UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO**

Commission File Number 1-39083

Vir Biotechnology, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**81-2730369**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
499 Illinois Street, Suite 500 San Francisco, California	**94158**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's telephone number, including area code: (415) 906-4324

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value	VIR	Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant as of June 30, 2021 was approximately $2.7 billion based upon the closing price of its Common Stock on June 30, 2021 of $47.28 per share, as reported by The Nasdaq Global Select Market.

The number of shares of the Registrant's Common Stock outstanding as of February 22, 2022 was 132,303,561.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement, or the Proxy Statement, for the Registrant's 2022 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K. The Proxy Statement will be filed with the Securities and Exchange Commission within 120 days of the Registrant's fiscal year ended December 31, 2021.

Auditor PCAOB ID: 42 Auditor: Ernst & Young LLP Address: Redwood City, California

Table of Contents

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This Annual Report on Form 10-K contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements regarding our strategy, future financial condition, future operations, research and development, planned clinical trials and preclinical studies, technology platforms, the timing and likelihood of regulatory filings and approvals for our product candidates, our ability to commercialize our product candidates, the potential benefits of collaborations, projected costs, prospects, plans, objectives of management and expected market growth, the timing of availability of clinical data, program updates and data disclosures, the ability of sotrovimab to treat and/or prevent COVID-19, the expected number of therapeutic doses that Vir will be able to supply to patients, and the ability of sotrovimab to maintain activity against circulating variants of concern and interest are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “design,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “positioned,” “potential,” “predict,” “seek,” “should,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology.

We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions described in the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this report. Other sections of this report may include additional factors that could harm our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements.

In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this report, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. You should refer to the section titled “Risk Factors” for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

This Annual Report on Form 10-K includes statistical and other industry and market data that we obtained from industry publications and research, surveys, and studies conducted by third parties as well as our own estimates of potential market opportunities. All of the market data used in this Annual Report on Form 10-K involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. Our estimates of the potential market opportunities for our product candidates include several key assumptions based on our industry knowledge, industry publications, third-party research, and other surveys, which may be based on a small sample size and may fail to accurately reflect market opportunities. While we believe that our internal assumptions are reasonable, no independent source has verified such assumptions.

RISK FACTOR SUMMARY

Investing in our securities involves a high degree of risk. Below is a summary of material factors that make an investment in our securities speculative or risky. Importantly, this summary does not address all of the risks that we face. Additional discussion of the risks summarized in this risk factor summary, as well as other risks that we face, can be found under the heading "Risk Factors" in Item 1A of Part I of this Annual Report on Form 10-K.

Our business is subject to a number of risks of which you should be aware before making a decision to invest in our common stock. These risks include, among others, the following:

- We have incurred net losses and anticipate that we may continue to incur net losses in the foreseeable future and therefore, may not be able to maintain profitability.
- Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.
- We may require substantial additional funding to finance our operations. If we are unable to raise capital when needed, we could be forced to delay, reduce or terminate certain of our development programs or other operations.
- We received an Emergency Use Authorization, or EUA, from the U.S. Food and Drug Administration, or FDA, for sotrovimab. If the FDA revokes or terminates our EUA for sotrovimab for the early treatment of COVID-19, the disease caused by the virus SARS-CoV-2, or the federally declared COVID-19 public health emergency ends, we will be required to stop commercial distribution of sotrovimab in the United States unless we can obtain FDA approval for this product and its currently authorized uses.
- We are committing substantial financial resources and personnel and making substantial capital commitments with third parties in connection with sotrovimab as a therapy for COVID-19. Market demand and utilization of sotrovimab or any of our other COVID-19 product candidates may be adversely impacted by factors such as the development of monoclonal antibodies, or mAbs, of other third parties, the rollout of vaccines and oral antivirals, the emergence of new viral variants and the current challenges in the delivery and administration of mAbs to patients.
- Our near-term success is dependent on the successful commercialization of sotrovimab for the early treatment of COVID-19, including our ability to enter into additional procurement contracts with government entities. If we are unable to successfully commercialize sotrovimab, our business, financial condition, results of operations and prospects may be adversely affected. In addition, sotrovimab may be rendered inferior or obsolete, even if it were to gain widespread market acceptance initially.
- Our future success is substantially dependent on the successful clinical development, regulatory approval and commercialization of sotrovimab and product candidates in a timely manner. If we are not able to obtain required regulatory approvals, we will not be able to commercialize our product candidates and our ability to generate product revenue will be adversely affected.
- Success in preclinical studies or earlier clinical trials may not be indicative of results in future clinical trials and we cannot assure you that any ongoing, planned or future clinical trials will lead to results sufficient for the necessary regulatory approvals and marketing authorizations.
- Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be delayed, made more difficult or rendered impossible by multiple factors outside our control.

- We are a party to strategic collaboration and license agreements pursuant to which we are obligated to make substantial payments upon achievement of milestone events and, in certain cases, have relinquished important rights over the development and commercialization of certain current and future product candidates. We also intend to explore additional strategic collaborations, which may never materialize or may require that we relinquish rights to and control over the development and commercialization of our product candidates.
- We intend to rely on third parties to produce clinical and commercial supplies of our product candidates.
- If we are unable to obtain and maintain patent protection for our product candidates and technology, or if the scope of the patent protection obtained is not sufficiently broad or robust, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize our product candidates and technology may be adversely affected.
- We are highly dependent on our key personnel, and if we are not able to retain these members of our management team or recruit and retain additional management, clinical and scientific personnel, our business will be harmed.
- Our business could be materially adversely affected by the effects of health pandemics or epidemics, including the current outbreak of COVID-19 pandemic and future outbreaks of the disease.
- The market price of our common stock has been, and in the future, may be, volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.
- If our information systems, or those maintained on our behalf, fail or suffer security breaches, such events could result in, without limitation, the following: a significant disruption of our product development programs; an inability to operate our business effectively; unauthorized access to or disclosure of the personal information we process; and other adverse effects on our business, financial condition, results of operations and prospects.

PART I

Item 1. Business.

Overview

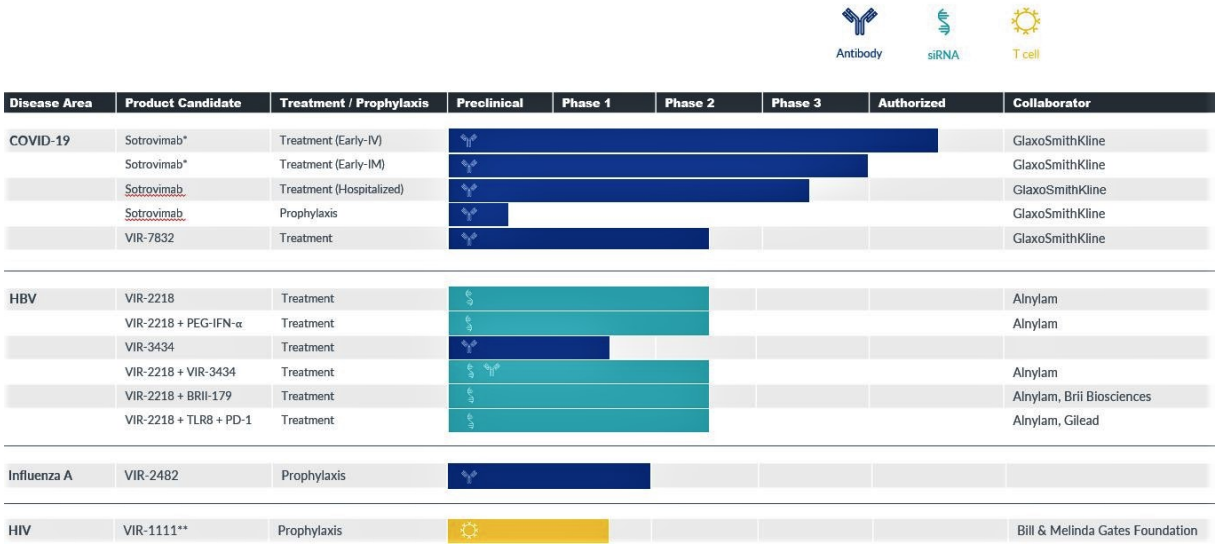
Our mission is to create a world without infectious disease.

We are a commercial-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. Infectious diseases are among the leading causes of death worldwide and can cause trillions of dollars of direct and indirect economic burden each year – as evidenced by the coronavirus disease 2019, or COVID-19, pandemic. We believe that now is the time to apply the recent and remarkable advances in immunology to combat current and prepare for future infectious diseases. Our approach begins with identifying the limitations of the immune system in combating a particular pathogen, the vulnerabilities of that pathogen and the reasons why previous approaches have failed. We then bring to bear powerful technologies that we believe, individually or in combination, will lead to effective therapies.

Our current pipeline consists of sotrovimab (previously VIR-7831; and where marketing authorization has been granted, marketed under the brand name Xevudy®) and other product candidates targeting COVID-19, hepatitis B virus, or HBV, influenza A virus, and human immunodeficiency virus, or HIV. We have assembled four technology platforms, focused on antibodies, T cells, innate immunity and small interfering ribonucleic acid, or siRNA, through internal development, collaborations and acquisitions. We have built an industry-leading team that has deep experience in immunology, infectious diseases, and product development and commercialization. Given the global impact of infectious diseases, we are committed to developing cost-effective treatments that can be delivered at scale.

Our Pipeline

Our current product and product candidates are summarized in the chart below:



Disease Area	Product Candidate	Treatment / Prophylaxis	Preclinical	Phase 1	Phase 2	Phase 3	Authorized	Collaborator
COVID-19	Sotrovimab*	Treatment (Early-IV)						GlaxoSmithKline
	Sotrovimab*	Treatment (Early-IM)						GlaxoSmithKline
	Sotrovimab	Treatment (Hospitalized)						GlaxoSmithKline
	Sotrovimab	Prophylaxis						GlaxoSmithKline
	VIR-7832	Treatment						GlaxoSmithKline
HBV	VIR-2218	Treatment						Alnylam
	VIR-2218 + PEG-IFN-α	Treatment						Alnylam
	VIR-3434	Treatment						
	VIR-2218 + VIR-3434	Treatment						Alnylam
	VIR-2218 + BRII-179	Treatment						Alnylam, Brii Biosciences
	VIR-2218 + TLR8 + PD-1	Treatment						Alnylam, Gilead
Influenza A	VIR-2482	Prophylaxis						
HIV	VIR-1111**	Prophylaxis						Bill & Melinda Gates Foundation

**Sotrovimab for early treatment by intravenous (IV) administration currently has marketing approval, emergency use authorization (EUA) or temporary authorization in >40 countries; for sotrovimab for early treatment by intramuscular (IM) administration, we and GSK (as defined below) recently filed an amendment request for an IM EUA with the FDA (as defined below).*
***Vaccine designed to establish proof of concept in Phase 1 clinical trial to determine whether unique immune response observed in non-human primates can be replicated in humans; ultimately, any candidates we advance as a potential HIV vaccine will require modifications to VIR-1111 before further clinical development.*

COVID-19: According to the John Hopkins Coronavirus Resource Center, as of February 23, 2022, there were almost 429.0 million recorded infections and almost 6.0 million recorded deaths worldwide from COVID-19. To date, the U.S. Food and Drug Administration, or FDA, has granted either Emergency Use Authorization, or EUA, or marketing approvals to multiple vaccines, drugs and/or antibodies to prevent or treat COVID-19. The ongoing efficacy of these medicines, however, particularly as the virus mutates while it infects more people and comes under increased immune pressure, is uncertain.

In response to the ongoing COVID-19 pandemic, we have moved rapidly, together with our collaborator Glaxo Wellcome UK Limited and GlaxoSmithKline Biologicals S.A. (individually and collectively referred to as GSK), to address this global health challenge. Our focus is on treating and preventing severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2 (the virus that causes COVID-19 illness), as well as potential future coronavirus outbreaks. To do so, we are developing differentiated monoclonal antibodies, or mAbs, like sotrovimab and VIR-7832, as well as vaccines and small molecules.

Sotrovimab and VIR-7832 are SARS-CoV-2-neutralizing mAbs. Both sotrovimab and VIR-7832 are based on a parent antibody, S309, which was derived from samples previously gathered for research on pan-coronavirus-neutralizing mAbs. Preclinical and clinical data suggest that sotrovimab and VIR-7832 have the potential for 'dual-action', or the ability to block viral entry into healthy cells and an enhanced ability to clear infected cells. Both mAbs also bind to an epitope on SARS-CoV-2 that is shared with SARS-CoV-1 (the virus that causes SARS), indicating that the epitope is highly conserved, which may make it more difficult for viral resistance to develop. Both mAbs have also been designed to have an extended half-life and to have doses low enough to allow for intramuscular, or IM, in addition to intravenous, or IV, administration. In addition, VIR-7832 has been designed to potentially enhance virus-specific T cell function, which could also help treat and/or prevent COVID-19 infection.

Sotrovimab

Early Treatment

In August 2020, we initiated the lead-in phase of our Phase 2/3 trial COVID-19 Monoclonal antibody Efficacy Trial - Intent to Care Early, or COMET-ICE, for the treatment of adults at high risk of hospitalization or death from COVID-19 via IV administration. In October 2020, the trial continued into Phase 3 based on a positive evaluation of the safety and tolerability data. In March 2021, we announced an Independent Data Monitoring Committee recommended the Phase 3 COMET-ICE trial be stopped for enrollment due to evidence of profound efficacy. Later in March 2021, we submitted an EUA request to the FDA for 500 mg IV of sotrovimab based on the interim analysis of efficacy and safety data from COMET-ICE.

In May 2021, the FDA granted an EUA to sotrovimab for the early treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and at high risk for progression to severe COVID-19, including hospitalization or death. We also received a positive scientific opinion from the Committee for Human Medicinal Products in the European Union, or EU, for sotrovimab in May 2021. In June 2021, we announced confirmatory full results for the Phase 3 COMET-ICE trial, which resulted in an adjusted relative risk reduction of 79% ($p<0.001$) in all-cause hospitalization for more than 24 hours or death due to any cause by Day 29 compared to placebo, meeting the primary endpoint of the trial. In December 2021, the European Commission granted marketing authorization to Xevudy® (sotrovimab) in the EU for the treatment of adults and adolescents at increased risk of progressing to severe COVID-19.

During and following the fourth quarter of 2021, we announced preclinical data generated through pseudovirus testing demonstrating that sotrovimab retains neutralizing activity against the highly divergent Omicron variant (B.1.1.529). In February 2022, we published pseudovirus data demonstrating a 16-fold shift in neutralization activity against the Omicron BA.2 subvariant. Our BA.2 results were derived from 10 independent experiments that were conducted using an optimized pseudovirus assay. This is the same assay that was used to generate data for previous variants. These data have been shared with regulatory agencies around the world. Initial feedback from the FDA question our conclusion that the 500 mg IV dose of sotrovimab retains activity against the BA.2 Omicron subvariant based on our current modeling assumptions, and the FDA has asked for additional data to support our position. The FDA also requested safety data for higher doses. Both have been provided to the FDA and we are awaiting further correspondence.

The Health Care Provider Fact Sheet was recently updated to show that sotrovimab's neutralization activity was reduced an average fold change in EC_{50} value of 16-fold against the SARS-CoV-2 Omicron B.1.1.529/BA.2 spike variant compared to wild-type. The Fact Sheet also noted that the clinical relevance of the 16-fold reduction in sotrovimab activity against the SARS-CoV-2 Omicron B.1.1.529/BA.2 variant is unknown. As of February 28, 2022, the FDA noted on its EUA website that sotrovimab is currently authorized in all U.S. regions until further notice by the FDA.

In an effort to facilitate broader patient access through IM administration, we also conducted two IM trials. In February 2021, we initiated COMET-Patient SafEty, TolerAbility, PharmacoKinetics, or COMET-PEAK, a Phase 2 trial, evaluating an IM formulation of sotrovimab in low-risk adults with mild to moderate COVID-19. In June 2021, we initiated COMET-Treatment of Acute COVID-19 with Intramuscular monocLonal antibody, or COMET-TAIL, a Phase 3 trial in adults at high risk of hospitalization or death. In November 2021, we announced that the COMET-TAIL Phase 3 trial's primary endpoint had been met, with headline data demonstrating that IM-administered sotrovimab was non-inferior to IV administration for high-risk populations. In January 2022, we filed an amendment to sotrovimab's EUA to include IM administration.

We and GSK plan to submit a Biologics License Application, or BLA, for sotrovimab to the FDA in the second half of 2022.

We and GSK continue to work actively with governments and payors around the world to make sotrovimab available to patients in need. Sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries, and we have received binding agreements for the sale of approximately 1.7 million doses of sotrovimab worldwide.

Prophylaxis

We are supporting multiple clinical trials evaluating whether sotrovimab, administered as prophylaxis, can help prevent symptomatic COVID-19 in uninfected immunocompromised adults. Two Phase 3 trials are expected to start in the second quarter of 2022. One is a platform trial and one is a company sponsored trial, COVID-19 Monoclonal antibody Efficacy Trial – Stop Transmission of Acute SARS-COV-2, or COMET-STAR. The primary endpoint for both trials is incidence of symptomatic PCR-confirmed COVID-19. The analysis of the primary endpoint of COMET-STAR will be event driven, and could be as early as the second half of 2022.

Hospitalized treatment

In December 2020, we initiated Therapeutics for Inpatients with COVID-19, or TICO, a Phase 3 trial of sotrovimab for the treatment of hospitalized adults with COVID-19 as part of a sub-trial of the National Institutes of Health's, or NIH, Accelerating COVID-19 Therapeutic Interventions and Vaccines, or ACTIV, Program, specifically ACTIV-3. In March 2021, we announced that the sotrovimab arm of the NIH's ACTIV-3 clinical trial met initial pre-specified criteria, and no safety signals were reported. Based on sensitivity analyses of the available data, the independent Data and Safety Monitoring Board recommended the sotrovimab arm be closed to enrollment.

In December 2021, sotrovimab entered the Randomized Evaluation of COVID-19 Therapy, or RECOVERY, trial, a Phase 3 trial in the U.K. evaluating standard of care alone versus usual standard of care plus a single dose of sotrovimab given IV. Initial data is expected in the second half of 2022.

VIR-7832. In April 2021, we initiated a Phase 1b/2a trial of VIR-7832 for the potential treatment of adults with mild to moderate COVID-19 as part of the U.K.'s National Health Service, or NHS, supported AGILE initiative. The dose-escalation Phase 1b part of the trial evaluates the safety and tolerability of single ascending doses of VIR-7832 for the treatment of mild to moderate COVID-19. The Phase 2a portion evaluates the safety and virologic activity of VIR-7832, as well as T cell responses to SARS-CoV-2 of VIR-7832 and sotrovimab. The Phase 1b trial is ongoing and no safety signals have been reported to date for the 50 mg, 150 mg, and 500 mg dose cohorts. The first patient in the Phase 2a portion of the trial was dosed in February 2022. Additional data are expected in the first half of 2022. In July 2021, VIR-7832's investigational new drug, or IND, application was cleared by the FDA.

In connection with the advancement of our COVID-19 mAbs, we and GSK have established a strategic manufacturing network, which will enable the manufacture of approximately two million doses of sotrovimab in the first half of 2022, and additional doses in the second half of 2022. We are actively working to expand our capacity to increase supply through 2022 so that we can continue to serve more patients. See the section titled "Manufacturing" for a summary of our manufacturing

activities and a description of the agreements with WuXi Biologics (Hong Kong) Limited, or WuXi Biologics, and Samsung Biologics Co., Ltd., or Samsung.

In addition to sotrovimab and VIR-7832, we are preparing for future pandemics with coronavirus mAbs that have the potential to be even broader and more potent than sotrovimab, pan-coronavirus vaccines designed with the aim to be variant-proof (initial pre-clinical proof of concept achieved), and small molecules that have the potential to treat multiple respiratory diseases like COVID-19 and influenza (initial pre-clinical proof of concept achieved).

HBV: According to the Hepatitis B Foundation, approximately 300 million people globally are chronically infected with HBV and approximately 900,000 of them die from HBV-associated complications each year. There is a significant unmet medical need for more effective therapies that lead to life-long control of the virus after a finite duration of therapy, which is the definition of a functional cure. For a registrational trial to demonstrate a functional cure, the formal endpoint accepted by the FDA is undetectable hepatitis B virus surface antigen, or HBsAg, defined as less than 0.05 international units per milliliter, or IU/ml, as well as HBV DNA less than the lower limit of quantification, in the blood six months after the end of therapy. Currently, a year-long course of pegylated interferon-alpha, or PEG-IFN-α, is the best available curative therapy. It has a low functional cure rate of approximately three to seven percent. Alternatively, suppressive therapy with nucleotide/nucleoside reverse transcriptase inhibitors, or NRTIs, is commonly used, but patients often require a lifetime of therapy.

We are developing VIR-2218 and VIR-3434 for the functional cure of HBV. Each of these product candidates has the potential to stimulate an effective immune response and also has direct antiviral activity against HBV. We believe that a functional cure for HBV will require an effective immune response in addition to antiviral activity based on the observation that severe immunosuppression can reactivate HBV disease. While monotherapy with VIR-2218 and VIR-3434 may provide a functional cure in some patients, we believe combination therapy will be necessary for a functional cure in many patients.

VIR-2218 is an investigational subcutaneously administered HBV-targeting siRNA. By targeting a conserved region of the HBV genome, it is designed to inhibit the production of all HBV proteins: X, polymerase, S, and core. Suppression of HBV proteins, particularly HBsAg, is hypothesized to remove the inhibition of T cell and B cell activity directed against HBV, allowing VIR-2218 to potentially result in a functional cure. VIR-2218 was the first siRNA in the clinic to include Alnylam Pharmaceuticals, Inc.'s, or Alnylam, Enhanced Stabilization Chemistry Plus, or ESC+, technology, which has the potential to enhance the therapeutic index.

In June 2021, we announced clinical data from our Phase 2 trial of VIR-2218 alone and in combination with PEG-IFN-α. First, with VIR-2218 as monotherapy, the trial demonstrated a strong safety profile and a substantial, durable and dose dependent reduction of HBsAg through 48 weeks. Second, evaluating VIR-2218 alone and in combination with PEG-IFN-α for 12 weeks, more rapid and substantial declines in HBsAg compared to VIR-2218 alone were observed.

In November 2021, we announced additional data evaluating VIR-2218 in combination with PEG-IFN-α for 24 weeks. New findings demonstrated that concurrent initiation of VIR-2218 and PEG-IFN-α therapy resulted in earlier and more substantial HBsAg reductions compared to VIR-2218 alone or with PEG-IFN-α following a VIR-2218 lead-in. Three participants achieved HBsAg loss below the lower limit of quantification by Week 24; two of three achieved anti-HBs seroconversion. Additional data are expected in the first half of 2022.

VIR-2218 is also being evaluated in additional clinical trials with collaborators. Brii Biosciences Offshore Limited, or Brii Bio, continues to lead the Phase 2 trial of VIR-2218 in combination with BRII-179, an investigational T cell vaccine, for the treatment of chronic HBV infection. Initial data are expected in the second half of 2022. In December 2021, we and Gilead Sciences, Inc., or Gilead, initiated a Phase 2 clinical trial of VIR-2218 in combination with GS-9688 (selgantolimod), Gilead's investigational TLR-8 agonist, and nivolumab, an approved PD-1 inhibitor, in both nucleos(t)ide, or NUC- suppressed patients and viremic patients. Patients with HBV treatment experience also may receive tenofovir alafenamide fumarate, or TAF.

VIR-3434 is an investigational subcutaneously administered HBV-neutralizing mAb. By targeting a conserved region of HBsAg, it is designed to block entry of all 10 genotypes of HBV into liver cells called hepatocytes and reduce the level of virions and subviral particles in the blood. VIR-3434, which incorporates Xencor, Inc.'s, or Xencor, Xtend and other Fc technologies, has been engineered to potentially function as a T cell vaccine against HBV in infected patients, as well as to have an extended half-life. These modifications are intended to enhance its potential to result in an HBV functional cure.

Building on the data previously disclosed in January and June 2021, in November 2021 we announced that a single dose of six mg, 18 mg, or 75 mg of VIR-3434 resulted in rapid HBsAg reductions in most participants within approximately

one week post-dose, and the largest and most sustained reductions in HBsAg were observed in the 75 mg cohort. Additional data are expected in the first half of 2022.

In July 2021, we initiated the Phase 2 Monoclonal Antibody siRNA Combination against Hepatitis B, or MARCH, trial to evaluate the combination of VIR-2218 and VIR-3434 as a functional cure regimen for chronic HBV infection. Initial data are expected in the first half of 2022. As some of our clinical trial sites are in Ukraine and Moldova, we are monitoring the situation to determine any impact resulting from the current conflict in this region.

Influenza: According to the World Health Organization, or WHO, on average, each year the influenza virus is estimated to infect 1 billion people and to result in 290,000 to 650,000 deaths globally. According to the Centers for Disease Control and Prevention, or CDC, in the 2018-2019 flu season, despite the availability of the flu vaccine, approximately 36 million people were diagnosed with influenza, 500,000 people were hospitalized, and 34,000 people died from influenza in the United States alone. Influenza vaccines have historically had limited success, with an average efficacy of 40% overall, across all populations. This limited efficacy results from incomplete coverage against seasonal strains and the lack of an effective immune response in many individuals after receiving the vaccine.

We are developing VIR-2482 as a universal prophylactic for influenza A and have designed it to overcome both limitations of flu vaccines, which we believe will lead to meaningfully higher levels of protection against seasonal and pandemic strains of influenza A. We anticipate that the initial registration population for VIR-2482 will include individuals at high risk of influenza A complications, such as the elderly with chronic lung disease or congestive heart failure.

In May 2021, we signed a definitive collaboration agreement, or the 2021 GSK Agreement, with GSK to expand our existing collaboration to include the research and development of new therapies for influenza and other respiratory viruses. See the section titled “Our Collaboration, License and Grant Agreements—Collaboration Agreements with GSK” for a description of the 2021 GSK Agreement.

VIR-2482 is an investigational IM administered influenza A-neutralizing mAb. In vitro, VIR-2482 has been shown to neutralize all major strains of influenza A that have arisen since the 1918 Spanish flu pandemic and is designed as a universal prophylactic for influenza A. We believe that VIR-2482 has the potential to provide superior protection to flu vaccines and be able to be used year after year because it has broad strain coverage as opposed to the limited strain coverage generated by vaccines. We also believe that it provides passive immunity rather than relying on a person to generate active immunity via a functional immune response, an ability that is known to decline with age. VIR-2482 has been engineered to extend its half-life so that a single IM dose has the potential to last the entire flu season, which is typically five to six months long. VIR-2482 is estimated to have a half-life of 58 days based on preliminary data.

In August 2019, we initiated dosing in the Phase 1/2 clinical trial for VIR-2482. VIR-2482 has been well-tolerated in the approximately 100 healthy volunteers dosed in Phase 1. Anticipating an increase in the incidence of influenza in the Northern Hemisphere this coming winter, we expect to initiate a Phase 2 trial in the second half of 2022.

HIV: According to the Joint United Nations Programme on HIV/AIDS, or UNAIDS, each year there are approximately 1.5 million new cases of HIV and approximately 700,000 HIV-related deaths globally. Current prevention approaches such as behavioral modification and pharmacological intervention have had only a modest effect on HIV transmission globally, leaving a high unmet medical need for a safe and effective vaccine for the billions of individuals who are or may become sexually active.

We are developing VIR-1111 as a proof of concept HIV vaccine designed to elicit a type of immune response that is different from other vaccines. We anticipate the initial registration population for our eventual HIV vaccine will be individuals at high risk of contracting HIV.

VIR-1111 is an investigational subcutaneously administered HIV T cell vaccine based on human cytomegalovirus, or HCMV. VIR-1111 has been designed to elicit T cells that recognize HIV epitopes that are different from those recognized by prior HIV vaccines and to stimulate a different and specific type of T cell immune response to HIV, known as an HLA-E restricted immune response. An HLA-E restricted immune response has been shown to be associated with protection of non-human primates, or NHPs, from simian immunodeficiency virus, or SIV, the NHP equivalent of HIV. VIR-1111 is a vaccine designed solely to establish proof of concept in a Phase 1 clinical trial to determine whether the unique immune response observed in NHPs can be replicated in humans.

In December 2020, we initiated a Phase 1 trial of VIR-1111. No safety signals have been reported to date and we expect to have additional clinical data in the first half of 2022.

Our Technology Platforms

Our four current technology platforms are designed to stimulate and enhance the immune system by exploiting critical observations of natural immune processes. We are using our platforms to advance sotrovimab and other current product candidates and generate additional product candidates for multiple indications.

Antibody Platform: We have established a robust method for capitalizing on unusually successful immune responses naturally occurring in people who are protected from, or have recovered from, infectious diseases. We identify rare antibodies from survivors that have the potential to treat and prevent rapidly evolving and/or previously untreatable pathogens via direct pathogen neutralization and immune system stimulation. The fully-human antibodies that we discover may also be modified to enhance their therapeutic potential. We have applied these methods to identify mAbs for a range of pathogens including SARS-CoV-2, HBV, influenza A and influenza B virus, Ebola, respiratory syncytial virus, or RSV, malaria, *clostridium difficile*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, and *Acinetobacter spp*. Examples of the power of this platform are Xevudy® (sotrovimab, formerly known as VIR-7831), our anti-SARS-CoV-2 mAb, and Ebanga (ansuvimab-zykl, formerly known as mAb114), the anti-Ebola virus mAb identified by our scientists in collaboration with the NIH and others and marketed by Ridgeback Biotherapeutics LP.

T Cell Platform: We are exploiting the unique immunology of HCMV, a commonly occurring virus in humans, as a vaccine vector to potentially treat and prevent infection by pathogens refractory to current vaccine technologies. This approach is based on fundamental observations made in NHPs, with rhesus cytomegalovirus, or RhCMV. HCMV is the most potent known inducer of T cell responses of any human virus and may induce potent and long-lasting T cell responses to a broader range of epitopes than observed for other viral vaccines. In addition, we can make proprietary modifications in the HCMV genome that we expect will elicit different types of pathogen-appropriate T cell responses. We term this approach “immune programming.” We believe that this platform may also have applicability beyond infectious diseases, to areas such as cancer.

Innate Immunity Platform: Moving beyond more traditional approaches that are used to evoke adaptive immunity or that directly target pathogens, where the development of resistance can occur, we plan to target host proteins as a means of creating host-directed therapies with high barriers to resistance. We believe that by leveraging the power of innate immunity, we can create medicines that break the “one-drug-for-one-bug” paradigm by producing “one-drug-for-multiple-bugs.” For example, we believe this platform can create a single product for respiratory viruses, such as SARS-CoV-2 and influenza. This is enabled using clustered regularly interspaced short palindromic repeats, or CRISPR, -based genomics, computational biology and machine learning to identify key host factors necessary for each pathogen’s survival and the protective effects of the innate immune system. We then identify product candidates that may be able to safely target host proteins to block pathogen replication or induce innate immunity to control infection. We believe that this platform may also have applicability beyond infectious diseases.

siRNA Platform: We are harnessing the power of siRNA to inhibit pathogen replication, eliminate key host factors necessary for pathogen survival and remove microbial immune countermeasures. Our collaboration with Alnylam includes VIR-2218 for HBV and up to four additional programs for infectious diseases. This platform can leverage Alnylam’s proprietary N-acetylgalactosamine, or GalNAc, delivery technology, for product candidates targeting the liver, allowing for subcutaneous administration and extended tissue half-life, as well as ESC+ technology to enhance stability and minimize off-target activity, which potentially can result in an increased therapeutic index.

Our Team

We have an industry-leading management team and board of directors with significant experience in immunology and infectious diseases and progressing product candidates from early stage research to clinical trials, regulatory approval and ultimately commercialization.

Our Chief Executive Officer, George Scangos, Ph.D., has spent over 30 years developing treatments in infectious disease, neuroscience and oncology, among other fields, and was previously the Chief Executive Officer of Biogen Inc., or Biogen, the Chief Executive Officer of Exelixis, Inc. and the President of Bayer Biotechnology. Our Chief Scientific Officer, Herbert (Skip) Virgin, M.D., Ph.D., is a Member of the National Academy of Sciences, and was previously Chair of the Department of Pathology and Immunology at the Washington University School of Medicine, St. Louis, Missouri. Our Senior Vice President and Senior Research Fellow, Antonio Lanzavecchia, M.D., is a Member of the National Academy of Sciences, was a co-founder of Humabs Biomed SA, or Humabs, which we acquired in 2017, and was the Director of the Institute for Research in Biomedicine in Bellinzona, Switzerland. Our Chief Medical Officer, Phil Pang, M.D., Ph.D., was previously Chief Medical Officer of Riboscience LLC, and before that was the Harvoni® project lead at Gilead, where he led

the team responsible for worldwide regulatory approval. Our Executive Vice President and Chief Business Officer, Global, Johanna Friedl-Naderer, who is anticipated to start on March 2, 2022, was previously President of Europe, Canada & Partner Markets for Biogen, where she served on the company's Global Leadership Team. Our Chief Technology Officer, Aine Hanly, Ph.D., was previously Vice President of Process Development for Amgen Inc., where she was accountable for clinical manufacturing and global supply of clinical trial materials. Our Senior Vice President of Regulatory Affairs and Program Leadership & Management, Lynne Krummen, Ph.D., previously served in many roles at Genentech, Inc. and F. Hoffmann-La Roche AG, including Head of U.S. Technical Development, Global Head of Technical Regulatory for Biologics, Head of Process Development and Clinical Development Project Team Lead for Avastin®. Our Chief Corporate Affairs Officer, Bolyn Hubby, Ph.D., was previously Chief Scientific Officer at Agenovir Corporation, which we acquired in 2018, and before that was the Vice President of Vaccines and Antimicrobials at Synthetic Genomics, Inc. Our Senior Vice President, General Counsel, Irene Pleasure, J.D., Ph.D., was previously Vice President of Intellectual Property at Achaogen, Inc. and before that held various positions at Genentech, Inc., including Senior Associate General Counsel and Head of Patents. Our Chief Administrative Officer, Steven Rice, was previously Chief Human Resources Officer at the Bill & Melinda Gates Foundation, and before that was Executive Vice President of Global Human Resources at Juniper Networks, Inc. Our Chief Financial Officer, Howard Horn, was previously Vice President, Business Planning at Biogen, and before that was a senior consultant at McKinsey & Company and an equity analyst at UBS Group AG.

Our board of directors is composed of leaders: from academia, Nobel laureate Phillip Sharp, Ph.D.; from the biopharmaceutical industry, Jeffrey Hatfield, Robert Perez, Saira Ramasastry, Elliott Sigal, M.D., Ph.D., and our Chairman Vicki Sato, Ph.D.; from the life science investment community, Robert More, Robert Nelsen (a co-founder) and Dipchand (Deep) Nishar; and from government, Janet Napolitano.

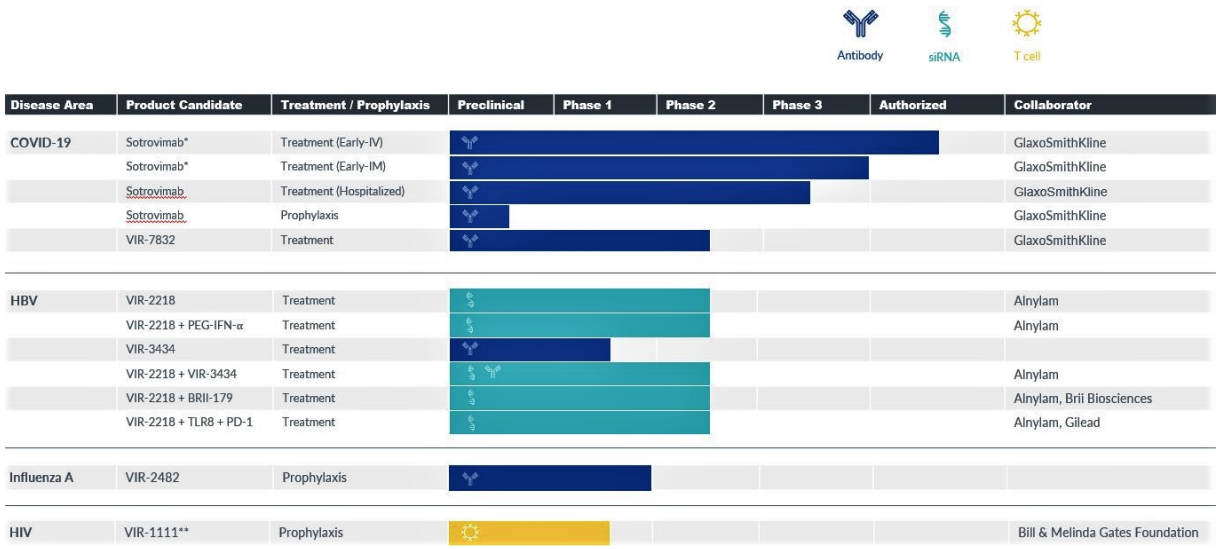
Our Strategy

We are a commercial-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. The core elements of our business strategy include:

- **Maximizing the impact of sotrovimab.** Sotrovimab has been granted EUA, temporary authorization or marketing approval in more than 40 countries. We and GSK will continue to work actively with governments and payors around the world to make sotrovimab available to patients in need.
- **Rapidly advancing our pipeline**. Currently underway are two Phase 3 clinical trials, five Phase 2 clinical trials, and four Phase 1 clinical trials across four distinct therapeutic areas. We anticipate moving additional preclinical candidates into the clinic and initiating additional later-stage combination trials where applicable in the next 12-18 months.
- **Expanding our pipeline using our current technology platforms**. We are leveraging our four current technology platforms to discover and develop novel product candidates for COVID-19, HBV, influenza A virus, HIV and tuberculosis, or TB, as well as additional viral, bacterial, fungal and parasitic infections, and potentially cancers.
- **Acquiring or accessing new technology platforms and assets**. We continually evaluate external technology platforms and assets that may help us develop therapies to treat and prevent serious infectious diseases.
- **Scaling our capabilities**. We are investing in our people, processes and systems across all functions of our company to ensure that we are able to take full advantage of our multiple product candidates and multiple technology platforms.
- **Enabling global access to our future medicines**. We have established relationships with organizations seeking to make a global impact like the Bill & Melinda Gates Foundation, the NIH, and the NHS to further enable and facilitate access to our future medicines and to support our clinical development efforts. We will continue to pursue additional relationships like these moving forward.

Pipeline

Our current pipeline consists of a product and product candidates that address unmet needs caused by COVID-19, HBV, influenza A virus, and HIV.



**Sotrovimab for early treatment by IV currently has marketing approval, EUA or temporary authorization in >40 countries; for sotrovimab for early treatment by IM, we and GSK recently filed an amendment request for an IM EUA with the FDA.*
***Vaccine designed to establish proof of concept in Phase 1 clinical trial to determine whether unique immune response observed in non-human primates can be replicated in humans; ultimately, any candidates we advance as a potential HIV vaccine will require modifications to VIR-1111 before further clinical development.*

Treatment and Prophylaxis for COVID-19

Summary

In response to the ongoing COVID-19 pandemic, we have moved rapidly, together with our collaborator GSK, to address this global health challenge. Our focus is on treating and preventing COVID-19, as well as potential future coronavirus outbreaks. To do so, we are developing differentiated mAbs like sotrovimab and VIR-7832, as well as vaccines and small molecules.

We are developing sotrovimab and VIR-7832 for the treatment and prophylaxis of COVID-19. Both sotrovimab and VIR-7832 are based on a parent antibody, S309, which was derived from samples previously gathered for research on pan-coronavirus-neutralizing mAbs. Preclinical and clinical data suggest that sotrovimab and VIR-7832 have the potential for 'dual-action', or the ability to block viral entry into healthy cells and an enhanced ability to clear infected cells. Both mAbs also bind to an epitope on SARS-CoV-2 that is shared with SARS-CoV-1 (the virus that causes SARS), indicating that the epitope is highly conserved, which may make it more difficult for viral resistance to develop. Both mAbs have also been designed to have an extended half-life and to have doses low enough to allow for IM and IV administration. In addition, VIR-7832 has been designed to potentially enhance virus-specific T cell function, which could also help treat and/or prevent COVID-19 infection.

During and following the fourth quarter of 2021, we announced preclinical data generated through pseudovirus testing demonstrating that sotrovimab retains neutralizing activity against the highly divergent Omicron variant (B.1.1.529). In February 2022, we published pseudovirus data demonstrating a 16-fold shift in neutralization activity against the Omicron BA.2 subvariant. Our BA.2 results were derived from 10 independent experiments that were conducted using an optimized pseudovirus assay. This is the same assay that was used to generate data for previous variants. These data have been shared with regulatory agencies around the world. Initial feedback from the FDA question our conclusion that the 500 mg IV dose of sotrovimab retains activity against the BA.2 Omicron subvariant based on our current modeling assumptions, and the FDA has asked for additional data to support our position. The FDA also requested safety data for higher doses. Both have been provided to the FDA and we are awaiting further correspondence.

The Health Care Provider Fact Sheet was recently updated to show that sotrovimab's neutralization activity was reduced an average fold change in EC_{50} value of 16-fold against the SARS-CoV-2 Omicron B.1.1.529/BA.2 spike variant compared to wild-type. The Fact Sheet also noted that the clinical relevance of the 16-fold reduction in sotrovimab activity against the SARS-CoV-2 Omicron B.1.1.529/BA.2 variant is unknown. As of February 28, 2022, the FDA noted on its EUA website that sotrovimab is currently authorized in all U.S. regions until further notice by the FDA.

To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) for the early treatment of COVID-19 in more than 40 countries, and we have received binding agreements for the sale of approximately 1.7 million doses worldwide. We and GSK continue to work actively with governments and payors around the world to make sotrovimab available to patients in need. We and GSK plan to submit a BLA for sotrovimab to the FDA in the second half of 2022.

We are also evaluating the use of sotrovimab in two additional indications: 1) to determine if sotrovimab can prevent symptomatic COVID-19 infection in uninfected immunocompromised adults or those who have a history of severe adverse reactions to COVID-19 vaccines, and 2) to evaluate if sotrovimab treatment can improve clinical outcomes in patients hospitalized with COVID-19.

We and GSK have established a strategic manufacturing network, which will enable the manufacture of approximately two million doses of sotrovimab in the first half of 2022, and additional doses in the second half of 2022. We are actively working to expand our capacity to increase supply through 2022 so that we can continue to serve more patients. See the section titled "Manufacturing" for a summary of our manufacturing activities and a description of the agreements with WuXi Biologics and Samsung.

VIR-7832, an anti-SARS-CoV-2 mAb, is currently in a Phase 1b/2a trial for the potential treatment of adults with mild to moderate COVID-19 as part of the U.K.'s NHS-supported AGILE initiative. The Phase 1b trial is ongoing and no safety signals have been reported to date for the 50 mg, 150 mg, and 500 mg dose cohorts. The first patient in the Phase 2a portion of the trial was dosed in February 2022. Additional data are expected in the first half of 2022. In July 2021, VIR-7832's IND application was cleared by the FDA.

In addition to sotrovimab and VIR-7832, we are preparing for future pandemics with coronavirus mAbs that have the potential to be even broader and more potent than sotrovimab, pan-coronavirus vaccines designed with the aim to be variant-proof (initial pre-clinical proof of concept achieved), and small molecules that treat multiple respiratory diseases like COVID-19 and influenza (initial pre-clinical proof of concept achieved).

However, there are no assurances that we will secure additional supply commitments from governments. In addition, COVID-19 treatment standards are susceptible to rapid changes in epidemiology and the emergence of new variants, thus, sotrovimab may be rendered inferior or obsolete in the future. The FDA may, under certain circumstances, revise or revoke an EUA. If our EUA is terminated or revoked, sotrovimab will no longer be available in the United States unless and until we have obtained FDA approval of a BLA for the product.

Disease Overview and Limitations of Current Standard of Care

According to the John Hopkins Coronavirus Resource Center, as of February 23, 2022, there were almost 429.0 million recorded infections and almost 6.0 million recorded deaths worldwide from COVID-19. To date, the FDA has granted either EUAs or marketing approvals to multiple vaccines, drugs and/or antibodies to prevent or treat COVID-19.

For prophylaxis, despite the high efficacy of the COVID-19 vaccines, there are still populations in whom vaccine immunogenicity is suboptimal, such as the elderly with comorbidities, immunocompromised persons, or those who may not want or be able to tolerate vaccines.

For early treatment, both mAbs and small molecules have shown strong efficacy data and have pros and cons around convenience and compliance. For example, for some patients and their physicians, IM or IV mAbs may be preferred to small molecules due to administration in a single treatment visit ("one and done"), concerns about compliance with small molecules (multiple pills, multiple times per day, over multiple days), and concerns about oral treatment initiation requirements.

For hospitalized patients, there is still significant unmet need. Preliminary data suggest that COVID-19 mAbs may have a role in improving clinical outcomes such as decreasing intensive care unit stays and/or mortality in hospitalized patients who have severe or critical COVID-19.

Importantly, the ongoing durability of current vaccines, small molecules, and mAbs in the setting of the continued emergence of variants like Omicron is uncertain.

Sotrovimab for COVID-19

Molecular Characteristics. Sotrovimab is an investigational fully human IgG1 neutralizing anti-SARS-CoV-2 monoclonal antibody that has Fc modifications that are designed to improve bioavailability in the respiratory mucosa and increase half-life, and incorporates Xencor's Xtend™ technology. Sotrovimab binds with high affinity to the receptor binding domain of the SARS-CoV-2 spike protein. It is designed to have dual-actions of neutralizing the virus by blocking viral entry into healthy cells, while also enhancing the ability to clear infected cells. Sotrovimab potently neutralizes live SARS-CoV-2 in vitro and in vivo, and binds to a highly conserved epitope that is shared with SARS-CoV-1, thus potentially leading to a wide breadth of sarbecovirus coverage and a higher barrier to resistance. Sotrovimab's dose may allow for both IM and IV administration.

Phase 2/3 Trials of Sotrovimab.

COMET-ICE: Sotrovimab was evaluated as a treatment in adults with mild to moderate COVID-19 at high risk of hospitalization or death. This trial was a Phase 2/3, randomized, double-blind, multi-center, placebo-controlled trial investigating IV infusion of 500 mg of sotrovimab in adults with mild to moderate COVID-19 at high-risk of progression to severe disease, who were not hospitalized and did not require oxygen. The trial included a lead-in phase to evaluate the safety and tolerability of sotrovimab, followed by an expansion phase with 1:1 randomization of sotrovimab and placebo. The final COMET-ICE trial results in the full trial population of 1,057 participants demonstrated an adjusted relative risk reduction of 79% ($p<0.001$) in hospitalization for more than 24 hours or death due to any cause by Day 29 compared to placebo, meeting the primary endpoint of the trial.

COMET-TAIL: Sotrovimab was evaluated in a Phase 3, multi-center, randomized, open-label, non-inferiority trial of IM versus IV administration of sotrovimab for the early treatment of mild-to-moderate COVID-19 in high-risk non-hospitalized adult and pediatric patients (12 years of age and older). The trial included three arms: 500 mg of sotrovimab given IV, and two IM arms, consisting of 500 mg and a low dose of 250 mg. The trial enrolled a total of 983 patients up to seven days after onset of symptoms. The trial's primary endpoint was met, and headline data demonstrated that IM-administered sotrovimab was non-inferior to IV administration for high-risk populations. In February 2022, topline data were presented at the Conference on Retroviruses and Opportunistic Infections (CROI 2022), and we plan to submit the full COMET-TAIL data set to a peer-reviewed journal for publication in the first half of 2022.

COMET-PEAK: Sotrovimab was evaluated in a Phase 2, multi-center, randomized, double-blind, two-part, parallel group trial designed to compare 1) the safety, tolerability and pharmacokinetics of second-generation sotrovimab manufactured material to first-generation sotrovimab manufactured material intravenously, and 2) the viral kinetics and safety of IV administration compared to IM administration of sotrovimab in low-risk adults with mild to moderate COVID-19. Data available to date from open label Part B of the trial (500 mg IV vs. 500 mg IM) demonstrated equivalence on the virological response between the IM and IV arms, while also showing an acceptable tolerability profile for IM with only 10/82 participants (12%) reporting any injection site reaction, all of which were low grade (Grade 1).

Based on the data from the COMET-TAIL and COMET-PEAK trials, in January 2022 we submitted an application to the FDA requesting an amendment to the EUA for sotrovimab to include IM administration.

RECOVERY: Sotrovimab is being evaluated in a randomized, controlled, open-label, platform trial assessing several possible treatments in patients hospitalized with COVID-19 in the U.K. Trial participants who are hospitalized with COVID-19 are eligible for random assignment in a 1:1 ratio to usual standard of care alone versus usual standard of care plus a single dose of sotrovimab given IV. Initial data are expected in the second half of 2022.

COMET-STAR: This is a planned Phase 3, multicenter, randomized, double-blind, placebo-controlled trial to evaluate IV sotrovimab as prophylaxis for COVID-19. The primary endpoint of this trial is incidence of symptomatic PCR-confirmed COVID-19. Enrollment is planned to initiate in the second quarter of 2022. The analysis of the primary endpoint of COMET-STAR will be event driven, and could be as early as the second half of 2022.

VIR-7832 for COVID-19

Molecular Characteristics. VIR-7832 is identical to sotrovimab, except that VIR-7832 contains additional modifications in the Fc domain that are designed to further enhance its effector function, such as antibody-dependent cellular cytotoxicity and antibody-dependent cellular phagocytosis, abrogate C1q binding, as well as elicit enhanced T cell and antibody responses. VIR-7832 incorporates Xencor's Xtend™ and other Fc technologies. These additional modifications may increase potency and induce a "vaccinal" effect (the induction of antigen-specific T cell responses) in patients with COVID-19.

Phase 1b/2a Trial of VIR-7832. VIR-7832 is being evaluated as part of the U.K.-based, NHS-supported AGILE initiative. The Phase 1b portion of the trial is a double-blinded, randomized, first-in-human dose-escalation trial of VIR-7832 in which adults with mild to moderate COVID-19 infection are randomized to VIR-7832 or placebo in a 3:1 ratio. The primary objective of Phase 1b is to determine the safety and tolerability of single ascending doses of VIR-7832 for the treatment of mild to moderate COVID-19. No concerning safety signals have been reported for the 50 mg, 150 mg and 500 mg dose cohorts to date. The Phase 2a portion of the trial is evaluating 500 mg of VIR-7832, 500 mg of sotrovimab and placebo, randomized in a 2:2:1 ratio in participants with mild to moderate COVID-19. The primary objective of the double-blinded, placebo-controlled, randomized Phase 2a is to investigate the safety and virologic activity of VIR-7832 compared to sotrovimab in patients with mild to moderate COVID-19 infection. Immunologic parameters, such as T-cell responses to SARS-CoV-2, will also be examined. Additional data are expected in the first half of 2022.

Functional Cure for HBV

Summary

We are developing VIR-2218 and VIR-3434 for the functional cure of HBV. Each of these product candidates has the potential to stimulate an effective immune response and also has direct antiviral activity against HBV. We believe that a functional cure for HBV will require an effective immune response, in addition to antiviral activity, based on the observation that severe immunosuppression can reactivate HBV disease. While monotherapy with VIR-2218 and VIR-3434 may provide a functional cure in some patients, we believe combination therapy will be necessary for a functional cure in many patients.

VIR-2218, an HBV-targeting siRNA, is currently in a Phase 2 clinical trial. In Parts A to C of the trial, 37 healthy volunteers and 24 patients with chronic HBV on NRTIs received VIR-2218. The data suggest that VIR-2218 is generally well-tolerated in healthy volunteers given as a single dose up to 900 mg and in patients given as two doses of 20 mg, 50 mg, 100 mg or 200 mg each dose. The data also demonstrate substantial, durable, dose dependent reductions in HBsAg in patients at doses ranging from 20 mg to 200 mg, which are durable at the higher doses through 48 weeks. Parts D and F evaluating six doses of 200 mg of VIR-2218 with PEG-IFN-α showed rapid and substantial declines in HBsAg levels after 24 weeks of treatment compared to VIR-2218 alone. VIR-2218 is also being explored in additional clinical trials with collaborators. Brii Bio continues to lead the Phase 2 trial of VIR-2218 in combination with BRII-179, an investigational T cell vaccine, for the treatment of chronic HBV infection. Initial data are expected in the second half of 2022. In December 2021, we and Gilead initiated a Phase 2 clinical trial of VIR-2218 in combination with GS-9688 (selgantolimod), Gilead's investigational TLR-8 agonist, and nivolumab, an approved PD-1 inhibitor, in both NUC-suppressed patients and viremic patients. Patients with HBV treatment experience also may receive TAF.

VIR-3434, an HBV-neutralizing mAb, is currently in a Phase 1 clinical trial. Two analyses from our ongoing Phase 1 trial showed no safety signals in healthy volunteers dosed with up to 3,000 mg, and a rapid reduction in HBsAg levels one week after subcutaneous administration of a single dose of six to 75 mg of VIR-3434 to virally suppressed patients with chronic HBV infection. The largest and most sustained reductions in HBsAg were observed in the 75 mg cohort. In July 2021, we initiated the Phase 2 MARCH trial to evaluate the combination of VIR-2218 and VIR-3434 as a functional cure regimen for chronic HBV infection. Initial data are expected in the first half of 2022. As some of our clinical trial sites are in Ukraine and Moldova, we are monitoring the situation to determine any impact resulting from the current conflict in this region.

Disease Overview and Limitations of Current Standard of Care

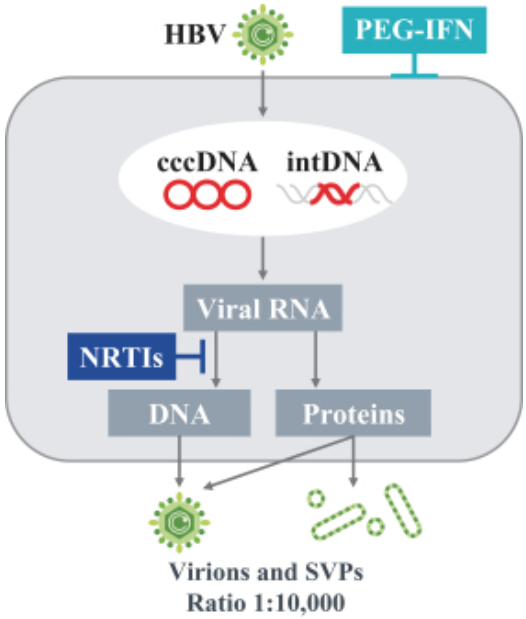
According to the Hepatitis B Foundation, approximately 300 million people globally are chronically infected with HBV. In the United States, up to two million people are chronically infected with HBV. Chronic HBV can lead to many serious complications, including liver scarring, liver failure and liver cancer. Globally, approximately 900,000 people die each year from HBV-associated complications.

The most commonly used therapy for chronic HBV is life-long suppressive therapy with NRTIs, like tenofovir or entecavir. Of the hundreds of millions of people with chronic HBV worldwide, only an estimated two percent of patients are currently taking this suppressive therapy. NRTIs prevent HBV ribonucleic acid, or RNA, from being transcribed into HBV deoxyribonucleic acid, or DNA, which is a process known as reverse transcription. NRTIs therefore have little to no direct impact on covalently closed circular DNA, or cccDNA, the reservoir for HBV. It has been reported that after a year of therapy with NRTIs, zero to three percent of patients experience a functional cure. Additionally, NRTIs reduce, but do not eliminate, the risk of HBV associated liver failure and liver cancer. Despite its low utilization rate, suppressive therapy with NRTIs for HBV represented over a billion-dollar market in 2021.

An alternative treatment option for chronic HBV is a year-long course of PEG-IFN-α therapy, which results in a functional cure approximately three to seven percent of the time. The mechanisms by which PEG-IFN-α, an immune cytokine, achieves a functional cure are not known, but there is additional evidence supporting the need for immune stimulation to achieve a functional cure.

HBV Life Cycle and Undetectable HBsAg as a Clinical Endpoint

The viral life cycle of HBV is shown in the figure below. After infecting a cell, the virus forms cccDNA. This form of HBV DNA is located in the nucleus of hepatocytes and acts like a mini-chromosome. HBV DNA can also integrate into the patient's DNA. This form of HBV DNA is known as integrated DNA, or intDNA.



HBV lifecycle with inhibition of processes by currently available therapies*. Arrows indicate viral life cycle process. Perpendicularly-ended lines indicate inhibition of viral process.*

HBV releases infectious virions and subviral particles, or SVPs, from infected cells. Both virions and SVPs include forms of an HBV protein called HBsAg, a blood biomarker that indicates that the HBV cccDNA and/or intDNA in that patient's hepatocytes are actively making HBV RNA and HBV proteins. For a registrational trial to demonstrate a functional cure, the formal endpoint accepted by the FDA, is undetectable HBsAg, defined as less than 0.05 international units per milliliter, or IU/ml, as well as HBV DNA less than the lower limit of quantification, in the blood six months after the end of therapy. Achievement of this endpoint has been shown to predict improved clinical outcomes and the lack of need for further therapy.

VIR-2218 for HBV

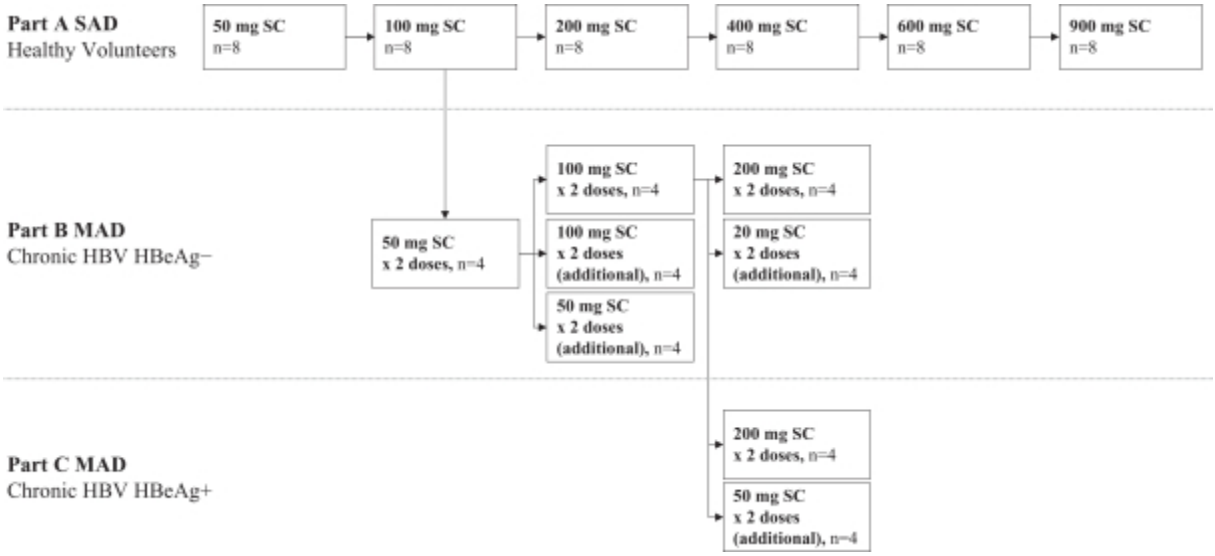
Molecular Characteristics. VIR-2218 is an investigational, single siRNA targeting a conserved sequence of HBV that allows for predicted activity against 99.7% of the strains of HBV, including all 10 HBV genotypes. Because this conserved sequence falls within a specific region of the X gene of HBV that exists within all four HBV RNA transcripts, VIR-2218 is able to degrade each transcript, and consequently decrease the expression of all proteins produced by the virus: X, polymerase, S, and core. VIR-2218 is thus potentially a broad-spectrum, potent antiviral.

HBV DNA can become integrated into human DNA as intDNA. Because VIR-2218 targets a region of HBV that is conserved in the large majority of HBV intDNA, this single siRNA is predicted to be able to prevent the production of HBV proteins derived from intDNA, as well as the production of all other HBV proteins from cccDNA.

We believe that the large amount of HBV protein that is transcribed in liver cells can suppress the immune system. There are at least two potential mechanisms by which suppression occurs. The first mechanism is T cell tolerance and exhaustion by the presentation of intracellular HBV antigens on hepatocytes. The second is the large quantities of HBV proteins that are released into the blood, especially HBsAg, which may also be immunosuppressive. By directly reducing the amount of HBV proteins made, VIR-2218 has the potential to decrease the ability of HBV to suppress the immune system—in effect removing a brake on the immune system. In mice models, siRNAs that are able to reduce HBsAg expression can transform an otherwise ineffective therapeutic HBV vaccine into one that can functionally cure such mice of HBV, suggesting that HBsAg suppression has the ability to enhance the immune response against HBV.

We believe that VIR-2218 is the only HBV-targeting siRNA currently in development that includes ESC+ technology. We believe this technology may be able to enhance the potential safety of VIR-2218.

Phase 1/2 Trial of VIR-2218. VIR-2218-1001 is an adaptive clinical trial designed to evaluate the safety, tolerability, pharmacokinetics and antiviral activity of VIR-2218. The current trial design of VIR-2218-1001 is shown below. We initiated dosing of the Part A portion of the trial for VIR-2218 in November 2018.



Status of VIR-2218-1001 trial in healthy volunteers and patients with chronic HBV infection*. Arrows indicate trial progression. HBeAg- = hepatitis B virus e-antigen negative; HBeAg+ = hepatitis B virus e-antigen positive; MAD = multiple ascending dose; SAD = single ascending dose; SC = subcutaneous.*

This trial currently has completed enrollment of 81 subjects across all three parts. Part A is a single ascending dose design in healthy volunteers. Parts B and C are multiple ascending dose designs in patients with chronic HBV on NRTIs. Patients in Part B are hepatitis B early antigen negative, or HBeAg negative, and patients in Part C are hepatitis B early antigen positive, or HBeAg positive. Patients in Parts B and C receive two doses of VIR-2218, four weeks apart.

HBeAg positive patients are generally younger, and thought to have more preserved immune function, as compared to HBeAg negative patients who are generally older and have experienced greater immune exhaustion. HBeAg negative patients are also thought to have larger amounts of intDNA compared to HBeAg positive patients.

The primary endpoints across Parts A-C of the trial are safety and tolerability. Key secondary endpoints in Parts B and C include the maximum reduction of serum HBsAg from baseline until Week 16 and the number of patients with HBsAg loss or anti-hepatitis B surface antibody seroconversion. Patients with chronic HBV who experience a greater than 10% decline from baseline at Week 16 in HBsAg will be followed for up to 32 additional weeks.

Clinical Trial Status. VIR-2218-1001 is an ongoing clinical trial. 49 healthy volunteers enrolled in Part A of the trial. Each Part A completed cohort includes six subjects receiving VIR-2218 and two subjects receiving placebo. All cohorts have completed dosing and follow-up. In the 400 mg cohort, a replacement subject was enrolled due to a subject who voluntarily withdrew from the trial. The 900 mg cohort was designed to assess the maximum tolerated dose of VIR-2218.

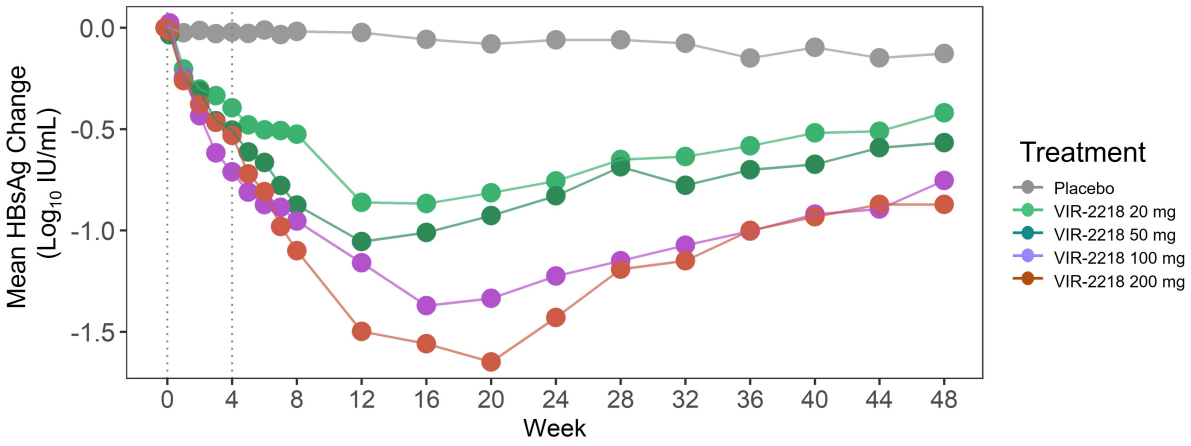
In Part B of the trial, 24 patients with chronic HBV who are HBeAg negative have been enrolled. Each Part B completed cohort includes three patients receiving VIR-2218 and one patient receiving placebo. All cohorts have completed dosing and have completed follow-up.

In Part C of the trial, eight patients with chronic HBV who are HBeAg positive have been enrolled. Each completed cohort includes three patients receiving VIR-2218 and one patient receiving placebo. All cohorts have completed dosing and have completed follow-up.

Clinical Data. Across healthy volunteers and chronic HBV patients, VIR-2218 has been generally well-tolerated. No clinically significant alanine transaminase or ALT abnormalities, which are a marker of liver inflammation, have been observed. In the Part A 900 mg cohort, asymptomatic Grade 1 ALT elevations with no associated changes in bilirubin, or other markers of liver function, have been observed. Three serious adverse events, or SAEs, have been reported, all in Part B. The first, a Grade 2 headache, resolved with intravenous fluids and non-opioid pain medications. This patient had additional symptoms of fever, nausea, vomiting and dehydration, assessed by us as consistent with a viral syndrome. The second SAE, a Grade 4 depression, occurred over 50 days after the last drug dose was administered, and was assessed by us as not related to VIR-2218. The third SAE, a patient suicide, occurred 241 days after the last dose of study drug and was assessed by us as not related to VIR-2218. Three Grade 3 adverse events of upper-respiratory tract infection, chest pain and low phosphate levels in the blood have also been reported. We did not consider any of these Grade 3 events as related to VIR-2218.

The biologic activity of VIR-2218 was assessed by declines in HBsAg. The activity of VIR-2218 through Week 48 for each dose level is shown in the graph below. For Parts B and C, the average baseline HBsAg levels were 3.3 $\log_{10}$IU/mL and 3.9 $\log_{10}$IU/mL, respectively. The average decline in HBsAg across HBeAg negative and HBeAg positive subjects at Week 16 was 1.5 $\log_{10}$, or an approximately 32-fold reduction. The declines observed in HBsAg at Week 16 ranged from 0.97 $\log_{10}$ to 2.2 $\log_{10}$, or an approximately nine to 160-fold reduction, after two 200 mg doses of VIR-2218 given four weeks apart. The average HBsAg level at Week 16 was 314 IU/mL, with half of the patients achieving HBsAg values < 100 IU/mL and 5/6 achieving HBsAg values < 1000 IU/mL. Five of the 12 patients that achieved HBsAg values of <100 IU/mL maintained it through Week 48. Therefore, even though HBsAg levels gradually rebounded, overall, a durable effect was observed.

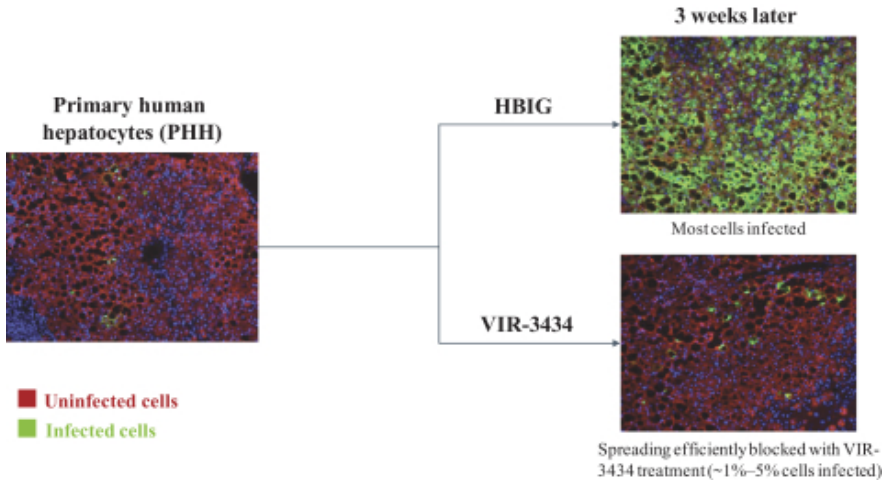
The ability of VIR-2218 to result in substantial and durable declines in HBsAg after only two doses suggests that VIR-2218 has the potential to play an important role in the functional cure of chronic HBV. We have initiated and plan to initiate additional clinical trials evaluating VIR-2218 in combination with other immunomodulatory agents.



Change from Baseline in HBsAg following administration of VIR-2218*. Each line represents the average decline from baseline in HBsAg for VIR-2218 for each dosing level or pooled placebo in Parts B and C.*

VIR-3434 for HBV

Molecular Characteristics and Preclinical Data. VIR-3434 is an investigational mAb targeting a conserved region on HBsAg that allows it to neutralize strains from all 10 HBV genotypes. VIR-3434 specifically targets the antigenic loop, or AGL, on HBsAg. The AGL helps the virus bind to hepatocytes and subsequently infect these liver cells. By binding to the AGL, VIR-3434 prevents viral entry, which prevents the spread of HBV to uninfected hepatocytes. VIR-3434, through a process called opsonization, also helps remove HBV virions and SVPs from the blood. Hepatitis B immunoglobulin, or HBIG, an approved therapy for preventing reinfection after transplantation and which consists of polyclonal antibodies against HBV, acts by similar mechanisms. In vitro, VIR-3434 demonstrates approximately 5000-fold greater potency than HBIG in neutralization assays. As shown in the figure below, VIR-3434 is better able to prevent the spread of HBV to uninfected cells in vivo compared to HBIG.

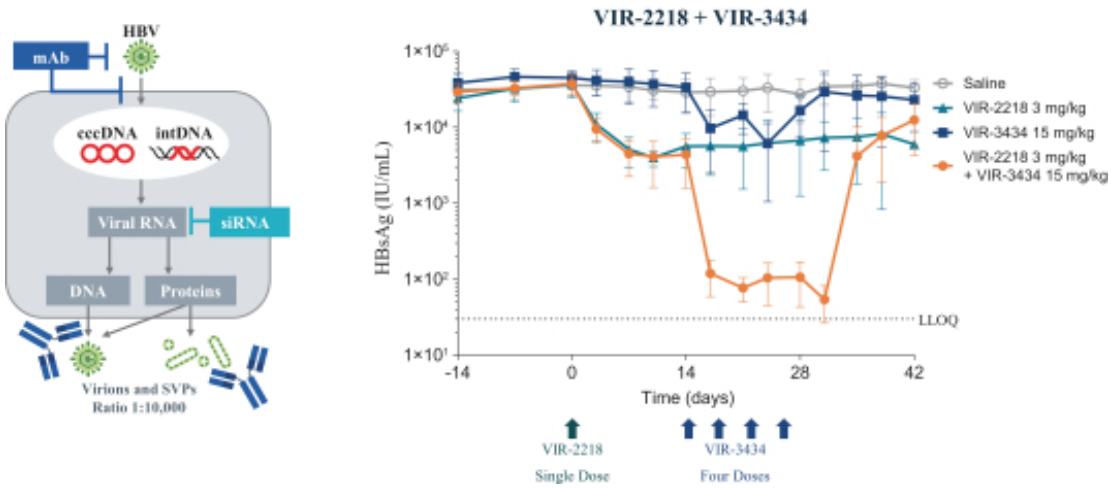


Progression of infection in primary human hepatocytes with hepatitis B immune globulin or VIR-3434 in vivo*. PHH = primary human hepatocytes.*

VIR-3434 also has the potential to activate the immune system, via three different processes. First, due to specialized mutations in the Fc domain of VIR-3434, it has the potential to act as a T cell vaccine. VIR-3434, which incorporates

Xencor's Xtend™ and other Fc technologies, has been engineered with mutations that enhance binding to the FcR IIa activating receptor and diminish binding to the FcR IIb inhibitory receptor. As such, VIR-3434 is designed to capture virions and SVPs, deliver such virions and SVPs to DCs, and instruct these DCs to mature and stimulate T cells that can eliminate HBV infected hepatocytes. Second, VIR-3434 has the potential to act via antibody-dependent cell cytotoxicity, or ADCC. In this process, by binding to HBsAg at the cell surface, VIR-3434 recruits natural killer cells to eliminate infected hepatocytes. The Fc domain of VIR-3434 has been engineered to promote ADCC. Third, by reducing the amount of HBsAg in the blood, VIR-3434 has the potential to remove a brake on the immune system by decreasing the ability of HBV to suppress it.

We have also evaluated the antiviral activity of the combination of VIR-2218 and VIR-3434 in an adeno-associated virus-HBV mouse model. As shown in the figure below, VIR-2218 and VIR-3434 work together to reduce the level of HBsAg.

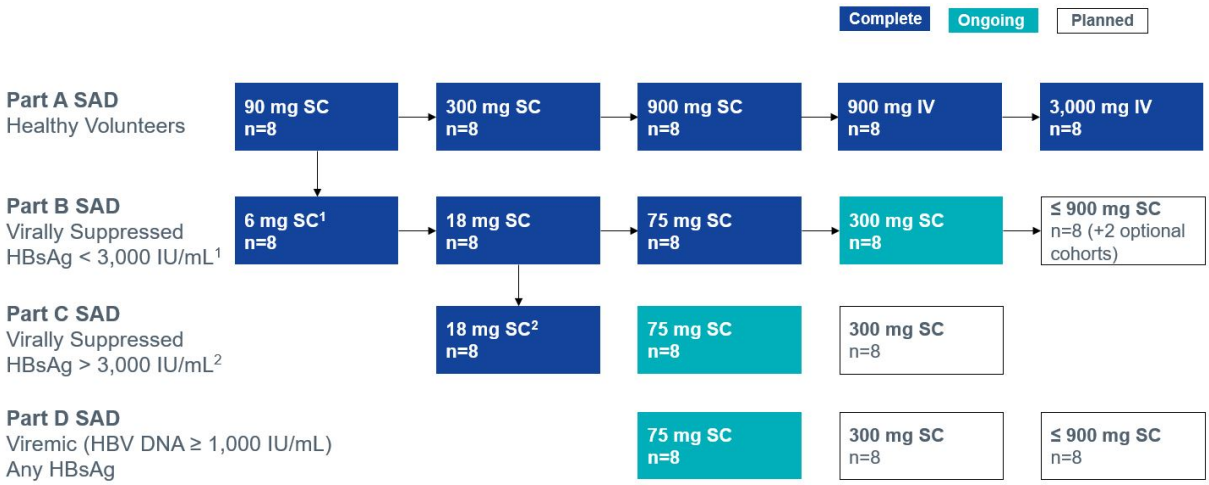


VIR-2218 and VIR-3434, which was modified to have a mouse mAb backbone for this experiment, administered alone or together result in reduced HBsAg in a mouse model.

Phase 1 Trial of VIR-3434. VIR-3434-1002 is an adaptive clinical trial designed to evaluate the safety, tolerability, pharmacokinetics and antiviral activity of VIR-3434. The current trial design of VIR-3434-1002 is shown below. We initiated dosing of the Phase 1 trial in May 2020.

The Phase 1 clinical trial has four parts. Part A is a single ascending dose design in healthy volunteers. Parts B and C are single ascending dose designs in patients with chronic HBV on NRTIs. Patients in Part B will have HBsAg levels less than 1,000 IU/ml for the 6 mg cohort, or less than 3,000 IU/mL for the other cohorts. It is possible that patients with lower HBsAg levels will have a more profound response to VIR-3434 than patients with higher HBsAg levels. Patients with

HBsAg levels greater than or equal to 3,000 IU/ml may be evaluated in an optional Part C. In Part D, patients with HBV DNA greater than or equal to 1,000 IU/mL who are not currently receiving antiviral therapy will be evaluated.



VIR-3434-1002 is an adaptive clinical trial design in healthy volunteers and patients with chronic hepatitis B virus infection*. Arrows indicate trial progression. SC = subcutaneous. SAD = single ascending dose. IV = intravenous.*

(1) The six mg SC cohort in Part B enrolled participants with screening HBsAg less than 1,000 IU/ml.

(2) The 18 mg SC cohort in Part C enrolled participants with any screening HBsAg.

The primary endpoints across all parts of the trial are safety and tolerability. The key secondary endpoint in Parts B and C is the maximum reduction of serum HBsAg from baseline. In Part D, an additional key secondary endpoint is the maximum change of HBV DNA from baseline.

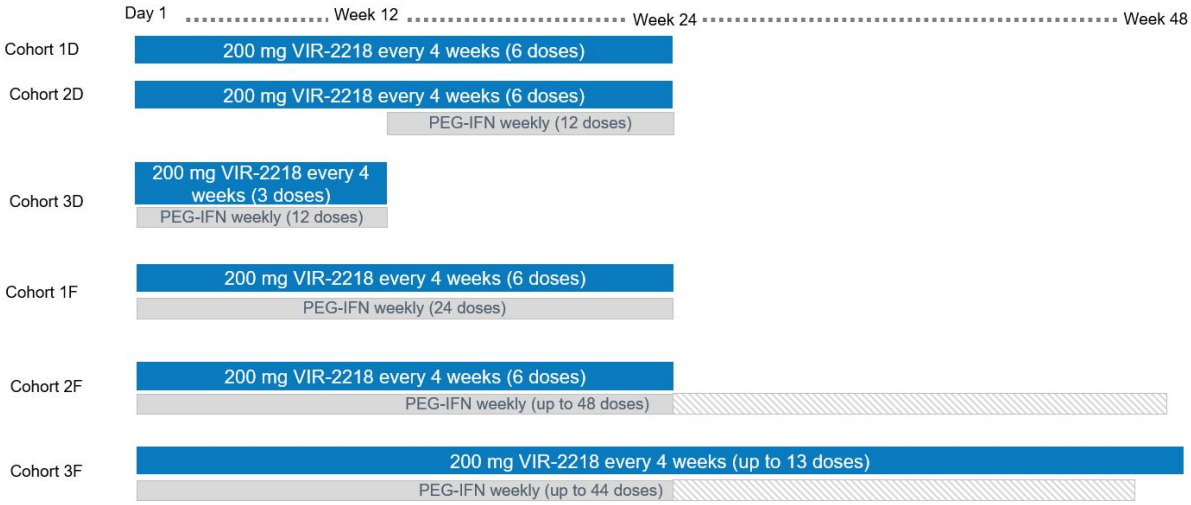
Clinical Data. To date, all Part A cohorts have completed dosing up to 3,000 mg administered intravenously. The trial's Safety Review Committee, or SRC, has reviewed blinded safety data for at least two weeks post dose from all Part A cohorts. Based on this data, VIR-3434 was generally well tolerated in healthy volunteers with no clinical safety concerns. The majority of adverse events, or AEs, were Grade 1, and no Grade ≥ 3 AEs or SAEs were reported. No clinically significant effects on laboratory or electrocardiogram parameters were observed. All dose levels were associated with an acceptable safety and tolerability profile, as determined through a blinded review of data by the SRC.

In November 2021, we announced additional preliminary data from Part B in patients with chronic HBV on NRTIs receiving six mg, 18 mg, or 75 mg VIR-3434 or placebo. Blinded data for eight patients per cohort, two of whom received placebo and six of whom received a single dose of VIR-3434, showed that most patients rapidly achieved a > 1 $\log_{10}$ IU/mL decline in HBsAg within approximately 1 week post-dose, with most patients achieving HBsAg < 100 IU/mL at nadir. The largest and most sustained reductions in HBsAg were observed in the 75 mg cohort, in which mean reductions were 1.96 $\log_{10}$ IU/mL at nadir and 1.5 $\log_{10}$ IU/mL at Day 29. VIR-3434 was generally well tolerated, and all adverse events were Grade 1 or 2. The ability of a single dose of VIR-3434 to markedly lower HBsAg demonstrates VIR-3434 has the potential to play an important role in the functional cure of HBV. Additional data are expected in the first half of 2022.

Other HBV Combinations and New Product Candidates

Phase 2 Trial of VIR-2218 in combination with PEG-IFN-α. VIR-2218-1001 Parts D and F is a clinical trial evaluating the safety, tolerability, pharmacokinetics and antiviral activity of VIR-2218 alone and in combination with PEG-IFN-α in patients with chronic HBV infection on NRTIs. We initiated the dosing in the trial in July 2020. We decided not to pursue Part E evaluating 50 mg of VIR-2218.

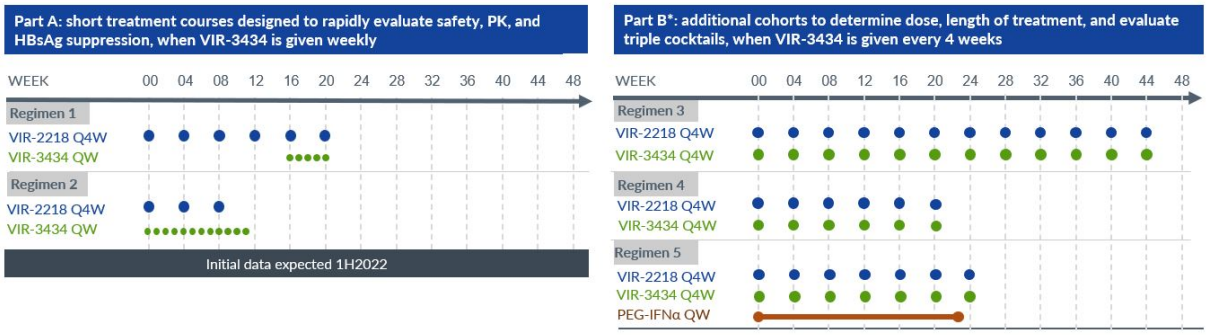
VIR-2218-1001 Parts D and F will evaluate multiple doses of VIR-2218 200 mg, alone or in combination with PEG-IFN-α starting on Day 1 or at Week 12. The trial cohorts are shown below.



VIR-2218-1001 Parts D and F are evaluating multiple doses of VIR-2218 alone or in combination with PEG-IFN-α in patients with chronic hepatitis B virus infection.

In November 2021, we announced additional data on our ongoing Phase 2 trial of 64 virally-suppressed adults with chronic HBV infection assigned to receive subcutaneously injected VIR-2218 alone or in combination with PEG-IFN-α for 24 weeks (cohort 1F). VIR-2218 in combination with PEG-IFN-α for 24 weeks from Day 1 resulted in a more rapid and substantial decline in HBsAg compared to VIR-2218 alone. Forty-eight of the 52 patients (92%) that completed 24 weeks in treatment achieved HBsAg < 100 IU/mL, 3 of these participants had HBsAg < LLOQ, including 2 that had anti-HBs seroconversion. The treatment regimen resulted in no new safety signals. The data continue to support the promising safety profile and potential durable response. Additionally, new findings also demonstrate that concurrent initiation of VIR-2218 and PEG-IFN-α therapy resulted in substantial HBsAg reductions compared to VIR-2218 alone or with PEG-IFN-α following a VIR-2218 lead-in. Additional data are expected in the first half of 2022.

Phase 2 Trial of VIR-2218 in combination with VIR-3434. In July 2021, we initiated the Phase 2 MARCH trial to evaluate the combination of VIR-2218 and VIR-3434 as a functional cure regimen for chronic HBV infection. We believe VIR-2218 and VIR-3434 have the potential to act in concert by inhibiting virion production, removing potentially tolerogenic HBV proteins, and stimulating new HBV specific T cells. Initial data are expected in the first half of 2022. As some of our clinical trial sites are in Ukraine and Moldova, we are monitoring the situation to determine any impact resulting from the current conflict in this region.



VIR-3434 18-75 mg dosing in Part A, dosing TBD for Part B; VIR-2218 200 mg dose in Part B; PEG-IFNα 180 mcg dose in Regimen 5*. QW= weekly; Q4W = every four weeks.*
**Not exhaustive - additional cohorts may be added*

Other Collaborators. In December 2021, we and Gilead initiated a multi-center, open-label Phase 2 clinical trial which is designed to evaluate the safety, tolerability and efficacy of various combinations of VIR-2218, selgantolimod, nivolumab and TAF in adults with chronic HBV. The trial will enroll approximately 120 patients ages 18 to 65 who are either viremic or are virally suppressed on an approved HBV NUC reverse transcriptase inhibitor. Patients who are hepatitis B e antigen (HBeAg)-positive (an indicator of acute viral replication), as well as those who are HBeAg-negative, will be enrolled. The primary efficacy endpoint is the proportion of patients who achieve a functional cure (defined as HBsAg loss and HBV DNA <20 IU/mL at follow-up week 24).

In April 2021, Brii Bio initiated a Phase 2 trial of VIR-2218 in combination with BRII-179, an investigational T cell vaccine, for the treatment of chronic HBV infection. Initial data are expected in the second half of 2022.

Furthermore, in parallel with the above development programs, research efforts are underway to use our innate immunity platform to identify and disrupt the host proteins necessary for HBV cccDNA formation and stability, which we believe could result in a complete cure. We also have an HBV therapeutic vaccine that leverages our T cell platform in preclinical development. This exemplifies the potential value of combining outputs from our four technology platforms to complex infectious diseases.

Universal Prophylaxis for Influenza A

Summary

We are developing VIR-2482 as universal prophylaxis for influenza A. VIR-2482 is a mAb that targets a conserved region of the influenza A hemagglutinin protein and consequently has the potential to prevent illness from any strain of influenza A, including seasonal and pandemic strains. In vitro, VIR-2482 has been shown to cover all major strains of influenza A that have arisen since the 1918 Spanish flu pandemic. Since flu vaccines have incomplete strain coverage and limited efficacy, the broad coverage of VIR-2482 may allow it to achieve higher protection levels and for it to be used year after year. In addition, because VIR-2482 is an antibody that can directly confer protection, it does not rely on a person to create his or her own antibodies. Thus, we believe VIR-2482 has the potential to be effective even in a person with a compromised immune system. VIR-2482 has been half-life engineered so that a single dose has the potential to last the entire flu season, which is typically five to six months long. VIR-2482 is currently in a Phase 1/2 clinical trial. VIR-2482 has been well-tolerated in the approximately 100 healthy volunteers dosed in Phase 1. Anticipating an increase in the incidence of influenza in the Northern Hemisphere this coming winter, we expect to initiate Phase 2 in the second half of 2022.

In May 2021, we signed the 2021 GSK Agreement to expand our existing collaboration to include the research and development of new therapies for influenza and other respiratory viruses. See the section titled “Our Collaboration, License and Grant Agreements—Collaboration Agreements with GSK” for a description of the 2021 GSK Agreement.

Disease Overview and Limitations of Current Standard of Care

According to the WHO, on average, each year the influenza virus is estimated to infect 1 billion people and results in 290,000 to 650,000 deaths globally. According to the CDC, in the 2018-2019 flu season, despite the availability of the flu vaccine, approximately 36 million people were diagnosed with influenza, 500,000 people were hospitalized, and 34,000 people died from influenza in the United States alone. Thus, more Americans died of influenza in the 2018-2019 flu season than from prostate cancer in all of 2019. The large majority of these influenza-related deaths occurred in the elderly and/or those with comorbidities at high risk for severe disease. These patients comprise a population with a high unmet need for better preventive measures. For example, there are 16 million Americans with a known diagnosis of chronic obstructive pulmonary disease, the care of whom is estimated to directly cost up to $49 billion annually. Up to 12% of chronic obstructive pulmonary disease acute exacerbations are thought to be attributable to influenza. Overall, it is estimated that the annual influenza-related economic burden is approximately $87 billion.

There are two major types of influenza virus: type A and type B. Influenza A has been associated with more severe illness and has been the source of all known influenza pandemics. A recent study of influenza hospitalized patients from 2016-2020 published by the BMC Infectious Diseases showed that 88% had influenza A and 12% had influenza B.

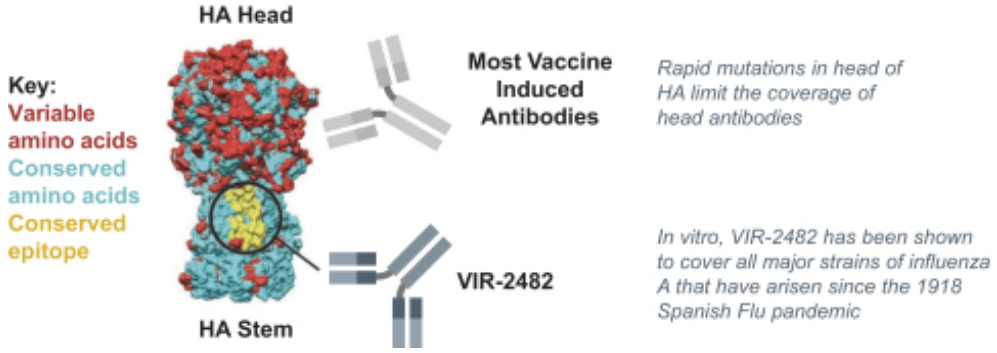
According to the CDC, the efficacy of the seasonal flu vaccine has ranged from 10% to 60% over the past 16 years, with an average of 40%, overall, across all populations. The seasonal flu vaccine's efficacy in the elderly, defined as those 65 and older, has been found to be notably lower, in some flu seasons as low as 10%. The limited success rate of influenza vaccines has been attributed to two primary factors. First, flu vaccines have incomplete strain coverage and therefore often do not provide protection against all strains of influenza that circulate in a given season, despite being updated every year.

Second, flu vaccines are active immunizations that rely on a person's own immune system to create protective influenza virus antibodies, and many individuals do not generate an effective immune response. Clinical and technological advances in flu vaccines, such as cell-based manufacturing, mRNA-based vaccines and higher dose administration, do not address these two fundamental limitations.

VIR-2482 for Influenza A

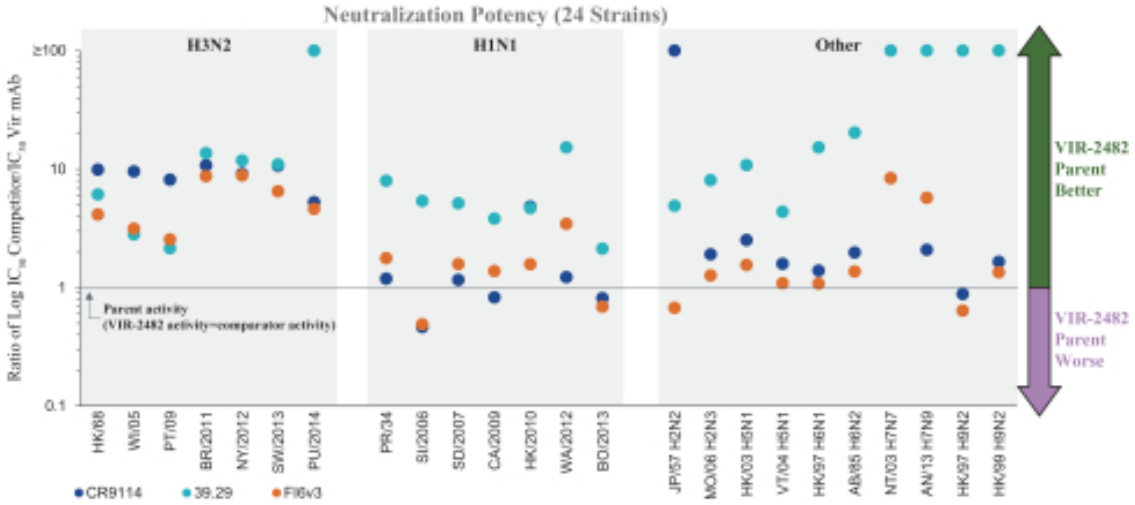
Molecular Characteristics and Preclinical Data. VIR-2482 is an investigational mAb targeting a functionally conserved epitope on the influenza A hemagglutinin protein located within the stem region. We believe that all strains of influenza, past and future, have and likely will contain this conserved epitope within the stem region. In preclinical studies, we have demonstrated that, in vitro, VIR-2482 covers all the major strains of influenza A that have arisen since 1918. Thus, unlike flu vaccines, whose incomplete strain coverage results in limited efficacy despite being updated every year, the broad coverage of VIR-2482 may allow it to achieve higher protection levels and to be used year after year. In addition, because VIR-2482 is an antibody that can directly confer protection, it does not rely on a person to create his or her own antibodies. Thus, we believe VIR-2482 has the potential to be effective irrespective of the status of a person's immune system.

Notably, in a 2019 clinical epidemiology study, it was observed that the presence of rare, stem-binding influenza antibodies correlated with protection from influenza infection.



VIR-2482 targets a highly conserved region of the influenza virus and exhibits potency against the last century of influenza viruses*. Following vaccination, most anti-influenza antibodies target the variable head region. VIR-2482 binds to the stem region which is highly conserved over time. HA = hemagglutinin.*

While other stem-binding influenza A antibodies have been identified, we have demonstrated that VIR-2482 has the broadest coverage when compared to a large representative panel of stem-binding mAbs. In prophylactic lethal challenge studies of influenza A in mice, VIR-2482 was able to protect mice from death at VIR-2482 exposures we believe to be clinically relevant. We have also demonstrated that the parent form of VIR-2482, an antibody that has the same antibody binding domain (Fab) as VIR-2482, has, in general, greater potency, when compared to three other stem-binding mAbs, as shown in the figure below.

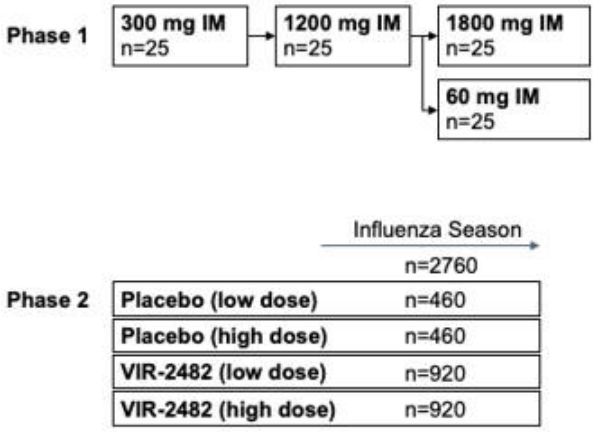


Neutralization potency of four stem-binding antibodies*. VIR-2482, and three other third-party antibodies, CR9114, 39.29, and FI6v3, were tested for their neutralization potency against 24 representative strains. These strains were selected to cover the antigenic variation of the seasonal H1N1 and H3N2 strains back to 1938 and 1968, respectively, and strains from other subtypes that infected humans in past pandemics or that caused sporadic animal-derived outbreaks.*

We engineered the parent form of VIR-2482 to extend its half-life to create VIR-2482, which incorporates Xencor's Xtend™ technology. This half-life extension potentially allows for a single injection of VIR-2482 given at the start of the influenza season to maintain a protective concentration in the respiratory tract for the duration of the influenza season.

Phase 1/2 Trial of VIR-2482. VIR-2482-3001 is a clinical trial designed to evaluate the safety, tolerability, pharmacokinetics and efficacy of VIR-2482. The current trial design of VIR-2482-3001 is shown below. This trial is designed to include up to 2,860 healthy volunteers across the Phase 1 and Phase 2 portions.

The Phase 1 portion of this trial is a single ascending dose trial in healthy adult volunteers with endpoints of safety, tolerability, and pharmacokinetics, or PK, when VIR-2482 is administered IM. Healthy volunteers in the Phase 1 portion may receive a second dose, one year later, to evaluate for the possibility of anti-drug antibodies. The Phase 2 portion of this trial is planned to be a dose-ranging, double-blind, placebo-controlled trial in healthy adult volunteers. The primary efficacy endpoint of the Phase 2 portion is laboratory-confirmed influenza A illness with key secondary endpoints of severity and duration of illness due to influenza A.



VIR-2482-3001 clinical trial design in healthy adult volunteers.

We initiated dosing of the Phase 1 portion of the trial in August 2019 and have completed enrollment of all four dose cohorts (60 mg, 300 mg, 1200 mg, and 1800 mg) and subjects remain in follow-up. Overall, VIR-2482 was well-tolerated and is estimated to have a half-life of 58 days based on preliminary clinical data. Anticipating an increase in the incidence of influenza in the Northern Hemisphere this coming winter, we expect to initiate the Phase 2 portion of the trial in the second half of 2022.

Vaccine for HIV Prophylaxis

Summary

We are developing a vaccine to prevent HIV. We have designed VIR-1111 to elicit T cells that recognize HIV epitopes that are different from those recognized by prior HIV vaccines and to stimulate a different and specific type of T cell immune response to HIV, known as an HLA-E restricted immune response. An HLA-E restricted immune response has been shown to be associated with protection of NHPs from SIV. In December 2020, we initiated a Phase 1 trial for VIR-1111. VIR-1111 is a proof of concept vaccine, because, at minimum, changes to the vaccine antigen from HIV will be required before starting subsequent phases of clinical development. The need to alter the antigen within VIR-1111 or other aspects of the vaccine design to allow for further clinical development will require additional Phase 1 work with the altered product candidate. That Phase 1 clinical trial is currently estimated to begin two years after the commencement of the VIR-1111 Phase 1 clinical trial, adding approximately two years to any potential regulatory approval timeline for an HIV vaccine product candidate.

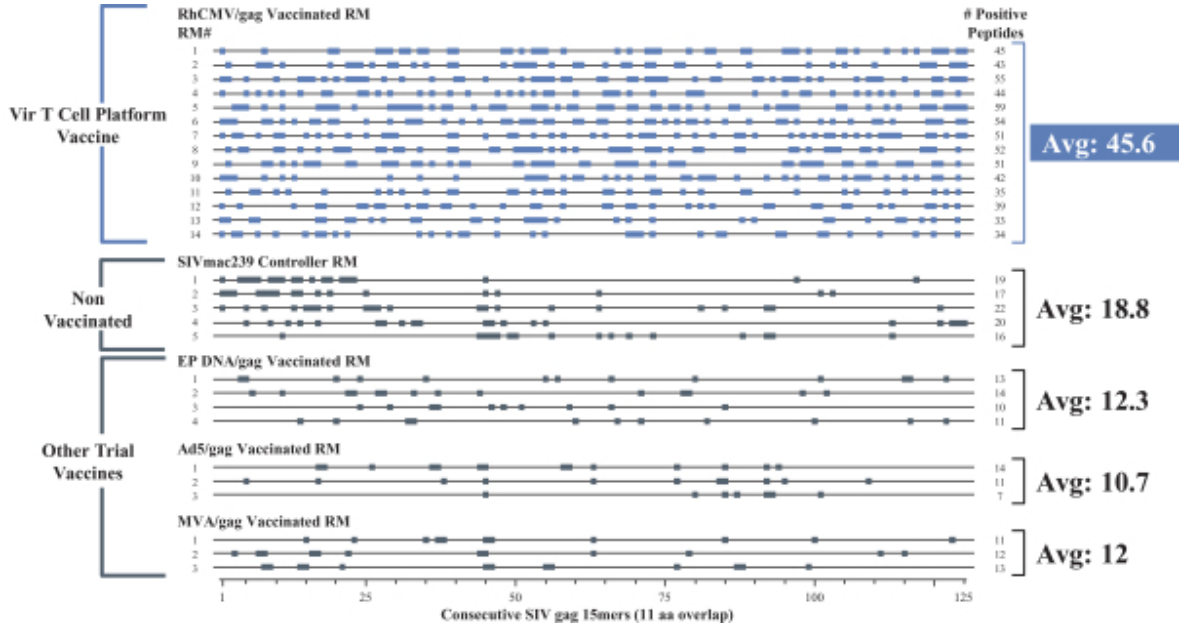
Disease Overview and Limitations of the Current Standard of Care

According to UNAIDS, each year there are approximately 1.5 million new cases of HIV and approximately 700,000 HIV-related deaths globally. Unless treated, infection with HIV results in an almost universally fatal disease, acquired immune deficiency syndrome, or AIDS. According to the World Health Organization, almost 36 million people have died from HIV-related illnesses globally.

Highly effective HIV treatments are now available, but these medicines only suppress HIV and are not curative. They require life-long administration and carry the risk for viral breakthrough and resistance. Furthermore, while HIV prevention programs based on behavioral modification, pharmacological intervention, use of barrier devices and other methods continue to be developed, such approaches have had at most a modest effect on HIV transmission globally in high-risk populations. Therefore, we believe the most effective means of curbing the worldwide HIV epidemic would be a safe and effective vaccine for individuals who are or may become sexually active. We believe that the target population for an HIV vaccine is comprised of billions of individuals and is potentially larger than the target population for Gardasil®, a vaccine to prevent human papillomavirus and the cancers human papillomavirus causes, due to the higher lethality associated with HIV. In 2020, Gardasil® revenue approximated $4.0 billion. Despite nearly 30 years of intensive efforts, no vaccine for HIV has been successfully developed.

VIR-1111 for HIV

Molecular Characteristics and Preclinical Data. VIR-1111 is a proof of concept T cell vaccine based on HCMV that is designed to elicit T cells that recognize parts of HIV epitopes that are different from those recognized by prior HIV vaccines, and to stimulate a different and specific type of T cell immune response to HIV, known as an HLA-E restricted immune response. In NHP models, T cell vaccines based on an RhCMV elicited T cells that recognized 3-4 times the number of epitopes compared to other vaccine platforms; the specific epitopes recognized were also different, as shown in the figure below. SIV is the NHP equivalent of HIV.



Number of epitopes recognized by T cells using RhCMV compared to other vaccine vector technologies or NHPs naturally achieving SIV control*. Each line represents a different NHP. Each box denotes the relative location of the epitope within the antigen that is recognized by the T cells elicited by that vaccine vector or SIV. The total number of epitopes recognized is shown on the right. RM = rhesus macaque; SIVmac239-controller = infected with a virulent strain of SIV; EP DNA/gag = electroporation of DNA expressing the SIV gag protein; Ad5/gag = Adenovirus type 5 expressing the SIV gag protein; MVA/gag = Modified vaccinia virus Ankara expressing the SIV gag protein.*

Further, in such NHP models, introducing different mutations to RhCMV allows the vector to be programmed to elicit an HLA-E restricted immune response. An HLA-E restricted immune response has been shown to be associated with protection of NHPs from SIV. In these series of experiments, large groups of NHPs were given an RhCMV-based vaccine, which protected more than 50% of the NHPs from repeated exposure to SIV.

Preliminary data suggest the ability to predict which NHPs will be protected from SIV after administration of the RhCMV-based vaccine. This is made possible using transcriptomic signatures, a blood test that evaluates how cells in the body respond to the vaccine. Transcriptomic signatures will be analyzed in human clinical trials. If protection effectiveness is found to be less than 100%, such data may allow us to predict who will be protected as well as to generate next-generation vaccines.

Phase 1 Trial of VIR-1111. VIR-1111-2001 is a multiple ascending dose clinical trial designed to evaluate the safety, tolerability, reactogenicity and immunogenicity of VIR-1111 in CMV-positive healthy adult volunteers. The immunogenicity evaluation includes an assessment of the breadth and nature of the T cell response to the vaccine. The current trial design of VIR-1111-2001 is shown below. We initiated a Phase 1 clinical trial for VIR-1111 in December 2020. The manufacture and early clinical development of VIR-1111 is funded by the Bill & Melinda Gates Foundation. Modifications to VIR-1111 will be required before subsequent phases of clinical development, as VIR-1111 is a proof of concept vaccine and will not in its current format result in a commercial product. No safety signals have been reported to date and we expect to have additional clinical data in the first half of 2022.

VIR-1111-2001 is a multiple ascending dose escalation trial in CMV seropositive, HIV uninfected healthy adult volunteers. *Arrows indicate trial progression. CMV = cytomegalovirus, HIV = human immunodeficiency virus, SC = subcutaneous, ffu = focus forming units*

Technology Platforms

Platforms for the Creation of Transformative Medicines for Infectious Diseases

We have purposefully assembled a portfolio of technology platforms that we believe will, individually or in combination, allow us to stimulate and enhance the immune system in innovative ways and to exploit the vulnerabilities of pathogens. Our current platforms are focused on antibodies, T cells, the innate immune response and siRNAs. We have assembled these platforms through internal development, collaborations and acquisitions. We are using our platforms, and continue to evaluate others, to advance our current product candidates and generate additional product candidates for multiple indications.

We follow the science to select the modality, or combination of modalities, that gives us the highest chance of success for a specific infection in a given patient population. The diversity of our different platforms allows us to select the best modality or modalities for a given clinical need.

Antibody Platform

Overview

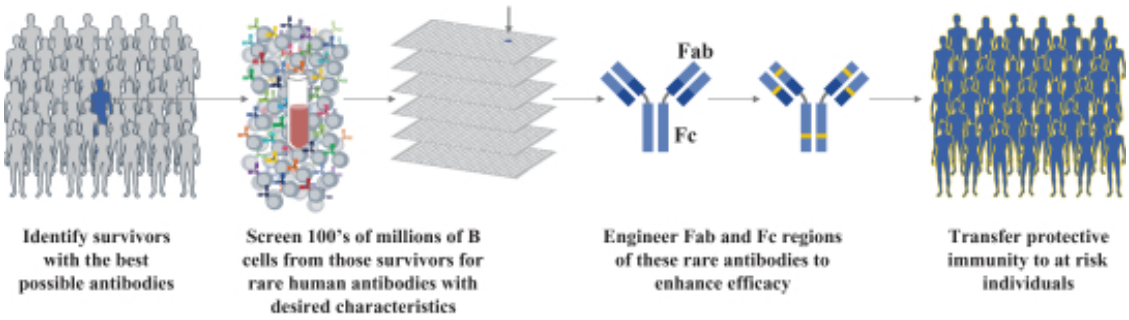
We are using specialized mAbs to treat or prevent rapidly evolving and/or previously untreatable pathogens. These mAbs act in a variety of ways, including direct pathogen neutralization and immune system stimulation. We combine high-throughput, rapid isolation of rare, highly potent, broad-spectrum and fully human antibodies with targeted engineering to enhance their therapeutic potential. We expect that these specialized mAbs can be administered to transfer protective immunity to all at-risk individuals.

We expect the following benefits from our antibody platform:

- Effective regardless of an individual’s ability to generate his or her own immune response
- Diminished likelihood of self-reactivity because they are selected in humans
- Broad coverage of most or all strains of a pathogen, or even multiple pathogens
- High affinity binding to conserved pathogen antigens, resulting in a high barrier to resistance
- Longer half-life than naturally occurring antibodies
- Potential to induce a vaccinal effect, i.e., to elicit continued protection even after the mAb is no longer present

Sotrovimab (previously VIR-7831), VIR-7832, VIR-3434 and VIR-2482 were generated using our antibody platform.

Our Approach



We use a proprietary antibody screening technology that allows us to characterize the antibodies produced from hundreds of millions of B cells derived from survivors of an infection to identify those rare antibodies that have the characteristics needed to create an effective medicine. Rare characteristics include, for example, the ability to bind to a highly conserved antigen within a pathogen and the ability to neutralize multiple different pathogens. We refer to this technology as High Throughput Isolation since we are able to screen hundreds of millions of B cells to find rare antibodies in just weeks.

Following isolation, we clone the antibody genes and express the resulting fully human antibody for further trials, engineering and development.

We have applied these methods to identify mAbs for a range of pathogens including SARS-CoV-2, HBV, influenza A and influenza B virus, Ebola, RSV, malaria, *clostridium difficile*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, and *Acinetobacter spp.* Examples of the power of this platform are Xevudy® (sotrovimab, formerly known as VIR-7831), our anti-SARS-CoV-2 mAb, and Ebanga (ansuvimab-zykl, formerly known as mAb114), the anti-Ebola virus mAb identified by our scientists in collaboration with the NIH and others and marketed by Ridgeback Biotherapeutics LP.

Precision Antibody Engineering to Create the Best Medicines

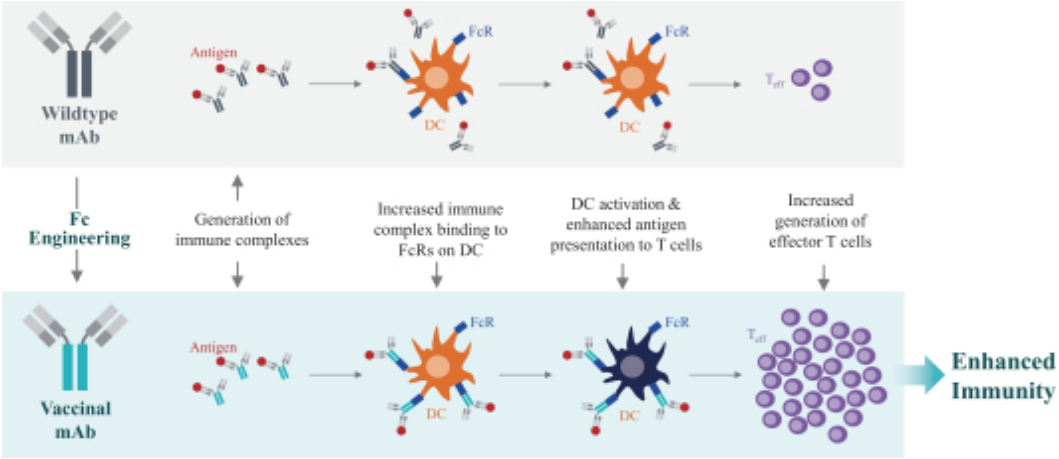
Our strategy is to optimize both the Fab and Fc domains of a mAb to generate the best medicine to treat or prevent infection. Having isolated a rare, fully human antibody via High Throughput Isolation, we then engineer as desired both parts of the mAb, the Fab and Fc domains, to enhance efficacy, potency and manufacturability. The Fab portion binds to the protective antigen on the pathogen. The Fc portion binds to effector proteins and cells in the body to engage the immune system in killing and clearing the infection.

Fab engineering is performed to further increase mAb potency and breadth of coverage. mAb potency and breadth are based on the epitope bound, affinity of binding and valency. In some cases, it may be valuable to create mAbs that bind to more than one epitope, so-called "multi-specific" mAbs, by engineering the Fab region. There are many approaches to creating multi-specific antibodies, and we are exploring a number of them, including some that naturally occur in people. We believe that naturally occurring multi-specific antibodies can be leveraged to create new and potent therapeutics and to enhance antibody prophylaxis of disease, and have the potential for higher manufacturing yields and better pharmacokinetics in patients, as compared to artificial multi-specific formats currently being developed.

Fc engineering selects and optimizes the specific ways in which mAbs engage Fc receptors, or FcRs, which in turn govern "effector functions" such as the half-life of the antibody and the way that the immune system is recruited by the mAb to fight infection. Effector functions can be enhanced or reduced via Fc mutations that alter the binding affinity of the Fc domain of a mAb to the various FcRs, based on a detailed understanding of the role of individual FcRs in half-life and immunity. Examples of immunity that can be altered in this way include the recruitment of serum proteins to infected areas, phagocytosis and destruction of viruses and viral particles, the killing of virus-infected cells through a process known as ADCC and the presentation of antigens to elicit B and T cell immunity.

Antibodies as T Cell Vaccines

We are using Fc engineering to create antibodies that are designed to not only directly treat or prevent infection but also to immunize an infected individual against future infections. We refer to this property as a vaccinal effect, i.e., eliciting continued protection even after the mAb is no longer present. This technology benefits from the fact that FcRs on specialized antigen-presenting cells, which are called dendritic cells, or DCs, internalize complexes of antibody and antigen. Our strategy leverages the observation that different FcRs on antigen presenting cells can bind different parts of the Fc portion of the mAb. By engineering the Fc region, we can select which FcRs interact with the antibody-antigen complex to generate activated DCs that we believe can effectively induce T cell immunity.



Design and mechanism of vaccinal antibodies intended to induce enhanced immunity through induction of T cells*. The Fc portion of mAbs interacts with FcRs on DCs to trigger uptake of antigen and induction of T cells. Engineering of the Fc portion of the mAb is predicted to increase the induction of T cells by these DCs.*

Specific vaccinal mutations in the Fc domain can enhance immune responses to a pathogen in two ways. First, the mAb can deliver increased amounts of antigen to DCs. Second, FcRs deliver signals that activate DCs. In turn, activated DCs can stimulate T cells specific to the delivered antigen, resulting in T cell immunity. In this way, an antibody with vaccinal mutations can potentially actively immunize infected patients. The in vivo data supporting enhancement of the vaccinal effect through Fc mutants has been demonstrated by others in a CD20 positive tumor model, using mice with humanized Fc receptors. In this experiment, anti-CD20 mAbs and CD20 tumor cells were administered to mice months before being later rechallenged with a lethal dose of CD20 tumor cells. 80% of the mice who received a mAb with Fc mutants that enhanced binding to activating FcRs IIa and IIIa survived. Conversely, 70% or more mice who received a mAb without the enhancing Fc mutations died. This durable protection is believed to be the result of the induction of a T-cell response. We are testing this technology in chronic HBV infection with VIR-3434 and in COVID-19 infection with VIR-7832, and if it performs as expected, we believe it may have applicability to multiple other infections including influenza and HIV.

T Cell Platform

Overview

T cells can prevent or control infection and cancer. T cells are diverse in how they sense pathogens and cancer cells, the tissues that they protect and the effector functions that they use to control infection or cancer. Our approach is to use HCMV as a vaccine vector to potentially treat and prevent infection by pathogens refractory to current vaccine technologies because HCMV may induce potent and long-lasting T cell responses to a broader range of epitopes than observed for other viral vaccines. In addition, we can make proprietary modifications in the HCMV genome that we expect will elicit different types of pathogen-appropriate T cell responses. Experiments in NHPs demonstrate the ability of vaccine vectors based on the closely related RhCMV to protect against SIV, a close relative of HIV, and TB, two of the most challenging infections for which to create effective vaccines.

HCMV infects a large proportion of the human population and causes a life-long asymptomatic infection that typically causes no harm. This is due to millions of years of co-evolution between the virus and host in which the virus evades

sterilizing immunity using specialized viral genes, while at the same time allowing the generation of certain T cell responses that prevent HCMV infection from becoming lethal.

We expect the following benefits from our T cell platform:

- Highly potent and long-lived T cell responses throughout the body
- Induction of high numbers of specialized T cells, known as effector memory cells, that allow control of disease in the first few days after infection
- Immune responses to three- to four-fold more antigenic epitopes in a target protein than other viral vectors
- Programmable T cell responses allowing selection of the type of T cells elicited
- Generation of universal T cells that may be active in most or all people despite high genetic variability between people in immune response genes
- Opportunity for repeated vaccination using the same backbone HCMV vector against different infections
- Opportunity to use the same vaccine to protect against multiple pathogens
- Potential to induce responses even to proteins that the host is tolerant of, such as self-proteins expressed in a tumor

VIR-1111 was generated using our T cell platform.

Our Approach

We believe that the type of T cell response elicited by an HCMV-based vaccine vector can be selected by mutating certain genes in HCMV. We term this approach “immune programming.” We believe that immune programming is critical to combatting infections such as HIV and TB that have proven intractable, to date, for other vaccine technologies.

Immune programming is best understood in the context of the normal processes that elicit T cell immunity. T cells that fight infection and cancer are elicited by DCs, as well as other types of cells. The elicited T cells detect small peptide fragments from antigens on the surface of DCs and other antigen presenting cells, which have been captured in grooves found within specialized proteins encoded by major histocompatibility complex, or MHC, genes.

The unique immunology of HCMV depends on the virus’s ability to regulate the normal immune processes of antigen presentation by MHC genes. HCMV contains multiple genes that regulate many of the steps in antigen presenting cells that elicit T cell immunity by altering antigen presenting cell biology, the types of antigen presenting cells infected by the viral vaccine and the mechanisms responsible for the ability of a T cell to recognize antigens together with MHC molecules. Through manipulation of the HCMV genome, we believe we can program different types of pathogen-appropriate T cell responses.

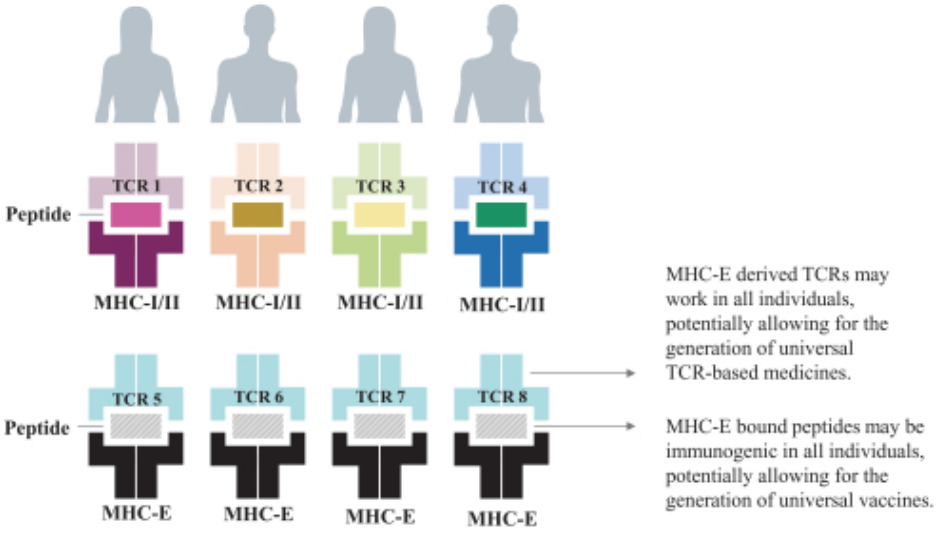
MHC-E as a Near-Universal Target for Medicines that Leverage T Cell Receptors

T cells need to be able to recognize a highly diverse set of pathogen proteins to be effective. This diversity comes from the use of multiple different host immune response MHC genes to present foreign antigens to T cells. Some immune response MHC genes are highly variable between individuals, while others are less variable between individuals as illustrated below. The immune response MHC genes that are highly variable between individuals are responsible for most T cell responses. These MHC molecules enable T cells to recognize foreign proteins through the use of a highly specialized T cell receptor, or TCR, on the T cell surface.

An important consequence of the inter-individual variation in some immune response MHC genes is that a TCR that recognizes an antigenic peptide associated with one person’s MHC molecules could attack even normal tissues of a person with different MHC genes. As a result, identifying universal TCRs and universal T cell antigens that work in all people has been very challenging.

Our T cell platform may enable us to create vaccines or other types of medicines that are near universal in their effects on human immunity. The programmed T cell responses elicited by engineered HCMV vectors are predicted to use immune response MHC genes that vary minimally between people, instead of the highly variable immune response MHC genes

targeted by other types of vaccines. As demonstrated by the graphic below, TCRs recognizing antigenic peptides together with MHC-E may be functional in all individuals, potentially allowing for the generation of universal TCR-based medicines, such as off-the-shelf cancer cell therapy. The peptides presented by MHC-E may be immunogenic in all individuals, potentially allowing for the generation of universal infectious disease and cancer vaccines.



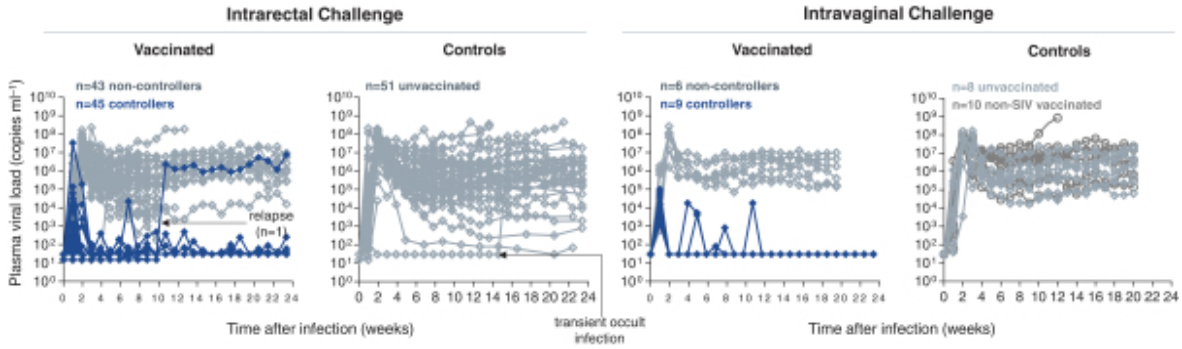
Comparison of standard T cell responses to MHC-E responses*. Peptides that are bound to MHC-I, -II or -E proteins are expressed on cell surfaces where they are recognized by T cell receptors on T cells (TCRs). This interaction results in the expansion of T cells that can recognize diverse antigen peptides (top row) and that carry out functions that protect the host. Since MHC-I and MHC-II molecules are highly variable between people, peptide presentation to TCRs has a high degree of individual specificity, as illustrated by the different colors of each peptide in the top row. In contrast to MHC-I and MHC-II, MHC-E proteins (bottom row) are conserved in the human population.*

Specifically programmed RhCMV vectors can elicit strong T cell responses that target MHC molecules which vary minimally between NHPs. One such protein is MHC-E. The fundamental discovery, by some of our founders, that enables this part of our T cell platform is that RhCMV responses can be programmed to generate abundant MHC-E-restricted T cells.

We believe that using our T cell programming approach will allow us to select vaccine antigens and to identify TCRs that work across the human population. An example of a use of such a TCR would be creating a biological product that specifically recognizes infected cells in all individuals.

Programming T Cell Responses to Create HIV and TB Vaccines

Two of the most challenging infections for vaccine development are HIV and TB. Preclinical studies have demonstrated that programmed RhCMV vectors can be used to vaccinate against either SIV or TB in NHPs. For example, as shown in the figure below, in an NHP study, an MHC-E programmed RhCMV vaccine effectively protected more than half of NHPs from infection when challenged with a highly virulent form of SIV, under conditions in which all animals in the control group became infected. SIV vaccines programmed in other ways were not protective, demonstrating the potential value of having a programmable T cell vaccine platform.



Primary data for the protective effects of RhCMV-derived T cell vaccines on SIV infection*. Rhesus monkeys were vaccinated with an RhCMV vaccine that elicits CD8 T cells recognizing SIV peptides presented by MHC-E and MHC-II or a control before challenge with SIV by rectal or vaginal routes. SIV genome copies were measured in peripheral blood (vertical axis) at intervals after challenge (horizontal axis). SIV infection was cleared in approximately 51% of intrarectal challenged animals and approximately 60% of intravaginal challenged animals while the infection was progressive in all unvaccinated controls.*

Protection has also been observed against TB in preclinical studies of NHPs after immunization with either of two different RhCMV vaccines. One of the protective vaccines was programmed to elicit MHC-II and MHC-E responses, while the other was programmed to elicit a response depending on MHC-I genes. This shows the potential significance of being able to specifically program a T cell vaccine to target a given infection, as the programming of a vaccine to protect against SIV can be different from the programming of a vaccine to protect against TB. These preclinical data support our plans to use our T cell platform to vaccinate against HIV and TB.

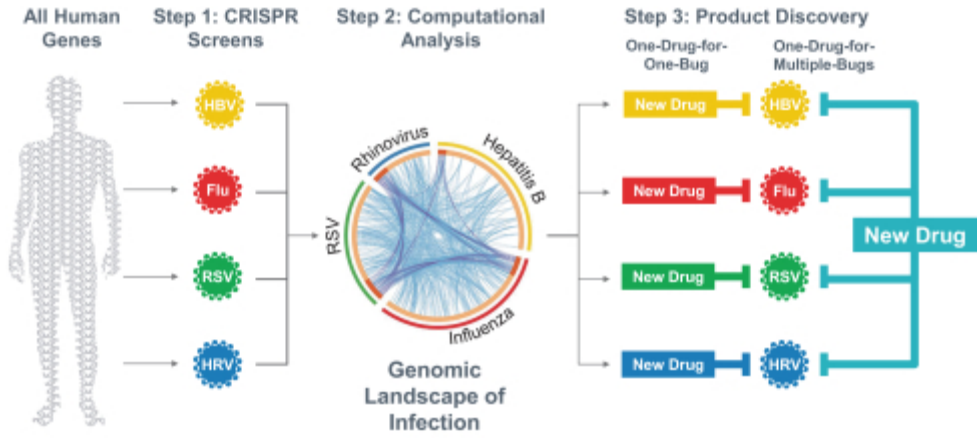
The Bill & Melinda Gates Foundation is providing funds for the process development and manufacturing and early clinical development of our HIV and TB vaccine programs. If proof of concept for the potential efficacy of our T cell vaccine platform is obtained in currently planned clinical trials, we plan to apply this T cell platform for treating additional types of infections, as well as potentially even cancers.

Innate Immunity Platform

Overview

Innate immunity protects us during the early stages of infection until antibodies and T cells can be generated by the immune system. Importantly, innate immunity is not pathogen-specific. We believe that we can target innate immunity to create medicines that break the “one-drug-for-one-bug” paradigm by producing “one-drug-for-multiple-bugs.” We term this concept “host-directed therapy” because the medicine would target a host protein instead of pathogen proteins, which are the target of standard antibiotics and antivirals. We can also identify proteins that are critical for a high priority infection, such as HBV, for which host-directed therapy might be part of a functional cure or complete cure. This platform may also identify targets relevant to diseases outside of infection.

Our scientists have developed and applied cutting-edge CRISPR-based genetic technologies to identify host genes that regulate innate immunity and/or pathogen replication. We have built internal capacity to systematically extend such trials to multiple pathogens and multiple aspects of innate immunity. We have joined the Broad Institute's Functional Genomics Consortium, which provides us access to cutting-edge CRISPR reagents and computational services for whole-genome and custom-designed genetic screens.



Design of steps in our innate immunity platform*. We are systematically mapping the genes that regulate pathogen control across a diverse set of pathogens. To accomplish this, advanced gene editing technology (CRISPR) is used to create cell libraries in which individual genes are either knocked out or activated. By exposing these cell libraries to pathogens of interest, under different screening conditions, we can systematically create genomic maps that identify genes that could lead to pathogen control. By computationally comparing these genomic maps, genes or pathways that are common to multiple pathogens can be identified and could lead to the development of products that could treat more than a single pathogen. Human rhinovirus = HRV.*

We expect the following benefits from our innate immunity platform:

- Enhancement of the potency of innate immunity, allowing for control of multiple unrelated pathogens
- High barrier to resistance since the targeted host protein is not likely to mutate
- Identification of key host targets in areas outside of infectious disease

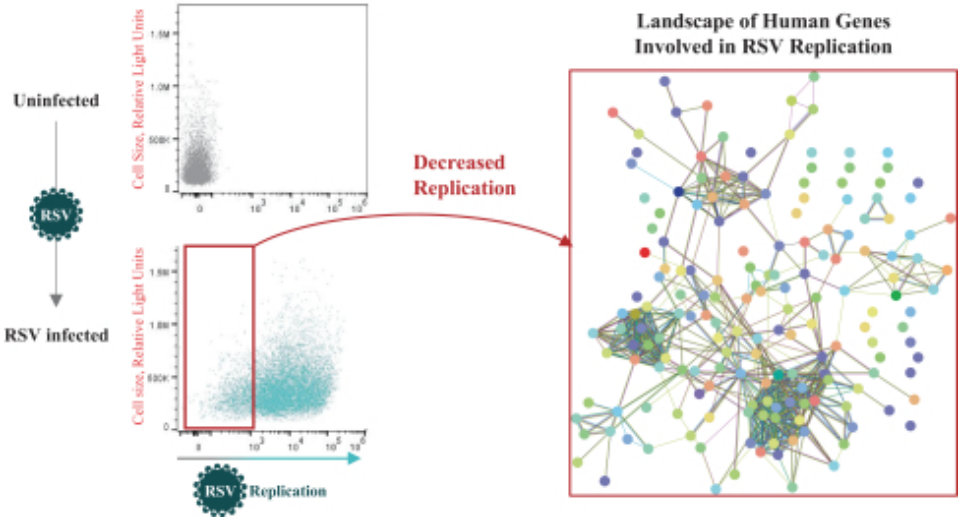
Our Approach

Our innate immunity platform envisions three steps leading to new medicines, as illustrated in the figure above.

Step 1: CRISPR Screens to Map the Genomic Landscape of Infection and Innate Immunity

Multiple types of proteins participate in innate immunity and infection, as they may be required for entry, replication, gene expression, pathogenicity and/or innate immune control of an infectious agent.

To identify such proteins, we screen CRISPR-derived cell libraries after infection, treatment with cytokines that trigger innate immunity, or both, and then select cells with desired properties. Using next-generation sequencing, we identify genes responsible for the desired property. By combining these data across screens and across pathogens, our team has created, and is continuously expanding, a proprietary database of the genomic landscape of infection and innate immunity.



CRISPR screen for genes involved in RSV replication*. A CRISPR cell library was prepared in cells in which RSV can replicate. After a period of infection with an RSV strain expressing a fluorescent protein which serves as a surrogate for viral replication, cells were separated using flow cytometry into populations in which RSV replication was decreased or increased. Deep sequencing of the population exhibiting decreased replication compared to control revealed candidate genes required for efficient replication. Computational analysis represented on the right panel revealed that some of these genes fall into nodes that function in specific cellular processes. These nodes are represented as dots interconnected with a dense network of lines.*

As an example, to identify genes required for RSV growth, we performed a screen in which a CRISPR-generated cell library was infected with RSV, as shown in the figure above. We then purified and sequenced populations exhibiting low or high RSV growth. Sequencing of the RSV low population revealed genes potentially required for RSV infection. When analyzed computationally, these genes fell into sets involved in specific cellular processes. These genes are potential targets for product candidates. We performed a similar screen with the influenza A virus and HRV and found that certain genes are shared between RSV, influenza A virus and HRV. Targeting such proteins might result in a pan-respiratory virus product candidate capable of treating RSV, influenza A virus and HRV.

The result from this step of the innate immune platform is a continuously updated database of the genomic landscape of pathogen replication and innate immunity. We have already performed multiple screens, and additional screens and target validation trials are in progress.

Step 2: Computational Analysis for Identification of Product Targets

Results from CRISPR screens provide the critical data that helps identify host targets necessary for a given pathogen. When creating a single drug for multiple pathogens, host targets in common among multiple pathogens are identified. After having identified the critical set of host targets necessary for a pathogen or pathogens, the specific target for a new medicine is selected by computationally integrating diverse data sets that account for tissue gene expression, human genetic variation, redundancies in cellular pathways and protein-protein interaction networks, among other factors.

Step 3: Product Discovery

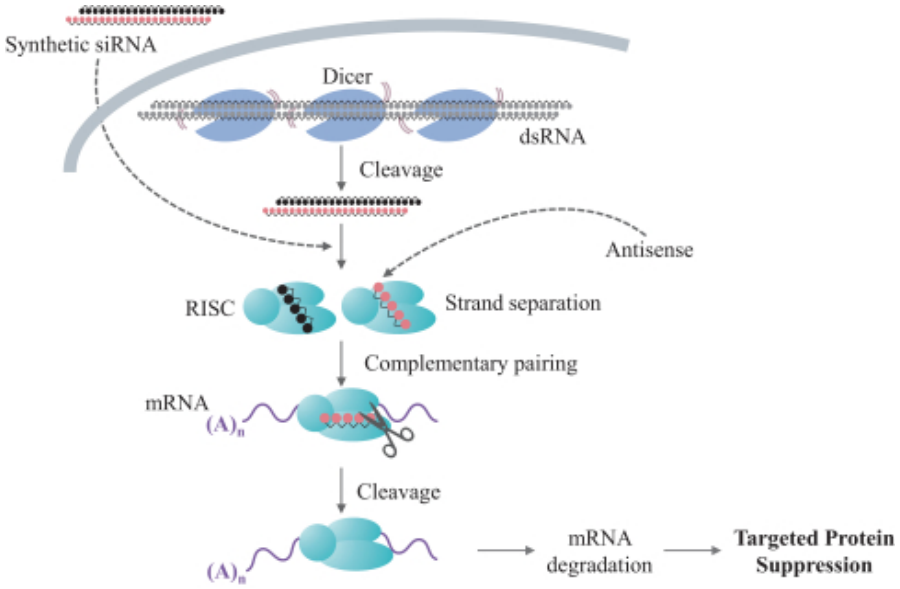
Once a specific target has been chosen, the modality used to disrupt the function of the target is then selected. Potential modalities may include small molecules, antibodies or siRNAs. Standard drug discovery efforts are then applied to identify a lead product candidate. Alternatively, machine learning and database mining can be used to identify pre-existing chemical matter that is already known to inhibit an identified host target. This chemical matter can then be verified as having

anti-pathogen activity, and serve as a lead compound. There are two potential outcomes from Step 3: one-drug-for-one-bug and one-drug-for-multiple-bugs.

siRNA Platform

Overview

Gene expression can be altered by two main types of synthetic oligonucleotides: (i) antisense oligonucleotides; and (ii) siRNAs. We believe that our current approach leveraging siRNAs may have safety and potency advantages over antisense oligonucleotides. The first FDA-approved siRNA in the United States was ONPATTRO® (patisiran), which was developed by our collaborator, Alnylam.



Mechanism of siRNA action to regulate gene expression*. Intracellular double stranded RNA, or dsRNA, is processed by the "dicer" complex to produce siRNAs that become integrated into a multi-subunit protein complex, the RNA-induced silencing complex, or RISC, which guides the siRNAs to the target messenger RNA, or mRNA, sequence. The siRNA duplex unwinds, and the antisense strand remains bound to RISC and directs site-specific cleavage of the target complementary mRNA sequence, resulting in mRNA degradation and reduced expression of the target protein. (A)n = polyadenylation.*

siRNAs act via an RNA interference, or RNAi, mechanism involving sequence-specific knockdown of target RNAs. Our bodies create their own so-called endogenous siRNAs, which act via the RNAi mechanism. This RNAi mechanism can be exploited by chemically synthesizing synthetic siRNAs that are introduced as medicines to knock down target RNAs that express pathogen or host proteins of interest. Pursuant to our collaboration and license agreement with Alnylam, we have an option to license Alnylam's siRNA technology for use in up to four other infectious disease targets in addition to VIR-2218 for HBV. See the section titled "Our Collaboration, License and Grant Agreements" for a description of the collaboration and license agreement.

We expect the following benefits from our siRNA platform and siRNAs generally:

- Cutting-edge siRNA design, through collaboration with Alnylam
- Direct anti-pathogen activity and potential for immunomodulation
- Diminished off-target siRNA effects via use of next generation ESC+ technology as a differentiator compared to other siRNA approaches, which has the potential to increase the therapeutic index

- Efficient targeting of siRNAs to the liver using GalNAc technology
- Extended effects of siRNA may last for weeks to months in humans

VIR-2218 was generated using our siRNA platform.

Our Approach

We have elected to develop modified siRNAs initially for infectious diseases of the liver because these product candidates can be administered subcutaneously, are highly stable in the blood stream and are efficiently delivered into hepatocytes via GalNAc sugar modification. Once in a liver cell, the siRNA can act to reduce pathogen or host gene expression. Such siRNAs can be further modified to reduce off-target activity, and potentially increase the therapeutic index. Since October 2017, we have collaborated with Alnylam to leverage this validated technology, with the goal of eliminating key host factors necessary for pathogen survival and removing microbial immune countermeasures.

We believe that HBV persists in part due to the expression of viral proteins such as HBsAg, which potentially inhibit antibody, T cell, and innate immune responses. This prevents the immune response from clearing HBV. By inhibiting the expression of these viral proteins, we envision enhancing immune function in persistently infected individuals. Furthermore, we believe that combining siRNA therapy with products derived from our other platforms, including antibodies, T cells and innate immune modulators, may allow us to rapidly advance a functional cure for HBV.

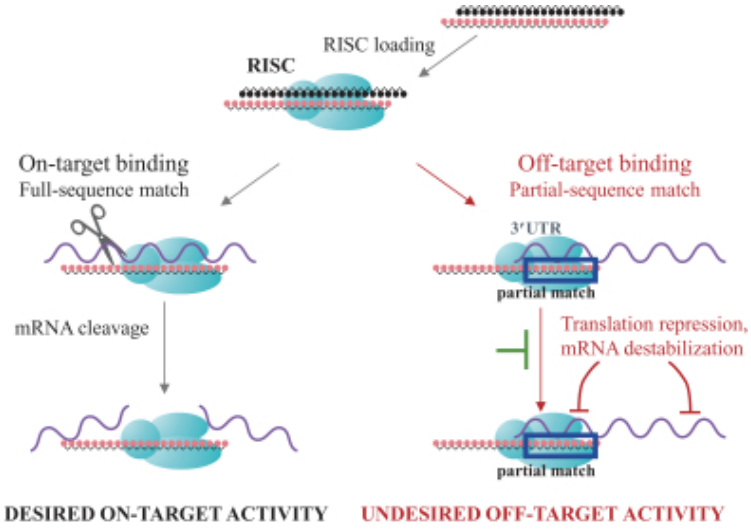
siRNA Delivery Mechanism

Since unmodified synthetic siRNAs can be unstable in the blood stream, methods to stabilize synthetic siRNAs have been pioneered by Alnylam including using their ESC technology.

An approach that has been used successfully to deliver siRNA to liver cells is to conjugate siRNAs to a specific sugar known as a GalNAc, whose receptor is exclusively expressed at high levels on hepatocytes, allowing for uptake of large quantities of siRNA into hepatocytes. Importantly, a GalNAc-conjugated siRNA can be delivered to the liver by subcutaneous injection, making administration relatively simple.

Potentially Enhancing the Therapeutic Index by Diminishing Off-Target Activity of siRNAs

A distinguishing characteristic of VIR-2218 siRNA, and of future siRNAs that we may develop with Alnylam, is the application of a new approach to diminish off-target effects of RNAi. siRNAs may cause unwanted alterations to non-target host RNAs, a process known as off-target activity, which can result in short- or long-term toxicity. To reduce off-target activity, which is thought to be due in part to microRNA, or miRNA, activity, it is necessary to preserve the RNAi activity of an siRNA while simultaneously decreasing its miRNA activity, as shown in the figure below. Alnylam scientists have pioneered placement of a modified nucleotide called a glycol nucleic acid, or GNA, into the part of the siRNA that generates miRNA-like activity. GNA modification has been shown to reduce miRNA activity, while preserving the RNAi activity of siRNA. The combination of GNA modification and other chemical modifications that enhance siRNA stability is called ESC+ technology. In animal models, reducing off-target miRNA activity can result in an increased therapeutic index of approximately five-fold. A higher therapeutic index has the potential to allow for higher siRNA doses and/or a longer duration of therapy, while maintaining a favorable safety profile. VIR-2218 was the first siRNA to enter the clinic with ESC+ technology.



On-Target and Off-Target Activity of siRNA*. siRNAs can have off-target activity when siRNA binds to mRNA with a partial sequence match, leading to translation repression or mRNA destabilization of unrelated messages (right side). This contrasts with the intended on-target activity of an siRNA, which binds to an mRNA through a match to the entire sequence, leading to mRNA cleavage (left side). mRNA = messenger ribonucleic acid; RISC = ribonucleic acid-induced silencing complex.*

Our Collaboration, License and Grant Agreements

Collaboration Agreements with GSK

2020 Collaboration Agreement with GSK

In June 2020, we entered into a definitive collaboration agreement with GSK, or the 2020 GSK Agreement, pursuant to which we agreed to collaborate to research, develop and commercialize products for the prevention, treatment and prophylaxis of diseases caused by SARS-CoV-2, the virus that causes COVID-19, and potentially other coronaviruses. The collaboration is focused on the development and commercialization of three types of collaboration products under three programs: (1) antibodies targeting SARS-CoV-2, and potentially other coronaviruses, or the Antibody Program; (2) vaccines targeting SARS-CoV-2, and potentially other coronaviruses, or the Vaccine Program, and (3) products based on genome-wide CRISPR screening of host targets expressed in connection with exposure to SARS-CoV-2, and potentially other coronaviruses, or the Functional Genomics Program. The initial antibodies under the Antibody Program are sotrovimab (previously VIR-7831) and VIR-7832.

For a period of four years beginning April 2020, the parties agreed to conduct certain research and development activities under mutually agreed development plans and associated budgets for each of the three programs, and under the oversight of a joint steering committee, or JSC. During such period, generally, subject to certain rights granted to WuXi Biologics under existing agreements between us and WuXi Biologics, the parties will have an exclusive research collaboration with respect to antibody products directed to SARS-CoV-2 or to any other coronavirus, and in connection with

functional genomics CRISPR screens for drug discovery and development in connection with SARS-CoV-2 or other coronaviruses. We are primarily responsible for the development and clinical manufacturing activities for the Antibody Program, and for conducting the initial development activities directed to a vaccine in the Vaccine Program. GSK is primarily responsible for the commercialization activities for the Antibody Program (except in connection with sales of antibody products licensed to WuXi Biologics in greater China), the later-stage development, manufacturing and commercialization activities for the Vaccine Program and the development, manufacturing and commercialization activities for the Functional Genomics Program. We and GSK are required to use commercially reasonable efforts to conduct the activities assigned to each party under each development plan and to seek and obtain regulatory approval for collaboration products that arise from such activities in the United States and specified major markets. Subject to an opt-out mechanism, we and GSK share all development costs, manufacturing costs and costs and expenses for the commercialization of the collaboration products, with us bearing 72.5% of such costs for the antibody products, 27.5% of such costs for the vaccine products, and we and GSK sharing equally all such costs for the functional genomics products, and all profits will be shared in the same ratios. If we and GSK elect to conduct a technology transfer of manufacturing technology under our agreement with WuXi Biologics (as further described below), we will bear 72.5% of the costs related to such manufacturing technology transfer and for commercial manufacturing of the antibody products under such agreement with WuXi Biologics, and GSK will bear 27.5% of such costs. The parties will also share the committed costs for the reservation of manufacturing capacity for the drug substance for antibody products in the foregoing ratio under our agreement with Samsung as well as such costs relating to committed manufacturing capacity for antibody products as are approved by the JSC from time to time.

On a collaboration product-by-collaboration product basis, each party has the one-time right, at specified points in development, to opt out of its co-funding obligations, and the other party may, at its election, either pursue such program unilaterally, or also cease research and development activities and funding of such collaboration product. If the opt-out provisions are not exercised by either party subject to the terms of the 2020 GSK Agreement, the parties share all profits and losses arising from any collaboration product in the same ratios in which the parties bore development costs for such collaboration program. For each collaboration product as to which a party exercises its opt-out right, the commercializing party pays to the opt-out party royalties on net sales of the applicable collaboration product at rates based on factors such as the stage of development of such collaboration product at the time the opt-out party exercises such right, and whether the opt-out party is the lead party, or a portion of the sublicense revenue if the commercializing party chooses to sublicense or otherwise divest rights to such collaboration product. On an antibody product-by-antibody product basis, we have a co-promotion right for such antibody product in the United States, under which we have the right to perform up to 20% of details in connection with such antibody product. GSK will lead commercialization and book all sales and is required to use commercially reasonable efforts to commercialize each collaboration product following regulatory approval in the United States and specified major markets. This definitive agreement superseded and replaced the April 2020 preliminary agreement with GSK. In connection with the 2020 GSK Agreement, we also entered into a stock purchase agreement in April 2020, pursuant to which we issued 6,626,027 shares of our common stock to Glaxo Group Limited, or GGL, an affiliate of GSK, at a price per share of $37.73, for an aggregate purchase price of approximately $250.0 million.

The 2020 GSK Agreement will remain in effect with respect to each collaboration program for as long as there is a collaboration product being developed or commercialized by the lead party, or the non-opt-out party, in such program. Either party has the right to terminate the 2020 GSK Agreement in the case of the insolvency of the other party, an uncured material breach of the other party with respect to a collaboration program or collaboration product, or as mutually agreed by the parties.

In December 2021, Beecham S.A. assigned and transferred all its rights, title, interest, and benefit in the 2020 GSK Agreement to GlaxoSmithKline Biologicals S.A., including all its rights to bring claims under such agreement.

2021 Expanded GSK Collaboration

In May 2021, we entered into the 2021 GSK Agreement under which the parties agreed to expand the 2020 GSK Agreement, to include collaboration on three separate programs: (1) a program to research, develop and commercialize mAbs for the prevention, treatment or prophylaxis of the influenza virus, or the Influenza Program, excluding VIR-2482 unless GSK exercises its option as described below; (2) an expansion of the parties' current Functional Genomics Program to focus on functional genomics screens directed to targets associated with respiratory viruses, or the Expanded Functional Genomics Program; and (3) additional programs to develop neutralizing mAbs directed to up to three non-influenza target pathogens selected by GSK, or the Selected Pathogens, and such programs, or the Additional Programs. Under the Influenza Program, we will collaborate to research, develop and commercialize our next generation mAbs for the prevention, treatment or prophylaxis of influenza. In addition, after we complete and report the Phase 2 clinical trial outcomes for VIR-2482, GSK has the exclusive option to obtain exclusive rights to co-develop and commercialize VIR-2482, or the Option.

In connection with the 2021 GSK Agreement, we entered into a stock purchase agreement with GGL pursuant to which we issued 1,924,927 shares of our common stock to GGL for an aggregate purchase price of approximately $120.0 million. The 2021 GSK Agreement superseded and replaced the preliminary agreement entered into with GSK in February 2021, or the 2021 Preliminary Agreement.

For a period of three years following the effective date of the 2021 GSK Agreement, or the Research Term, the parties will conduct certain research and development activities under mutually agreed development plans and associated budgets for the programs within the expanded collaboration. Subject to certain exceptions, we will exclusively collaborate with respect to (a) all of our mAbs that the parties agree to develop for the prevention, treatment or prophylaxis of the influenza virus, until such time there are none of our mAbs being developed under the expanded collaboration, (b) functional genomic screens for targets associated with respiratory viruses during the Research Term, and compounds or products developed through the Expanded Functional Genomics Program directed to a collaboration target for five years following the target selection (unless either party elects to opt-out earlier), and (c) products directed to Selected Pathogens during the Research Term. We will be responsible for continuing the development and clinical manufacturing activities for VIR-2482 unless and until GSK exercises the Option. If GSK does not exercise the Option for VIR-2482, then, in general, we have the right to continue the development and/or commercialization of VIR-2482 by itself or with a third party. GSK will be the lead party for development, clinical and commercial manufacturing, and commercialization activities for products under the Influenza Program (other than VIR-2482 unless and until GSK exercises the Option, if applicable). We will mutually agree upon the allocation of responsibility for the development of products under the Expanded Functional Genomics Program, and for the development and early-stage manufacturing of products under the Additional Programs if and when GSK decides which Selected Pathogens to pursue. GSK will be primarily responsible for commercial manufacturing and commercialization activities for products under the Expanded Functional Genomics Program and Additional Programs, if and when selected by GSK. For each collaboration program, upon execution of the definitive agreement, we will grant GSK certain license rights related to the development, manufacturing and commercialization of products arising from the program.

The parties will share 50% of all development costs in accordance with the budget for each of the collaboration programs (other than for the Selected Pathogens and VIR-2482, unless GSK exercises the Option), with each party having the right (on a target-by-target, or collaboration product-by-collaboration product basis, as applicable) to opt-out of its co-funding obligations at specified points in development. In such case, the party continuing with the program will pay to the opt-out party a royalty on net sales of products arising from such program at specified rates based on the stage of development at which the opt-out is exercised. Following the exercise of an opt-out right by a party the other party may, at its election, either pursue development and commercialization of such product or program unilaterally, or also cease the conduct and funding of such collaboration product or program. In the absence of any opt-out, the parties will also share 50% of all profits and losses arising from any collaboration product. Each party is required to use commercially reasonable efforts to conduct the activities assigned to it under each development plan and, where applicable, to seek and obtain regulatory approval for collaboration products that arise from such activities in the United States and specified major markets. GSK will lead commercialization and book all sales, and is required to use commercially reasonable efforts to commercialize each collaboration product following regulatory approval in the United States and specified major markets.

GSK made an upfront payment to us of $225.0 million, 50% became payable at the effective date of the 2021 Preliminary Agreement and 50% of became payable following the execution of the 2021 GSK Agreement. If GSK exercises the Option, GSK will pay us an Option exercise fee of $300.0 million unless certain agreed product criteria for VIR-2482 are not met, in which case the parties will negotiate an alternative option exercise fee. Upon achievement of a pre-defined regulatory milestone for the first product in the Influenza Program, which may be (i) VIR-2482 (if GSK exercised the Option), (ii) a next-generation mAb, or (iii) any other influenza mAb approved by the JSC to be included in the collaboration, arising from the Influenza Program, GSK will make a milestone payment to us of up to $200.0 million.

With respect to the Influenza Program and each Additional Program, unless earlier terminated, the 2021 GSK Agreement will remain in effect for as long as there is a product from such collaboration program being developed or commercialized by the lead party in the collaboration program or by the non-opt-out party, if applicable. With respect to the Expanded Functional Genomics Program, unless earlier terminated, the 2021 GSK Agreement will remain in effect (a) until the end of the Research Term, if no targets are selected for the Expanded Functional Genomics Program prior to the end of the Research Term, or (b) if at least one target is selected for the Expanded Functional Genomics Program prior to the end of the Research Term, for as long as there is a product from the Expanded Functional Genomics Program being developed or commercialized by the lead party in the Expanded Functional Genomics Program or by the non-opt-out party, if applicable. Either party has the right to terminate the 2021 GSK Agreement in the case of the insolvency of the other party, an uncured material breach of the other party with respect to a collaboration program or a collaboration product, or as mutually agreed by the parties.

Collaboration and License Agreement with Alnylam

In October 2017, we entered into a collaboration and license agreement with Alnylam, or the Alnylam Agreement, for the development of siRNA products for the treatment of HBV and following the exercise of certain program options, the development and commercialization of siRNA products directed to up to four other infectious disease targets selected by us. The technology licensed under the Alnylam Agreement forms the basis of our siRNA technology platform.

Pursuant to the Alnylam Agreement, we obtained a worldwide, exclusive license to develop, manufacture and commercialize the HBV siRNA product candidates, including VIR-2218, for all uses and purposes other than agricultural, horticultural, forestry, aquaculture and other residential applications, such excluded fields, the Excluded Fields. In addition, Alnylam granted us an exclusive option, for each of the infectious disease siRNA programs directed to our selected targets, to obtain a worldwide, exclusive license to develop, manufacture and commercialize siRNA products directed to the target of each such program for all uses and purposes other than the Excluded Fields. Our options are each exercisable during a specified period following selection of candidates for each program, or two years following the initiation of certain activities under an agreed-upon development plan, if earlier. On a product-by-product basis for each product arising from the HBV and, following our option exercise, the infectious disease programs, Alnylam has an exclusive option, exercisable during a specified period prior to the initiation of a Phase 3 clinical trial for each such product, to negotiate and enter into a profit-sharing agreement for such product.

We and Alnylam are jointly responsible for funding the initial research and development activities for VIR-2218 through completion of proof of concept trials. Prior to the exercise of our option for each siRNA program directed to one of our selected infectious disease targets, Alnylam is responsible for conducting all development activities, at our expense, in accordance with an agreed-upon development plan. Following our exercise of an option for a program and payment of the program option exercise fee and any outstanding program costs due to Alnylam, we are solely responsible, at our expense, for conducting all development, manufacture and commercialization activities for products arising from each such program unless Alnylam exercises its profit-sharing option. We are required to use commercially reasonable efforts to develop and commercialize one siRNA product directed to HBV and one siRNA product directed to the target of each other infectious disease program for which we exercise our option, in each of the major markets. If Alnylam exercises a profit-sharing option for a product, we will negotiate the terms of such profit-sharing agreement, which will include sharing equally with Alnylam all subsequent costs associated with the development of such product, as well as the profits and losses in connection with such product, subject to reimbursement by Alnylam of a portion of specified development costs in certain circumstances.

We retain final decision-making authority with respect to which infectious disease product candidates we advance and the development programs for the HBV and infectious disease product candidates, subject to certain limitations. During the term of the Alnylam Agreement, neither we nor Alnylam may develop or commercialize any gene-silencing, oligonucleotide-based product directed to the same target as any product candidate under the Alnylam Agreement, other than pursuant to the Alnylam Agreement, subject to certain exceptions.

Pursuant to the Alnylam Agreement, we paid Alnylam an upfront fee of $10.0 million and issued to Alnylam 1,111,111 shares of our common stock. Upon the achievement of a certain development milestone, as further discussed below, we were obligated to issue shares of our common stock equal to the lesser of (i) 1,111,111 shares or (ii) a certain number of shares based on our stock price at the time such milestone was achieved. We will be required to pay Alnylam up to $190.0 million in the aggregate for the achievement of specified development and regulatory milestones by the first siRNA product directed to HBV, and up to $115.0 million for the achievement of specified development and regulatory milestones for the first product directed to the target of each infectious disease siRNA program for which we exercised our option. Following commercialization, we will be required to pay to Alnylam up to $250.0 million in the aggregate for the achievement of specified levels of net sales by siRNA products directed to HBV and up to $100.0 million for the achievement of specified levels of net sales by products directed to the target of each infectious disease siRNA program for which we exercised our option. We will also be required to pay Alnylam tiered royalties at percentages ranging from the low double-digits to mid-teens on annual net sales of HBV products, and tiered royalties at percentages ranging from the high single-digits to the sub-teen double-digits on annual net sales of licensed infectious disease products, in each case subject to specified reductions and offsets. The royalties are payable on a product-by-product and country-by-country basis until the later of the expiration of all valid claims of specified patents covering such product in such country and 10 years after the first commercial sale of such product in such country. Alnylam is also entitled to receive a portion of any consideration we receive as a result of granting a sublicense under the licenses granted to us by Alnylam under the Alnylam Agreement or an option to acquire such a sublicense, determined based on the timing of the grant of such sublicense. In November 2018, in connection with the inclusion of the HBV siRNA program as the subject of a potential grant of a sublicense to Brii Bio under the Brii Agreement, as defined under the section titled "—Collaboration, Option and License Agreement with Brii Bio," which triggered certain payment obligations under the Alnylam Agreement, we entered into a letter agreement with Alnylam, or the Alnylam Letter, making certain modifications to the payments due to Alnylam as a result of the grant of the option and potential payments that would result from Brii Bio's exercise of rights under such sublicense. As a result of the rights granted under the Brii Agreement and pursuant to the Alnylam Letter, in February 2020 we transferred to Alnylam a specified percentage of the equity consideration allocable to the HBV siRNA program that we received from Brii Bio and its affiliated companies in connection with the entry into the Brii Agreement.

The term of the Alnylam Agreement will continue, on a product-by-product and country-by-country basis, until expiration of all royalty payment obligations under the Alnylam Agreement. If we do not exercise our option for an infectious disease program directed to one of our selected targets, the Alnylam Agreement will expire upon the expiration of the applicable option period with respect to such program. However, if Alnylam exercises its profit-sharing option for any product, the term of the Alnylam Agreement will continue until the expiration of the profit-sharing arrangement for such product. We may terminate the Alnylam Agreement on a program-by-program basis or in its entirety for any reason on 90 days' written notice. Either party may terminate the agreement for cause for the other party's uncured material breach on 60 days' written notice (or 30 days' notice for payment breach), or if the other party challenges the validity or enforceability of any patent licensed to it under the Alnylam Agreement on 30 days' notice.

In March 2020, we achieved one of the specified development milestones relating to VIR-2218 pursuant to the Alnylam Agreement, as amended. As such, we paid Alnylam $15.0 million in April 2020, and issued Alnylam 1,111,111 shares of our common stock in May 2020.

In March and April 2020, we entered into two further amendments to the Alnylam Agreement, or the Amended Alnylam Agreement, to expand our existing collaboration to include the development and commercialization of siRNA products targeting SARS-CoV-2 and potentially other coronaviruses, and up to three targeting human host factors for SARS-CoV-2, or collectively, the COVID Collaboration Targets.

In December 2020, we and Alnylam entered into a letter amendment, or the Letter Agreement, further amending the Amended Alnylam Agreement to modify certain funding and governance provisions in connection with the siRNA products directed to the COVID Collaboration Targets, including VIR-2703, or the COV Target, and to modify certain rights of each party with respect to products arising from such programs. Pursuant to the Letter Agreement, Alnylam was responsible for conducting pre-clinical research activities set forth in the existing workplan for the COV Target, or the COV Workplan, at its discretion and sole expense, and we were no longer obligated to reimburse Alnylam for any share of costs incurred by Alnylam in conducting activities under the COV Workplan after July 1, 2020. In July 2021, Alnylam elected to discontinue the development of the COV Target, and all other related research and development activities in accordance with their rights under the Letter Agreement. As a result, the COV Target and the siRNA program related thereto are no longer included within the Amended Alnylam Agreement and all rights to the siRNA program directed to the COV Target reverted to Alnylam.

License Agreements with MedImmune

2012 Sub-License and Collaboration Agreement with MedImmune

In March 2012, our subsidiary Humabs entered into a sub-license and collaboration agreement with MedImmune, LLC, or MedImmune, as amended, or the 2012 MedImmune Agreement, pursuant to which Humabs conducted certain activities under a mutually agreed research plan for the development of therapeutic antibodies directed to influenza viruses (including influenza A and influenza B) and to Klebsiella bacteria. The 2012 MedImmune Agreement was amended in April 2013, April 2015, December 2015, August 2016, July 2017, and September 2018 to designate Klebsiella as an extra target, to extend the term of the research program and provide for related payments, and to incorporate certain research activities funded by MedImmune under a specified government grant. Under the 2012 MedImmune Agreement, as amended, MedImmune obtained a worldwide exclusive license from Humabs to develop and commercialize products directed to such targets for all uses in humans and animals except for active vaccination. MedImmune is obligated to use commercially reasonable efforts to develop at least one product directed to influenza viruses.

In consideration for the grant of the license, MedImmune made certain upfront payments to Humabs. MedImmune is obligated to pay Humabs development, regulatory and commercial milestone payments of up to $96.5 million in the aggregate for the first product directed to influenza viruses to achieve the applicable milestones, and up to $12.0 million for the first product directed to Klebsiella to achieve the applicable milestones. MedImmune will also be obligated to pay royalties based on net sales of products directed to influenza viruses or Klebsiella at certain fixed percentages in the low to mid-single-digits, with the rate determined based on the specific target to which the product is directed, in each case subject to specified reductions and a royalty floor. The royalties are payable, on a product-by-product and country-by-country basis, until the later of the last to expire valid claim that would, but for the licenses granted under the 2012 MedImmune Agreement, be infringed by the sale of such product in such country, and 10 years from the first commercial sale of the first product in such country. MedImmune also made certain payments to Humabs in consideration for Humabs' conduct of the research program. We will be obligated to pass through the milestone payments and royalty payments that we receive under the 2012 MedImmune Agreement, following deduction of certain expenses incurred by us or Humabs thereunder, to Humabs' securities holders pursuant to the Humabs SPA, as defined under the section titled "—Securities Purchase Agreement with Humabs."

The 2012 MedImmune Agreement will remain in force until MedImmune has fulfilled all of its obligations to make milestone and royalty payments. MedImmune may terminate the 2012 MedImmune Agreement in its entirety, or on a product-by-product, license-by-license or country-by-country basis, for convenience, upon 90 days' notice. Either MedImmune or Humabs may terminate the 2012 MedImmune Agreement for the other party's uncured material breach or in the event of bankruptcy of the other party.

2018 License Agreement with MedImmune

In September 2018, we entered into a license agreement with MedImmune, or the 2018 MedImmune Agreement, pursuant to which we obtained a worldwide, exclusive license to develop and commercialize half-life extended versions of two specified antibodies under development by MedImmune that target influenza A and influenza B, respectively, for all uses in humans and animals. The license from MedImmune includes the grant of a sublicense under MedImmune's license to certain intellectual property controlled by Humabs that was granted to MedImmune pursuant to the 2012 MedImmune Agreement. Under certain circumstances and during certain periods of time we have the right to nominate up to two variants of each of these antibodies for inclusion under the license. MedImmune retained the rights to continue to develop and to commercialize the two specified antibodies that target influenza A and influenza B, in each case that are not the half-life extended versions that are licensed to us. Additionally, we obtained a worldwide, exclusive license under MedImmune's antibody half-life extension technology to develop and commercialize half-life extended antibodies directed to up to two additional targets selected by us for all uses in humans or animals for the prevention, treatment or diagnosis of infectious diseases. We have the right to nominate such additional targets during a specified period following the effective date of the 2018 MedImmune Agreement. In September 2020, the 2018 MedImmune Agreement was amended to adjust the period of time we have the right to nominate up to two antibodies for inclusion under the MedImmune's antibody half-life extension technology license. MedImmune may only refuse our nomination if such targets are already the subject of internal development by MedImmune, are subject to third party rights at the time of our selection, or are the subject of good faith discussions between MedImmune and a third party for a license for products directed to such targets. We are solely responsible, at our sole cost, for the development of products containing half-life extended versions of antibodies directed to the influenza targets and any additional selected targets, and are obligated to use commercially reasonable efforts to develop and obtain regulatory approval for at least one product containing half-life extended versions of antibodies directed to each of influenza A, influenza B and any additional targets, if applicable, in the United States and specified markets in Europe and Asia. We are also obligated to use commercially reasonable efforts to commercialize products containing half-life extended versions of antibodies directed to such targets in such markets. We are developing VIR-2482 using technology licensed under the 2018 MedImmune Agreement.

In consideration for the grant of the licenses under the 2018 MedImmune Agreement, we made an upfront payment to MedImmune of $10.0 million. We will be obligated to make development and regulatory milestone payments to MedImmune of up to $92.0 million, of which $5.0 million was paid in the third quarter of 2019, in the aggregate for products containing half-life extended versions of antibodies directed to influenza A that we licensed, up to an additional $39.2 million in the aggregate for such products directed to influenza B that we licensed, and up to $250,000 in the aggregate for certain specified products directed to the additional selected targets, if applicable. We will also be required to make sales-related milestone payments to MedImmune following commercialization up to an aggregate of $200.0 million for the achievement of specified levels of aggregate annual net sales of products containing half-life extended versions of antibodies directed to influenza A and/or influenza B. MedImmune will also be entitled to receive tiered royalties based on net sales of products containing half-life extended versions of antibodies directed to influenza A and/or influenza B at percentages ranging from the mid-single-digits to sub-teen double-digits and a royalty based on net sales of products containing half-life extended versions of antibodies directed to any additional selected targets, if applicable, at a percentage in the low single-digits, in each case subject to specified reductions. These royalties are payable, on a product-by-product and country-by-country basis, until the latest to occur of expiration of the last to expire valid claim covering such product in such country, expiration of regulatory exclusivity for such product in such country, and 12 years after the first commercial sale of such product in such country. Additionally, we are responsible for paying any royalties due under the 2012 MedImmune Agreement as a result of our commercialization of products under the 2018 MedImmune Agreement.

The 2018 MedImmune Agreement will remain in force until the expiration on a country-by-country and product-by-product basis of all of our obligations to pay royalties to MedImmune. We may terminate the 2018 MedImmune Agreement in its entirety or on a product-by-product basis, for convenience, upon 120 days' notice. Either party may terminate the 2018 MedImmune Agreement for cause for the other party's uncured material breach on 60 days' notice or immediately in the event of bankruptcy of the other party. Additionally, MedImmune may terminate the 2018 MedImmune Agreement for cause on 30 days' written notice if we challenge the validity or enforceability of the patents to which we have obtained a license under the 2018 MedImmune Agreement.

Master Exclusive License Agreement with OHSU

In June 2012, our subsidiary TomegaVax, Inc., or TomegaVax, entered into a master exclusive license agreement, or the OHSU Agreement, with Oregon Health & Science University, or OHSU. The OHSU Agreement was revised and restated in August 2014 and again in August 2019, at which time we assumed TomegaVax's rights and obligations as licensee under the OHSU Agreement. Under the OHSU Agreement, we obtained a worldwide exclusive license under certain patent rights

and a non-exclusive license under certain know-how to make, have made, use, offer to sell, sell, have sold, export and import certain products relating to CMV vectors in all fields of use. The OHSU Agreement provides for us to include within the license grant additional patent or know-how rights covering certain inventions arising at OHSU and relating to the use of CMV vaccine vectors through the execution of technology addenda, each such addendum, a Technology Addendum. Each Technology Addendum relates to a single invention disclosure and family of patent or know-how rights. During the term of the OHSU Agreement to date, we have entered into 17 such Technology Addenda. We must use reasonably diligent efforts to develop and commercialize the CMV vector products consistent with its reasonable business practices and judgment, including by achieving certain specified development and regulatory milestones within certain periods. We use technology licensed under the OHSU Agreement in our T cell platform and in our product candidate VIR-1111.

Pursuant to the initial entry into the OHSU Agreement and certain of the Technology Addenda, TomegaVax issued a specified percentage of its then outstanding common stock to OHSU, which was subsequently exchanged for shares of our common stock as a result of our acquisition of TomegaVax in September 2016. In connection with the second revision and restatement of the OHSU Agreement in August 2019, we issued an additional specified number of shares of our common stock to OHSU. We are obligated to pay OHSU up to $1.3 million upon the achievement of certain development and regulatory milestones for each CMV vector product, and up to $2.0 million upon the achievement of certain aggregate annual net sales milestones for all CMV vector products. We will also be required to pay OHSU a royalty in the low single-digits on net sales of licensed products on a product-by-product basis, subject to specified reductions and offsets, and specified minimum annual royalty payments. The royalties are payable, on a product-by-product and country-by-country basis, until the later of (a) the expiration of all valid claims in the licensed patents covering such product in the country of sale or country of manufacture, as applicable, and (b) 10 years after the first commercial sale of such product in the country of sale. OHSU is also entitled to receive a specified percentage of any consideration received by us as a result of the grant of a sublicense under the rights granted under the OHSU Agreement, with the applicable percentage based on the development stage of the applicable program at the time of the grant of the sublicense.

The OHSU Agreement will remain in force until the expiration of all licensed patent rights or 10 years after the effective date of the last Technology Addendum, whichever is the later. Each individual Technology Addendum remains in force until the expiration of the patent rights to which it applies, or 10 years after the effective date of such Technology Addendum, whichever is later. Either party may terminate the OHSU Agreement, or any individual Technology Addendum, for the other party's uncured material breach on 60 days' written notice, which may be extended by an additional 120 days under certain conditions. The OHSU Agreement and each Technology Addendum also terminate in the event of bankruptcy of either party. We may also terminate the OHSU Agreement in its entirety, or any Technology Addendum individually, upon 60 days' notice. OHSU may immediately terminate the OHSU Agreement if we or our sublicensees bring any action or proceeding against OHSU, subject to certain exceptions.

Exclusive License Agreement with the Institute for Research in Biomedicine

In December 2011, Humabs Holdings GmbH, or Humabs Holdings, the former parent company of our subsidiary Humabs, entered into an exclusive license agreement, or the IRB Agreement, with the Institute for Research in Biomedicine, or IRB. The IRB Agreement amended and restated an original 2004 exclusive license agreement between the parties in connection with IRB's proprietary technologies relating to human monoclonal antibodies and the discovery of unique epitopes recognized by such antibodies. In May 2008, Humabs entered into an exclusive license agreement with IRB, or the Humabs IRB Agreement, and together with the IRB Agreement, the Current IRB License Agreements. Pursuant to the Humabs IRB Agreement, IRB granted to Humabs an exclusive license under certain intellectual property rights for the development of certain monoclonal antibodies. Following the entry into the Humabs IRB Agreement, in February 2012, Humabs and IRB entered into a research agreement, or the IRB Research Agreement, concurrently with the termination of an original research agreement dated July 2004 between Humabs Holdings and IRB, to provide for a continuing research collaboration between Humabs and IRB, and to coordinate the exploitation of intellectual property rights arising from the IRB Research Agreement with the rights granted under the Current IRB License Agreements. Under the terms of the IRB Research Agreement, IRB performs certain research activities for Humabs, and all intellectual property rights arising under the IRB Research Agreement are either owned by Humabs, or included in and licensed to Humabs pursuant to the terms of the Current IRB License Agreements. In August 2017, we acquired all of the share capital of Humabs as described further below. Prior to the closing of such acquisition, Humabs Holdings was consolidated into Humabs, such that Humabs Holdings ceased to exist as a separate legal entity, and Humabs became the successor-in-interest to Humabs Holdings' rights under the IRB Agreement. As a result, Humabs is the licensee under each of the Current IRB License Agreements.

We use technology licensed under the Current IRB License Agreements in our antibody platform and in our product candidates VIR-2482 and VIR-3434.

Pursuant to the Current IRB License Agreements, IRB granted to Humabs an exclusive, worldwide, royalty-bearing, sublicensable license under patent and know-how rights covering or associated with IRB's proprietary technology platform relating to antibody discovery, as well as rights in certain antibodies, including as a result of activities under the IRB Research Agreement, in each case for all purposes, including to practice the licensed technology platform, and to develop, manufacture and commercialize any drug, vaccine or diagnostic product containing such licensed antibodies. Humabs is required to use commercially reasonable efforts to develop and commercialize licensed products, and must maintain an active program to commercialize licensed products. Humabs is required to pay to IRB a flat royalty on net sales of licensed products approved for non-diagnostic use in the low single-digits, and a flat royalty on licensed products for diagnostic use at 50% of the non-diagnostic product rate, in each case subject to standard reductions and offsets. A single royalty stream is payable on products that include the licensed antibodies (including antibodies that are owned by Humabs, but developed using the licensed technology), irrespective of whether a given product is covered by patents under both of the Current IRB License Agreements. Humabs' obligation to pay royalties to IRB, on a country-by-country basis, is reduced upon the expiration of the relevant patents in such country, and expires 10 years after the date of first commercialization of a licensed product in such country. Humabs is also required to pay to IRB a specified percentage in the sub-teen double-digits of consideration received in connection with the grant of a sublicense to a non-affiliate third party, subject to a specified maximum dollar amount for the first up front or milestone payment received under such sublicense for each licensed product, and a lower specified maximum dollar amount for subsequent up front or milestone payments for such licensed product.

Each of the Current IRB License Agreements remains in force until the expiration of all valid claims of the licensed patent rights and trade secrets included in the licensed IRB know-how. Humabs may terminate the IRB Agreement at will on 90 days' written notice to IRB, and either party may terminate either of the Current IRB License Agreements on 60 days' written notice for the uncured material breach of the other party.

Exclusive License Agreement with The Rockefeller University

In July 2018, we entered into an exclusive license agreement with The Rockefeller University, or Rockefeller, which was amended in May 2019, in September 2020, and in March 2021, or the Rockefeller Agreement. Pursuant to the Rockefeller Agreement, Rockefeller granted us a worldwide exclusive license under certain patent rights, and a worldwide non-exclusive license under certain materials and know-how covering certain antibody variants relating to a specified mutation leading to enhanced antibody function and utility, to develop, manufacture and commercialize infectious disease products covered by the licensed patents, or that involve the use or incorporation of the licensed materials and know-how, in each case for all uses and purposes for infectious diseases. The licenses granted to us are freely sublicensable to third parties. Rockefeller retains the right to use the licensed patents outside the field of use, and within the field of use solely in connection with educational, research and non-commercial purposes, as well as for certain research being conducted in collaboration with us. We are obligated to grant sublicenses to third parties with respect to products that are not being pursued and are not of interest to us following a specified anniversary of the May 2019 amendment date. Pursuant to the Rockefeller Agreement, we are required to use commercially reasonable efforts to develop and commercialize infectious disease products as soon as reasonably practicable, including by achieving certain specified development milestone events within specified time periods for products arising from our HBV and influenza programs.

We use technology licensed under the Rockefeller Agreement in our antibody platform and in our product candidates VIR-3434 and VIR-7832.

We paid Rockefeller an upfront fee of $0.3 million for entry into the Rockefeller Agreement, and are required to pay annual license maintenance fees of $1.0 million, which will be creditable against royalties following commercialization. In addition, for the achievement of specified development, regulatory and commercial success milestone events, we will be required to pay up to $80.3 million, in the aggregate, for up to six infectious disease products. Any follow-on products beyond six products may result in additional milestone event payments. We will also be required to pay to Rockefeller a tiered royalty at a low single-digit percentage rate on net sales of licensed products, subject to certain adjustments. Our obligation to pay royalties to Rockefeller will terminate, on a product-by-product and jurisdiction-by-jurisdiction basis, upon the latest of the expiration of the last valid claim of a licensed patent in such jurisdiction, the expiration of all regulatory exclusivity in such jurisdiction or 12 years following the first commercial sale of the applicable licensed product in such jurisdiction. If we grant a sublicense to a non-affiliate third party under the Rockefeller technology, we will be required to pay to Rockefeller a specified percentage of the consideration received from such sublicensee for the grant of the sublicense, depending on the date of receipt of the applicable sublicense income from such sublicensee.

The Rockefeller Agreement will remain in force, absent earlier termination, until the expiration of all of our obligations to pay royalties to Rockefeller in all jurisdictions. We have the right to terminate the Rockefeller Agreement in its entirety, or

in part, for any reason on 60 days' written notice to Rockefeller. Rockefeller may terminate the Rockefeller Agreement on 90 days' written notice for our uncured material breach, or if we challenge the validity or enforceability of any of the licensed patents, or immediately in the event of our insolvency. Rockefeller may also terminate the Rockefeller Agreement if we cease to carry on business with respect to the rights granted to us under the agreement.

Collaboration, Option and License Agreement with Brii Bio

In May 2018, we entered into a collaboration, option and license agreement with Brii Biosciences Limited (previously named BiiG Therapeutics Limited), or Brii Bio Parent, and Brii Bio, and such agreement, the Brii Agreement, pursuant to which we granted to Brii Bio, with respect to up to four of our programs (excluding mAbs in Vir's active research and development program against coronaviruses), an exclusive option to obtain exclusive rights to develop and commercialize compounds and products arising from such programs in China, Taiwan, Hong Kong and Macau, or collectively the China Territory, for the treatment, palliation, diagnosis, prevention or cure of acute and chronic diseases of infectious pathogen origin or hosted by pathogen infection, or the Field of Use. Our HBV siRNA program being developed under the Amended Alnylam Agreement (described above) is included within the Brii Agreement as a program for which Brii Bio may exercise one of its options. Brii Bio may exercise each of its options following the achievement by us of proof of concept for the first product in such program. In partial consideration for the options granted by us to Brii Bio, Brii Bio Parent and Brii Bio granted us, with respect to up to four of Brii Bio Parent's or Brii Bio's programs, an exclusive option to be granted exclusive rights to develop and commercialize compounds and products arising from such Brii Bio programs in the United States for the Field of Use. The number of options that we may exercise for a Brii Bio program is limited to the corresponding number of options that Brii Bio exercises for a Vir program. All options granted to Brii Bio under the Brii Agreement that are not exercised will expire no later than seven years following the effective date, or two years earlier than such date if Brii Bio has not undergone an initial public offering within such shorter period. All options granted to us under the Brii Agreement that are not exercised will expire no later than two years following the expiration of all options granted to Brii Bio.

We are responsible, at our expense and discretion, for the conduct of all development activities under our programs prior to the exercise of Brii Bio's options, and Brii Bio is responsible, at its expense and discretion, for all activities under its programs prior to the exercise of our options. Following the exercise of an option for a specified program by either us or Brii Bio, the exercising party is granted an exclusive, royalty-bearing license to develop, manufacture and commercialize products arising from the applicable program in the United States (where we are exercising the option) or the China Territory (where Brii Bio is exercising the option), and such party is thereafter responsible for all development and commercialization activities, at its expense, in the optioned territory. If Brii Bio exercises its option with respect to our development program being conducted under the Amended Alnylam Agreement, Brii Bio's rights will be subject to the terms of such amended agreement.

Under the terms of the Brii Agreement, following our option exercise, we are obligated to use commercially reasonable efforts to develop at least one licensed product arising from each optioned Brii Bio program, and to commercialize each such product in the United States following regulatory approval, and following Brii Bio's option exercise, Brii Bio is obligated to use commercially reasonable efforts to develop at least one licensed product arising from each optioned Vir program and to commercialize each such product in the China Territory following regulatory approval.

With respect to programs for which Brii Bio exercises its options, Brii Bio will be required to pay us an option exercise fee for each such Vir program ranging from the mid-single-digit millions up to $20.0 million, determined based on the commercial potential of the licensed program. Brii Bio will also be required to pay regulatory milestone payments on a licensed product-by-licensed product basis ranging from the mid-single-digit millions up to $30.0 million, also determined based on the commercial potential of such program. Following commercialization, Brii Bio will be required to make sales milestone payments based on certain specified levels of aggregate annual net sales of products arising from each licensed program in the China Territory, up to an aggregate of $175.0 million per licensed program. Brii Bio also will pay us royalties that range from the mid-teens to the high-twenties, as described below. On June 12, 2020, Brii Bio notified us of the exercise of its option to obtain exclusive rights to develop and commercialize compounds and products arising from VIR-2218 in the China Territory. Brii Bio paid us a $20.0 million option exercise fee in connection with the option exercise. We separately paid $10.0 million, half of the option proceeds, to Alnylam in connection with the Amended Alnylam Agreement.

As partial consideration for our entry into the Brii Agreement, upon closing of Brii Bio Parent's Series A preferred stock financing, we received Class A ordinary shares equal to 9.9% of the outstanding shares in Brii Bio Parent. As a result of Brii Bio's right to exercise one of its options for our HBV siRNA program, under the terms of the Amended Alnylam Agreement, in February 2020 we transferred to Alnylam a specified percentage of such equity consideration allocable to such program. In July 2021, Brii Bio Parent completed its initial public offering, or the Brii Bio Parent IPO, on the Stock

Exchange of Hong Kong Limited. Upon completion of the Brii Bio Parent IPO, our Class A ordinary shares held at Brii Bio Parent converted into the same single class of ordinary shares issued in the Brii Bio Parent IPO.

Upon exercise of each option for a Brii Bio program, we will be required to pay to Brii Bio an option exercise fee ranging from the low tens of millions to up to $50.0 million, determined based on the commercial potential of the licensed program. We will be required to make regulatory milestone payments to Brii Bio on a licensed product-by-licensed product basis ranging from the low tens of millions up to $100.0 million, also determined based on the commercial potential of such program. We will also be required to make sales milestone payments based on certain specified levels of aggregate annual net sales of products in the United States arising from each licensed program, up to an aggregate of $175.0 million per licensed program.

In addition, we are obligated under the Brii Agreement to pay Brii Bio tiered royalties based on net sales of products arising from the licensed programs in the United States, and Brii Bio is obligated to pay us tiered royalties based on net sales of products arising from the licensed programs in the China Territory. The rates of royalties payable by us to Brii Bio, and by Brii Bio to us on net sales range from mid-teens to high-twenties. Each party's obligations to pay royalties expires, on a product-by-product and territory-by-territory basis, on the latest of 10 years after the first commercial sale of such licensed product in the United States or China Territory, as applicable; the expiration or abandonment of licensed patent rights that cover such product in the United States or China Territory, as applicable; and the expiration of regulatory exclusivity in the United States or the China Territory, as applicable. Royalty rates are subject to specified reductions and offsets.

The Brii Agreement will remain in force until the expiration of all options or, if any option is exercised, expiration of all royalty payment obligations for all licensed products within such licensed program, unless terminated in its entirety or on a program-by-program basis by either party. Each party may terminate for convenience all rights and obligations with respect to any program for which it has an option, with 30 days' written notice (if the terminating party has not exercised an option for such program) or 180 days' notice (following the exercise of an option for such program). The Brii Agreement may also be terminated by either party for insolvency of the other party, and either party may terminate the Brii Agreement in its entirety or on a program-by-program basis for the other party's uncured material breach on 60 days' written notice (or 30 days' notice following failure to make payment).

Patent License Agreements with Xencor

In August 2019, we entered into a patent license agreement, which was amended in February 2021, or the 2019 Xencor Agreement, with Xencor, pursuant to which we obtained a non-exclusive, sublicensable (only to our affiliates and subcontractors) license to incorporate Xencor's licensed technologies into, and to evaluate, antibodies that target influenza A and HBV, and a worldwide, non-exclusive, sublicensable license to develop and commercialize products containing such antibodies incorporating such technologies for all uses, including the treatment, palliation, diagnosis and prevention of human or animal diseases, disorders or conditions. We are obligated to use commercially reasonable efforts to develop and commercialize an antibody product that incorporates Xencor's licensed technologies, for each of the influenza A and HBV research programs. These technologies are used in our VIR-2482, incorporating Xencor's Xtend technology, and VIR-3434, incorporating Xencor's Xtend and other Fc technologies.

In consideration for the grant of the license, we paid Xencor an upfront fee. For each of the influenza A and HBV research programs, we will be required to pay Xencor development and regulatory milestone payments of up to $17.8 million in the aggregate, and commercial sales milestone payments of up to $60.0 million in the aggregate, for a total of up to $77.8 million in aggregate milestones for each program and $155.5 million in aggregate milestones for both programs. On a product-by-product basis, we will also be obligated to pay tiered royalties based on net sales of licensed products ranging from low- to mid-single-digits. The royalties are payable, on a product-by-product and country-by-country basis, until the expiration of the last to expire valid claim in the licensed patents covering such product in such country.

In March 2020, we entered into a patent license agreement, which was amended in February 2021, or the 2020 Xencor Agreement, with Xencor pursuant to which we obtained a non-exclusive license to Xencor's licensed technologies into, and to evaluate, antibodies that target any component of a coronavirus, including SARS-CoV-2, SARS-CoV and MERS-CoV, and a worldwide, non-exclusive, sublicensable license to develop and commercialize products containing such antibodies incorporating such technologies for all uses, including the treatment, palliation, diagnosis and prevention of human or animal diseases, disorders or conditions. We are obligated to use commercially reasonable efforts to develop and commercialize an antibody product that incorporates Xencor's licensed technologies, for each of the coronavirus research programs. These technologies are used in sotrovimab, incorporating Xencor's Xtend technology, and VIR-7832, incorporating Xencor's Xtend and other Fc technologies.

In consideration for the grant of the license, we are obligated to pay royalties based on net sales of licensed products at the mid-single-digits. The royalties are payable, on a product-by-product and country-by-country basis, until the later of the expiration of the last to expire valid claim in the licensed patents covering such product in such country or 12 years.

The 2019 Xencor Agreement and 2020 Xencor Agreement will remain in force, on a product-by-product and country-by-country basis, until the expiration of all royalty payment obligations under each of the respective agreements. We may terminate each agreement in its entirety, or on a target-by-target basis, for convenience upon 60 days' written notice. Either party may terminate each agreement for the other party's uncured material breach upon 60 days' written notice (or 30 days in the case of non-payment) or in the event of bankruptcy of the other party immediately upon written notice. Xencor may terminate each agreement immediately upon written notice if we challenge, or upon 30 days' written notice if any of our sublicensees challenge, the validity or enforceability of any patent licensed to us under each respective agreement.

Amended and Restated Letter Agreement with the Bill & Melinda Gates Foundation

In January 2022, we entered into an amended and restated letter agreement with the Bill & Melinda Gates Foundation, or the Gates Agreement, which amended and restated the letter agreement with the Bill & Melinda Gates Foundation that we entered into in December 2016. In connection with the Gates Agreement, the Bill & Melinda Gates Foundation purchased $10.0 million of shares of our Series A-1 convertible preferred stock in December 2016, $10.0 million of shares of our Series B convertible preferred stock in January 2019 and $40.0 million of shares of our common stock in January 2022. We were obligated to use the proceeds of the Bill & Melinda Gates Foundation's December 2016 and January 2019 investments in furtherance of its charitable purposes to (i) conduct our programs to develop products to treat or prevent infectious disease caused by HIV and TB, respectively, with at least 50% of the funds to be used for such programs and (ii) develop our HCMV-based vaccine technology platform in a manner reasonably expected to result in the generation of products for the treatment or prevention of other specified infectious diseases, and we are obligated to use the proceeds of the Bill & Melinda Gates Foundation's January 2022 investment in furtherance of its charitable purposes to develop our vaccinal antibody program, in each case for use in specified developing countries. We agreed to use reasonable efforts to achieve specified research and development milestones with respect to our HIV program, TB program and vaccinal antibody program, and, if requested by the Bill & Melinda Gates Foundation, to work with the Bill & Melinda Gates Foundation on an additional mutually agreeable infectious disease program. Additionally, we are bound by specified global access commitments including a commitment to provide any products developed using the proceeds of the Bill & Melinda Gates Foundation's investment at an affordable price to the people most in need within the specified developing countries, not to exceed a specified percentage over our fully burdened manufacturing and sales costs.

If we fail to comply with (i) our obligations to use the proceeds of the Bill & Melinda Gates Foundation's investment for the purposes described in the paragraph above and to not use such proceeds for specified prohibited uses, (ii) specified reporting requirements or (iii) specified applicable laws, or if we materially breach our specified global access commitments (any such failure or material breach, a Specified Default), we will be obligated to redeem or arrange for a third party to purchase all of our stock purchased by the Bill & Melinda Gates Foundation under the Gates Agreement at the Bill & Melinda Gates Foundation's request, at a price equal to the greater of (a) the original purchase price or (b) the fair market value, such redemption or sale, a Gates Foundation Redemption. Following a Gates Foundation Redemption, if a sale of the company or all of our material assets relating to the Gates Agreement occurs prior to the six month anniversary of the first redemption or sale of any stock in such Gates Foundation Redemption, then the Bill & Melinda Gates Foundation will receive compensation equal to the excess of what it would have received in such transaction if it still held the stock redeemed or sold at the time of such sale transaction over what it actually received in the Gates Foundation Redemption. Additionally, if a specified default occurs, if we are unable or unwilling to continue the HIV program, TB program, vaccinal antibody program or, if applicable, the mutually agreed additional program (except for scientific or technical reasons), or if we institute bankruptcy or insolvency proceedings, then the Bill & Melinda Gates Foundation will have the right to exercise a non-exclusive, fully-paid license (with the right to sublicense) under our intellectual property to the extent necessary to use, make and sell products arising from such programs, in each case solely to the extent necessary to benefit people in the developing countries in furtherance of the Bill & Melinda Gates Foundation's charitable purpose.

In the event that we sell, exclusively license or transfer to a third party all or substantially all of our assets, the technology platform, or products arising from programs that are funded using the proceeds of the Bill & Melinda Gates Foundation's investment, such third party is required to assume our specified global access commitments on terms that are reasonably acceptable to the Bill & Melinda Gates Foundation. Additionally, we will not grant to any third party any rights or enter into any agreement with any third party that would restrict the Bill & Melinda Gates Foundation's rights with respect to our specified global access commitments unless such third party expressly assumes such commitments to the reasonable satisfaction of the Bill & Melinda Gates Foundation. Consistent with the foregoing restriction, we also specifically will not

enter into any such agreement negotiated in connection with a decision by us not to pursue the technology platform controlled by us as a result of our acquisition of TomegaVax. The global access commitments will continue for as long as the Bill & Melinda Gates Foundation continues to be a charitable entity.

In connection with the purchase of $40.0 million of shares of our common stock in January 2022, we entered into a stock purchase agreement, or the Gates Stock Purchase Agreement, with the Bill & Melinda Gates Foundation. The Bill & Melinda Gates Foundation purchased the shares of our common stock at $45.3841 price per share, which is the average of the volume weighted average price of a share of our common stock for the 30 trading day period prior to the date of the Gates Stock Purchase Agreement. The Gates Stock Purchase Agreement provides that until the first anniversary of the closing date, the Bill & Melinda Gates Foundation will hold and not sell any of the shares purchased pursuant to the Gates Stock Purchase Agreement, subject to certain exceptions. We have also agreed to register the shares for resale following expiration of the one-year lock-up period if Rule 144 under the Securities Act of 1933, as amended, is not available for such resale without any volume or manner of sale restrictions.

Separately, in January 2018, March 2018 and January 2022, we entered into three grant agreements with the Bill & Melinda Gates Foundation, pursuant to which the Bill & Melinda Gates Foundation agreed to grant additional funding to us for our HIV, TB and vaccinal antibody programs, respectively, through the award of three research grants totaling in the aggregate up to $12.2 million with respect to the HIV program, up to $14.9 million with respect to the TB program, and up to $10.0 million with respect to the vaccinal antibody program if we achieve all the specified research and development milestones or reporting deliverables under the grants. In February 2020, we amended the HIV grant agreement pursuant to which we were awarded with a supplemental grant of $8.6 million. In addition, the term of the HIV grant agreement was extended through October 31, 2022. The TB grant agreement will remain in effect until March 31, 2022. As of December 31, 2021, we had received $19.7 million with respect to the HIV program and $12.2 million with respect to the TB program.

In November 2021, we entered into a grant agreement with the Bill & Melinda Gates Foundation under which we were awarded a grant totaling up to $10.0 million to support the manufacturing and clinical activities of our HIV and TB vaccine programs. This grant agreement will remain in effect until August 30, 2023. As of December 31, 2021, we had received $5.5 million under this grant agreement.

The grant agreements may be terminated early by the Bill & Melinda Gates Foundation for our breach, failure to progress the applicable funded projects, in the event of our change of control, change in our tax status, or significant changes in our leadership that the Bill & Melinda Gates Foundation reasonably believes may threaten the success of the applicable project.

Our Acquisition Agreements

Agreement and Plan of Merger with TomegaVax

In September 2016, we entered into an agreement and plan of merger with TomegaVax, or the TomegaVax Merger Agreement, pursuant to which we purchased all equity interests of TomegaVax, a preclinical private biotechnology company. The primary asset purchased in the acquisition was a CMV vector-based vaccine platform for the development of products directed to HBV, HIV and TB.

In connection with the entry into the TomegaVax Merger Agreement, we also entered into a letter agreement with TomegaVax, or the TomegaVax Letter Agreement, which provides for certain payments to TomegaVax's former stockholders prior to September 2024, in each case so long as we are continuing to pursue the development of the TomegaVax technology. Under the terms of the TomegaVax Letter Agreement, we will be required to pay to the former stockholders of TomegaVax milestone payments of up to an aggregate of $30.0 million if the per-share price of our publicly traded common stock, or implied price per share of our Series A-1 convertible preferred stock (or common stock upon conversion) upon a certain asset sale, merger or stock sale, is at least $45 (as adjusted in the case of any stock dividend, stock split or other similar recapitalization), with the amount of such payments determined by the share price and/or the stage of our clinical development at the time of the relevant event triggering the payment. The share price of our publicly traded common stock will be determined using the average of the daily volume-weighted average trading price of our common stock for each trading day during a consecutive 90-day period. The foregoing payments are payable (i) during any date after the completion of an initial public offering by the company or any successor or affiliate controlling the TomegaVax technology, provided that no payment will be due before the first anniversary of the initial public offering, (ii) upon the sale of all assets related to the TomegaVax technology or (iii) upon a merger or stock sale of the company or any successor or affiliate controlling the TomegaVax technology, in each case subject to certain conditions with respect to the timing of the payments. The payments under the TomegaVax Letter Agreement can be made in cash or shares of our common stock, at the discretion of our board of directors.

The TomegaVax Letter Agreement may be amended, modified or terminated and the observance of any term may be waived only with the written consent of the stockholders' representative (as such term is defined in the TomegaVax Merger Agreement) and us.

In February 2021, we achieved one of the milestones related to the specified per-share price of our common stock, which resulted in a $10.0 million payable to TomegaVax's former stockholders. In July 2021, we made the milestone payment to the former TomegaVax stockholders through a combination of $8.1 million in cash and the issuance of 42,737 shares of common stock with a total fair value of $1.9 million. The remaining milestone payments of up to $20.0 million in the aggregate will be triggered if (i) the per-share price of our publicly traded common stock is at least $45 (as adjusted in the case of any stock dividend, stock split or other similar recapitalization) and upon the achievement of a certain milestone related to the stage of our clinical development at the time of the relevant event triggering the payment and/or (ii) the per-share price of our publicly traded common stock is at least $90 (as adjusted in the case of any stock dividend, stock split or other similar recapitalization).

Securities Purchase Agreement with Humabs

In August 2017, we entered into a securities purchase agreement with Humabs and its securities holders, or the Humabs SPA, pursuant to which we purchased all equity interests of Humabs. Pursuant to the Humabs SPA, we are required to pay up to $135.0 million upon the first achievement of certain clinical, regulatory and commercial milestones for an HBV product, or the HBV Milestones, and up to $105.0 million upon the first achievement of certain clinical, regulatory and commercial milestones for another product. Pursuant to the Humabs SPA, we are required to use commercially reasonable efforts to achieve such milestones during a specified period following the closing of the Humabs acquisition. In addition, Humabs' securities holders are also entitled to receive certain pass-through payments that Humabs receives under certain license agreements, including the 2012 MedImmune Agreement, following deduction of certain expenses incurred by us or Humabs thereunder.

Sales and Marketing

Given our stage of development, we have not yet established a commercial organization or distribution capabilities. We intend to build a commercial infrastructure to support sales of our product candidates. We expect to manage sales, marketing and distribution through internal resources and third-party relationships. While we may commit significant financial and management resources to commercial activities, we will also consider collaborating with one or more pharmaceutical companies to enhance our commercial capabilities.

Manufacturing

We are currently manufacturing product candidates from three of our platforms: antibodies, T cells and siRNAs. We have established our own internal process development, manufacturing and quality capabilities and are working with contract development and manufacturing organizations, or CDMOs, to supply our early- and late-stage product candidates in the near term. We continue to expand our internal capabilities and resources in process development, analytical development, quality, manufacturing and supply chain, which are supported by our San Francisco, California, and Portland, Oregon facilities that include laboratories for process development, production of HCMV research viral seed stock and selected quality control testing for our product candidates.

We have established relationships with multiple CDMOs and have produced material to support preclinical studies and Phase 1, Phase 2 and Phase 3 clinical trials. Material for any Phase 3 clinical trials and commercial supply will generally require large-volume, low-cost-of-goods production. For example, for our COVID-19 program, we and our collaborator GSK have executed manufacturing agreements with CDMOs having large-scale capacity to support future scale-up and product supply, particularly for potential commercialization. However, there are no assurances that our manufacturing and supply chain infrastructure will remain uninterrupted and reliable, or that the third parties we rely on to manufacture our COVID-19 therapies will be able to satisfy demand in a timely manner or not have supply chain disruptions due to COVID-19 related shutdowns, stock-outs due to raw material shortages and/or greater than anticipated demand or quality issues given the operational challenges and raw material shortages that have been experienced during the COVID-19 pandemic.

Production Modalities

Antibody Platform

The technology and industrial processes for producing mAbs are well-established across the biopharmaceutical industry. Over the last 30 years, process optimization and standardization has enabled process portability and facilitated manufacturing with high success rates at most biologic CDMOs, as well as the partnered use of excess capacity with other biopharmaceutical companies. We rely on the mAb process platforms and manufacturing facilities of our CDMOs and strategic collaborators for all of our product candidate clinical supplies. For our COVID-19 program, we and our collaborator GSK have executed manufacturing agreements with large-scale CDMOs to support future scale-up and capacity, particularly for potential commercialization.

T Cell Platform

Our T cell platform is based on genetically engineered HCMV. We have attenuated the HCMV for the purpose of patient safety, but this attenuation also reduces its yield in production. To improve manufacturing efficiency and scale-up, we have made significant internal investments in process development, largely funded by the Bill & Melinda Gates Foundation. We have established a reproducible current Good Manufacturing Practices, or cGMP, manufacturing process in support of Phase 1 and Phase 2 clinical trials that has been successfully transferred and executed at CDMOs specializing in live virus manufacturing.

siRNA Platform

Alnylam is currently supplying clinical material from their CDMO sites for the current VIR-2218 clinical trials. We initiated a technology transfer of the manufacturing process at the same CDMO sites in the second half of 2021 and will assume responsibility for all additional clinical manufacturing including Phase 3 supplies in the first half of 2022 and subsequently for all commercial manufacturing in advance of any Phase 3 clinical trial. In addition to the current CDMOs supplying our clinical trials, other CDMOs as well as Alnylam are capable of producing kilogram-scale batches of siRNA and we may contract for scale-up and Phase 3 manufacturing at one of these qualified facilities.

Manufacturing Agreements

In connection with the ongoing COVID-19 pandemic, we have entered into the following agreements to date in support of our COVID-19 program:

Letter Agreement, Assignment and Master Services Agreement with Samsung

In April 2020, we entered into a binding letter agreement with Samsung pursuant to which Samsung will perform process development and manufacturing services for our SARS-CoV-2 mAbs. Under the terms of the letter agreement, we had committed to purchase a firm and binding capacity reservation for a specified number of drug substance manufacturing slots in 2021 and 2022. Samsung will reserve such manufacturing slots on a non-cancellable, non-adjustable basis and will not offer such manufacturing slots under our capacity reservation to third parties. We were obligated to pay a total of approximately $362.0 million for such capacity reservation on a take-or-pay basis regardless of whether such manufacturing slots are utilized by us, subject to annual adjustment based on the Korean Consumer Price Index. The amounts were to be payable during 2021 and 2022 and invoiced on a per-batch basis, with shortfalls invoiced at the end of the year in which such shortfall occurs.

In August 2020, we entered into an Assignment and Novation Agreement with GlaxoSmithKline Trading Services Limited, or GSKTSL, and Samsung effective as of July 31, 2020 pursuant to which we assigned and transferred to GSKTSL all of our right, title, and interest in, to and under the letter agreement, and GSKTSL became our successor in interest in and to all of our rights, duties, and obligations in, to and under the letter agreement. On August 4, 2020, GSKTSL entered into a Master Services Agreement with Samsung effective as of July 31, 2020, or the Samsung MSA, thereby superseding the letter agreement, and pursuant to which, among other things, Samsung will perform technology transfer, development, and manufacturing services for clinical and commercial supply of antibody products under our SARS-CoV-2 antibody program.

Development and Manufacturing Collaboration Agreement with WuXi Biologics

In February 2020, we entered into a development and manufacturing collaboration agreement with WuXi Biologics for the clinical development, manufacturing, and commercialization of our proprietary antibodies developed for SARS-CoV-2. Under the agreement, WuXi Biologics will conduct cell-line development, process and formulation development, and initial manufacturing for clinical development. WuXi Biologics will have the right to commercialize products incorporating such SARS-CoV-2 antibodies in greater China pursuant to an exclusive license granted for the selected SARS-CoV-2 antibodies that have been developed. We will have the right to commercialize such products in all other markets worldwide.

WuXi Biologics will perform mutually agreed process and clinical development and manufacturing activities, under individual statements of work. In addition, the parties agreed that WuXi Biologics will pay us tiered royalties at percentages ranging from the high single-digits to mid-teens on annual net sales of all products sold by WuXi Biologics in greater China.

Letter Agreement, Assignment and Master Services Agreement with WuXi Biologics

In June 2020, we entered into a binding letter of intent with WuXi Biologics pursuant to which WuXi Biologics will perform certain development and manufacturing services for our SARS-CoV-2 antibody program. Under the terms of the letter of intent, we had committed to purchase a firm and binding capacity reservation for the manufacture of a specified number of batches of drug substance of our SARS-CoV-2 antibody in 2020 and 2021. In addition, we had the right to order an additional specified number of batches of drug substance, provided we make such election by a specified date in the fourth calendar quarter in 2020. WuXi Biologics is obligated to reserve such manufacturing slots on a non-cancellable basis, and will manufacture the agreed number of batches of drug substance in accordance with an agreed manufacturing schedule. We were obligated to pay a total of approximately $130.0 million for such capacity reservation, if all batches are manufactured, inclusive of estimated raw material costs, with between 70% and 80% of the batch production fees owed to WuXi Biologics on a take-or-pay basis regardless of whether we utilize such manufacturing slots. The amounts were to be payable during 2020 and 2021 and invoiced on a per-batch basis. The SARS-CoV-2 antibody drug substance contemplated to be manufactured in accordance with the terms of the letter of intent will be utilized in connection with progressing the development and commercialization of the SARS-CoV-2 antibody product under our collaboration with GSK.

In August 2020, we entered into an Assignment and Novation Agreement with GSKTSL and WuXi Biologics effective as of July 29, 2020 pursuant to which we assigned and transferred to GSKTSL all of our right, title, and interest in, to and under the letter of intent, and GSKTSL became our successor in interest in and to all of our rights, duties, and obligations in, to and under the letter of intent. On August 4, 2020, GSKTSL entered into a non-exclusive Master Services Agreement for Commercial Manufacture of Drug Substance with WuXi Biologics effective as of July 29, 2020, or the WuXi Biologics MSA, thereby superseding the letter of intent, and pursuant to which, among other things, WuXi Biologics will perform development and manufacturing services for clinical and commercial supply of antibody products under our SARS-CoV-2 antibody program.

GSKTSL entered into the WuXi Biologics MSA and Samsung MSA in connection with the performance of GSK and our obligations pursuant to the 2020 GSK Agreement. In accordance with the terms of the 2020 GSK Agreement, we will continue to be responsible for 72.5% of the costs under each of the WuXi Biologics MSA and Samsung MSA, and GSK will bear 27.5% of such costs under each of the Samsung MSA and the WuXi Biologics MSA, subject to certain conditions and exceptions.

Clinical Development and Manufacturing Agreement with Biogen

In May 2020, we entered into a clinical development and manufacturing agreement with Biogen pursuant to which Biogen will perform process development activities and specified manufacturing services under agreed statements of work for certain pre-commercial and clinical supply of our SARS-CoV-2 mAbs. We also agreed to collaborate with Biogen to develop highly productive clonal cell lines and clinical and commercial manufacturing processes for our SARS-CoV-2 mAbs. These processes are designed to be transferrable to global biomanufacturing facilities designed for advanced biologics production. Under the agreement, Biogen will conduct cGMP clinical manufacturing in the United States and provide technical support to facilitate process transfer to Samsung, and potentially other large-scale biomanufacturing facilities in the United States and other regions of the world to enable us to obtain a reliable supply of a potential commercial product.

Under the terms of the Biogen agreement, we have agreed to pay fees for Biogen's performance of services as provided in each applicable statement of work, including costs to third parties on a pass-through basis. We entered into three statements of work with Biogen for the process development and certain clinical manufacturing services simultaneously with the execution of the agreement, with the cost of activities under such agreed statements of work totaling approximately $13.8 million. In October 2021, pursuant to the terms of this agreement, we terminated all outstanding statements of work with Biogen.

Competition

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technology, the expertise of our executive and scientific team, research, clinical capabilities, development experience and scientific knowledge provide us with competitive advantages, we face increasing competition from many different sources, including pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions. Product candidates that we successfully develop and commercialize may compete with existing therapies and new therapies that may become available in the future. For example, the industry and competitive landscape for COVID-19 treatments is rapidly changing, which could result in more competition from new and existing therapies in the future.

Many of our competitors, either alone or with their collaborators, have significantly greater financial resources, established presence in the market, expertise in research and development, manufacturing, preclinical and clinical testing, obtaining regulatory approvals and reimbursement and marketing approved products than we do. These competitors also compete with us in recruiting and retaining qualified scientific, sales, marketing and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or potentially necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Additional mergers and acquisitions may result in even more resources being concentrated in our competitors.

Our commercial potential could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market or make our development more complicated. The key competitive factors affecting the success of all of our programs are likely to be efficacy, safety, convenience, and cost/access.

COVID-19

There are limited FDA-approved treatments and prophylactic vaccines for COVID-19 and several treatments and a prophylactic vaccine are available under EUA. An IV administered antiviral, remdesivir, marketed by Gilead, is FDA-approved for treatment in the hospitalized and early-treatment settings. Currently, Eli Lilly and Company's antibody, bebtelovimab, is also available under EUA for the treatment of COVID-19 in the mild to moderate setting. Oral antiviral therapies from Merck & Co, Inc., or Merck, and Pfizer Inc., or Pfizer (molnupiravir and nirmatrelvir, respectively), are also available under EUA in the mild to moderate early treatment setting. Additionally, Pfizer's COVID-19 vaccine, Comirnaty®, was approved by the FDA for individuals 16 years of age or older, Moderna, Inc.'s COVID-19 vaccine, Spikevax®, was approved by the FDA for individuals 18 years of age or older and a COVID-19 vaccine is available in the United States under EUA from Janssen Biotech, Inc. Numerous large and small pharmaceutical and biotechnology companies are developing programs with various mechanisms of actions, including prophylactic vaccines, oral antivirals, immunomodulators, and antibodies, some of which are further along in the development process than we are. Companies with antibodies in clinical development include AbbVie, Inc., Adagio Therapeutics, Inc., or Adagio, AstraZeneca plc, or AstraZeneca, Brii Bio, Celltrion Healthcare Co., Ltd. and Regeneron Pharmaceuticals, Inc. Companies with oral antivirals in clinical development include Shionogi Inc., Gilead and others. Companies with prophylactic vaccines in clinical development include AstraZeneca, GSK, Novavax, Inc. and Sanofi S.A. In addition, COVID-19 treatment standards are susceptible to rapid changes in epidemiology and the emergence of new variants, thus, sotrovimab may be rendered inferior or obsolete in the future.

HBV

Current FDA-approved treatments for chronic HBV infection include PEG-IFN-α, marketed by Roche, and oral antiviral agents such as NRTIs, marketed by Gilead and Bristol-Myers Squibb Company. These treatments do not lead to either a functional or a complete cure in the vast majority of patients, and in the case of NRTIs, require life-long therapy. Several large and small pharmaceutical companies are developing programs with various mechanisms of action, to be used alone or in combination, with the goal of achieving an HBV functional or complete cure. Companies with RNAi agents in clinical development include Arbutus Biopharma Corporation, Janssen Pharmaceuticals, Inc., or Janssen (part of Johnson & Johnson, in partnership with Arrowhead Pharmaceuticals, Inc.), and Roche Holding AG, or Roche, (in partnership with Dicerna Pharmaceuticals, Inc.) In addition, GC Pharma is developing an antibody against surface antigen. Several companies, including Altimmune, Inc., GSK, Janssen, Vaccitech plc and Transgene SA, have therapeutic vaccines in late-preclinical or early-clinical development.

Influenza

There are numerous approved seasonal flu vaccines, including trivalent, quadrivalent, high-dose, and adjuvanted products, marketed by GSK, Sanofi Pasteur, and Seqirus (owned by CSL Limited). In addition, there are approved antiviral agents to treat influenza, such as Xofluza and Tamiflu, marketed by Roche, as well as other neuraminidase inhibitors. Cidara Therapeutics, Inc. (in partnership with Janssen) is working to develop an antiviral conjugate which could be a novel method for long-acting prophylaxis.

While several companies, including AstraZeneca, Janssen and Roche, have conducted clinical trials of antibodies for the treatment of influenza, to our knowledge, there are no other prophylactic antibodies currently in clinical development. Adagio has stated that it intends to develop prophylactic antibodies for influenza.

Several vaccines are in clinical development from large and small pharmaceutical companies including GSK (in partnership with CureVac N.V.), Moderna, Inc., Novavax, Inc., Pfizer (in partnership with BioNTech SE) and Sanofi S.A. (in partnership with Translate Bio). Some aim to improve efficacy or convenience over existing seasonal vaccines, and others are pursuing a universal flu vaccine approach with broad strain coverage and at least one year of protection.

HIV

No FDA-approved vaccine is currently available for the prevention of HIV. Several large and small pharmaceutical companies, including GSK, GeoVax Labs, Inc., Janssen, Profectus Biosciences, Inc. and Sanofi S.A. are actively engaged in vaccine research and development in this area. These and other companies are developing vaccines using viral vectors, nanoparticles, DNA, or formulations, with the goal of stimulating T cell-mediated and/or neutralizing antibody responses against HIV. To our knowledge, none are using a CMV-based vector. Numerous clinical trials of these vaccines are ongoing with support from the NIH Vaccine Research Center, the Bill & Melinda Gates Foundation, the U.S. military, the International AIDS Vaccine Initiative, the European Vaccine Initiative, the South African AIDS Initiative, and their academic and industry partners. In addition, many of these institutions, as well as pharmaceutical companies like Gilead and Viiv Healthcare Limited, or Viiv, are also studying the passive transfer of broadly neutralizing antibodies against HIV for prophylactic and therapeutic applications.

We may also compete with oral or long-acting antiretroviral therapies for pre-exposure prophylaxis of HIV. Truvada, marketed by Gilead, is a once-daily therapy approved for this indication. Viiv recently received FDA approval for long-acting antiretroviral therapy, cabotegravir for pre-exposure prophylaxis of HIV. Gilead, Janssen, Merck and Viiv have additional long-acting formulations in development.

Intellectual Property

Our intellectual property is critical to our business and we strive to protect it, including by obtaining and maintaining patent protection in the United States and internationally for our product candidates, new therapeutic approaches and potential indications, and other inventions that are important to our business. Our policy is to seek to protect our proprietary and intellectual property position by, among other methods, filing U.S. and foreign patent applications related to our proprietary technology, inventions and improvements that are important for the development and implementation of our business. We also rely on the skills, knowledge and experience of our scientific and technical personnel, as well as that of our advisors, consultants and other contractors. To help protect our proprietary know-how that is not patentable, we rely on confidentiality agreements to protect our interests. We require our employees, consultants and advisors to enter into confidentiality agreements prohibiting the disclosure of confidential information and requiring disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business.

Our patent portfolio includes patents and patent applications that are licensed from a number of collaborators and other third parties, including Alnylam, OHSU, MedImmune, IRB, Rockefeller and Xencor, and patents and patent applications that are owned by us. Our patent portfolio includes patents and patent applications that cover our product candidates sotrovimab (previously VIR-7831), VIR-7832, VIR-2218, VIR-3434, VIR-2482 and VIR-1111, and the use of these candidates for therapeutic purposes. Our proprietary technology has been developed primarily through acquisitions, relationships with academic research centers and contract research organizations.

For our product candidates, we will, in general, initially pursue patent protection covering compositions of matter and methods of use. Throughout the development of our product candidates, we seek to identify additional means of obtaining patent protection that would potentially enhance commercial success, including through additional methods of use, process of making, formulation and dosing regimen-related claims.

In total, our patent portfolio, including patents licensed from our collaborators and other third parties, comprises over 100 different patent families as of December 31, 2021, filed in various jurisdictions worldwide. Our patent portfolio includes issued patents and patent applications in the United States and in many international countries. Our patent portfolio for our product candidates and technology platforms is outlined below:

Patent Portfolio by Product Candidate

Sotrovimab

Licensed Patents

Our sotrovimab intellectual property portfolio includes patents and patent applications that we have non- exclusively licensed from Xencor. As of December 31, 2021, these patents and applications include five issued patents in the United States directed to composition of matter claims, methods of extending antibody serum half-life claims, pharmaceutical composition claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire in 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these patents and applications include 90 issued patents in Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Croatia,

Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the U.K. directed to composition of matter claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2025 and 2028, absent any available patent term adjustments or extensions.

Patents Owned by Us

Additionally, we own, directly or through our subsidiary Humabs, four patent families relating to sotrovimab. These families collectively include, as of December 31, 2021, one issued patent in the United States directed to composition of matter claims. The 20-year term of this patent is presently estimated to expire in 2041, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these families collectively include nine patent applications and provisional patent applications in the United States, two pending international Patent Cooperation Treaty, or PCT, applications and six patent applications in Argentina, Europe, Singapore and Taiwan. The applications in these families include composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from pending patent applications in these families is presently estimated to expire between 2041 and 2042, absent any available patent term adjustments or extensions.

We also co-own one patent family that includes, as of December 31, 2021, one pending PCT patent application. The application includes composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2041, absent any available patent term adjustments or extensions.

We also co-own, directly and/or through our subsidiary Humabs, two patent families that collectively include, as of December 31, 2021, three pending provisional patent applications in the United States. These applications include pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2042, absent any available patent term adjustments or extensions.

VIR-7832

Licensed Patents

Our VIR-7832 intellectual property portfolio includes a patent family that we have exclusively licensed from Rockefeller, which includes, as of December 31, 2021, issued patents in Nigeria and Organisation Africaine de la Propriété Intellectuelle (OAPI) (Africa), one pending patent application in the United States and 31 pending patent applications in the African Regional Intellectual Property Organization (ARIPO) (Africa), Algeria, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, the Dominican Republic, Ecuador, Eurasia, Europe, Guatemala, Hong Kong, Indonesia, Israel, India, Japan, Malaysia, Mexico, New Zealand, Panama, Peru, Philippines, Singapore, South Africa, South Korea, Thailand, the Ukraine and Vietnam. The applications in this family include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from the application in this family is presently estimated to expire in 2038, absent any available patent term adjustments or extensions.

Our VIR-7832 intellectual property portfolio also includes patents and patent applications that we have non- exclusively licensed from Xencor. As of December 31, 2021, these patents and applications include 10 issued patents in the United States directed to composition of matter claims, methods of extending antibody serum half-life claims, pharmaceutical composition claims, methods of treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these patents and applications include 121 issued patents in Australia, Austria, Belgium, Bulgaria, Brazil, Canada, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions.

The patents and applications we have non-exclusively licensed from Xencor also include, as of December 31, 2021, one patent application pending in the United States and one patent application pending in India, directed to composition of

matter claims and process (methods of producing) claims. The 20-year term of any patents issuing from these patent applications is presently estimated to expire in 2023, absent any available patent term adjustments or extensions.

Patents Owned by Us

Additionally, we own, directly or through our subsidiary Humabs, four patent families relating to VIR-7832. These families collectively include, as of December 31, 2021, one issued patent in the United States directed to composition of matter claims. The 20-year term of this patent is presently estimated to expire in 2041, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these families collectively include nine patent applications and provisional patent applications in the United States, two pending international PCT applications and six patent applications in Argentina, Europe, Singapore and Taiwan. The applications in these families include composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from pending patent applications in these families is presently estimated to expire between 2041 and 2042, absent any available patent term adjustments or extensions.

We also co-own one patent family that includes, as of December 31, 2021, one pending PCT patent application. The application includes composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2041, absent any available patent term adjustments or extensions.

We also co-own two patent families that collectively include, as of December 31, 2021, three pending provisional patent applications in the United States. These applications include pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2042, absent any available patent term adjustments or extensions.

VIR-2218

Licensed Patents

Our VIR-2218 intellectual property portfolio includes three different patent families that we have exclusively licensed from Alnylam.

One of these families includes, as of December 31, 2021, two issued patents in the United States directed to composition of matter claims, pharmaceutical composition claims and method of treatment claims. This family also includes 47 issued patents in Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Eurasia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Italy, Japan, Jordan, Latvia, Lebanon, Lithuania, Luxembourg, Macao, Monaco, North Macedonia, Malta, Mexico, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of these patents is presently estimated to expire in 2035, absent any available patent term adjustments or extensions. A third party filed a request for invalidation of the patent issued in China with the China National Intellectual Property Administration on December 31, 2021, and we intend to vigorously defend the patent.

Another of these families includes, as of December 31, 2021, two issued patents in Nigeria and OAPI (Africa) directed to method of treatment claims and composition for use in treatment claims. The 20-year term of these patents is presently estimated to expire in 2038, absent any available patent term adjustments or extensions.

Another of these families includes, as of December 31, 2021, one issued patent in Nigeria directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of this patent is presently estimated to expire in 2039, absent any available patent term adjustments or extensions.

The three licensed families also collectively include, as of December 31, 2021, three patent applications in the United States and 83 patent applications in ARIPO (Africa), Algeria, Argentina, Australia, Brazil, Canada, China, Eurasia, Europe, Gulf Cooperation Council (GCC), Hong Kong, India, Indonesia, Israel, Japan, Jordan, Malaysia, Mexico, New Zealand, OAPI (Africa), Pakistan, Paraguay, Philippines, Singapore, South Africa, South Korea, Taiwan, Thailand, Ukraine, Venezuela and Vietnam directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from pending patent applications

in these families is presently estimated to expire between 2035 and 2039, absent any available patent term adjustments or extensions.

Patents Owned by Us

In addition, we own two different patent families that are directed to VIR-2218 in combination with one or more other therapeutics. These families collectively include, as of December 31, 2021, two patent applications in the United States and 43 patent applications in ARIPO (Africa), Algeria, Australia, Brazil, Canada, China, Eurasia, Europe, India, Indonesia, Israel, Japan, Malaysia, Mexico, New Zealand, OAPI (Africa), Philippines, Singapore, South Africa, South Korea, Taiwan, Thailand, Ukraine and Vietnam. The applications in these families include method of treatment claims and composition for use in treatment claims for VIR-2218 in combination as a second therapeutic. The 20-year term of any patents issuing from pending patent applications in these families is presently estimated to expire between 2039 and 2040, absent any available patent term adjustments or extensions.

VIR-3434

Licensed Patents

Our VIR-3434 intellectual property portfolio includes a patent family that we have exclusively licensed from Rockefeller, which includes, as of December 31, 2021, issued patents in Nigeria and OAPI (Africa), one pending patent application in the United States and 31 pending patent applications in ARIPO (Africa), Algeria, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, the Dominican Republic, Ecuador, Eurasia, Europe, Guatemala, Hong Kong, Indonesia, Israel, India, Japan, Malaysia, Mexico, New Zealand, Panama, Peru, Philippines, Singapore, South Africa, South Korea, Thailand, the Ukraine and Vietnam. The applications in this family include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from the application in this family is presently estimated to expire in 2038, absent any available patent term adjustments or extensions.

Our VIR-3434 intellectual property portfolio also includes patents and patent applications that we have non- exclusively licensed from Xencor. As of December 31, 2021, these patents and applications include 10 issued patents in the United States directed to composition of matter claims, methods of extending antibody serum half-life claims, pharmaceutical composition claims, method of treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these patents and applications include 121 issued patents in Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions.

The patents and applications we have non-exclusively licensed from Xencor also include, as of December 31, 2021, two patent applications pending in the United States and one patent application pending in India, directed to composition of matter claims, method of treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from these patent applications is presently estimated to expire between 2023 and 2034, absent any available patent term adjustments or extensions.

Patents Owned by Us

We also own two different patent families that include, as of December 31, 2021, one pending PCT patent application and five provisional patent applications in the United States. These applications include composition of matter claims, pharmaceutical composition claims and method of treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire between 2040 and 2042, absent any available patent term adjustments or extensions.

In addition, through our subsidiary Humabs, we own two different patent families that include, as of December 31, 2021, one issued patent in the United States directed to composition of matter claims and pharmaceutical composition claims. These families also collectively include, as of December 31, 2021, 41 issued patents in Albania, Austria, Belgium, Bulgaria,

Croatia, Cyprus, Czechia, Denmark, Estonia, Eurasia, Finland, France, Germany, Greece, Hong Kong, Hungry, Iceland, Indonesia, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Monaco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey and the U.K. that include composition of matter claims, pharmaceutical composition claims and composition for use in treatment claims. The 20-year term of these patents is presently estimated to expire in 2036, absent any available patent term adjustments or extensions.

These two families owned by Humabs also collectively include, as of December 31, 2021, two pending patent applications in the United States and 51 pending patent applications in ARIPO (Africa), Australia, Bahrain, Brazil, Canada, China, Eurasia, Europe, Hong Kong, India, Indonesia, Israel, Japan, Kuwait, Malaysia, Mexico, Nigeria, New Zealand, OAPI (Africa), Oman, the Philippines, Qatar, Saudi Arabia, Singapore, South Korea, Sri Lanka, Taiwan, Thailand, Ukraine, United Arab Emirates and Vietnam. The applications in these families include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from patent applications in these families is presently estimated to expire between 2036 and 2039, absent any available patent term adjustments or extensions.

VIR-2482

Licensed Patents

Our VIR-2482 intellectual property patent portfolio includes two different patent families that we have exclusively licensed from MedImmune, which collectively include, as of December 31, 2021, two issued patents in the United States directed to composition of matter claims, pharmaceutical composition claims and method of treatment claims. These families also collectively include 51 issued patents in Albania, Australia, Austria, Belgium, Bulgaria, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Guernsey, Hong Kong, Hungry, Iceland, Ireland, Italy, Japan, Jersey, Latvia, Lithuania, Luxembourg, Malta, Mexico, Monaco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey and the U.K. that include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire in 2034, absent any available patent term adjustments or extensions.

The two families licensed from MedImmune also collectively include, as of December 31, 2021, two patent applications in the United States and 25 patent applications in Australia, Brazil, Canada, China, Europe, Hong Kong, Israel, Japan, Mexico, Russia, Singapore, South Korea and Taiwan. The applications in these families include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from patent applications in these families is presently estimated to expire between 2034 and 2037, absent any available patent term adjustments or extensions.

Our VIR-2482 intellectual property portfolio also includes patents and patent applications that we have non- exclusively licensed from Xencor. As of December 31, 2021, these patents and applications include five issued patents in the United States directed to composition of matter claims, methods of extending antibody serum half-life claims, pharmaceutical composition claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire in 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these patents and applications include 90 issued patents in Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the U.K. directed to composition of matter claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2025 and 2028, absent any available patent term adjustments or extensions.

Patents Owned by Us

We also own one patent family that includes, as of December 31, 2021, one pending PCT application. These applications include composition of matter claims, pharmaceutical composition claims and method of treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2040, absent any available patent term adjustments or extensions.

Through our subsidiary Humabs, we co-own a patent family (with MedImmune) that includes, as of December 31, 2021, two issued patents in the United States directed to composition of matter claims, pharmaceutical composition claims and method of treatment claims. This family also includes 51 issued patents in Albania, Australia, Austria, Belgium, Bulgaria, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Gibraltar, Greece, Guernsey, Hong Kong, Hungry, Iceland, Ireland, Italy, Japan, Jersey, Latvia, Lithuania, Luxembourg, Malta, Mexico, Monaco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey and the U.K. that include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire in 2034, absent any available patent term adjustments or extensions.

This co-owned family also includes, as of December 31, 2021, one patent application in the United States and 14 patent applications in Australia, Brazil, Canada, China, Europe, Hong Kong, Japan, South Korea, Mexico, Russia, Singapore and Taiwan. The applications in this family include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2034, absent any available patent term adjustments or extensions.

In addition, through our subsidiary Humabs, we own a patent family that includes, as of December 31, 2021, one pending application in the United States and 32 pending applications in Algeria, Australia, Bahrain, Brazil, Canada, Chile, China, Colombia, Egypt, Eurasia, Europe, India, Indonesia, Israel, Japan, Kuwait, Malaysia, Mexico, New Zealand, Nigeria, Oman, Philippines, Qatar, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand, Ukraine, United Arab Emirates and Vietnam. The application in this family includes composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from the patent application in this family is presently estimated to expire in 2040, absent any available patent term adjustments or extensions.

VIR-1111

Licensed Patents

Our VIR-1111 intellectual property patent portfolio includes seven different patent families that we have exclusively licensed from OHSU.

Six of these families collectively include, as of December 31, 2021, nine issued patents in the United States directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2031 and 2037, absent any available patent term adjustments or extensions. Additionally, six of the seven patent families collectively include, as of December 31, 2021, 219 issued patents in Albania, ARIPO (Africa), Australia, Austria, Belgium, Bulgaria, Canada, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Macao, Monaco, North Macedonia, Malta, Mexico, New Zealand, Netherlands, Norway, OAPI (Africa), Poland, Portugal, Romania, San Marino, Serbia, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2025 and 2037, absent any available patent term adjustments or extensions.

The seven licensed families also collectively include, as of December 31, 2021, nine patent applications in the United States and 89 patent applications in Algeria, ARIPO (Africa), Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, the Dominican Republic, Ecuador, Eurasia, Europe, Guatemala, Hong Kong, Indonesia, Israel, India, Japan, Mexico, New Zealand, Nigeria, Panama, Peru, Singapore, South Africa, South Korea, Thailand and the Ukraine directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from patent applications in these families is presently estimated to expire between 2025 and 2037, absent any available patent term adjustments or extensions.

Patents Owned by Us

We co-own a patent family that includes, as of December 31, 2021, one issued patent in the United States directed to composition of matter claims and method of treatment claims. The 20-year term of this patent is presently estimated to expire

in 2035, absent any available patent term adjustments or extensions. The family also includes two patent applications in the United States and 26 patent applications in ARIPO (Africa), Australia, Brazil, Canada, China, Eurasia, Europe, Hong Kong, Indonesia, Israel, India, Japan, Mexico, New Zealand, Singapore, South Africa, South Korea, Thailand and the Ukraine directed to composition of matter claims, method of treatment claims and composition for use in treatment claims. The 20-year term of any patents issuing from patent applications in this family is presently estimated to expire in 2035, absent any available patent term adjustments or extensions.

Patent Portfolio by Technology Platform

siRNA Platform

Licensed Patents

Our siRNA intellectual property portfolio includes three additional different patent families that we have exclusively licensed from Alnylam.

Two of the three families collectively include, as of December 31, 2021, 10 issued patents in the United States directed to composition of matter claims, pharmaceutical composition claims and method of treatment claims. The 20-year term of these patents is presently estimated to expire between 2024 and 2031, absent any available patent term adjustments or extensions. Additionally, the three patent families collectively include, as of December 31, 2021, 66 issued patents in Albania, Australia, Belgium, Canada, China, Croatia, Denmark, Finland, France, Germany, Hungary, Iceland, India, Indonesia, Ireland, Japan, Latvia, Lithuania, Luxembourg, Macao, Monaco, Netherlands, North Macedonia, Norway, Russia, Singapore, Slovenia, South Korea, Sweden, Switzerland and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of these patents is presently estimated to expire between 2024 and 2031, absent any available patent term adjustments or extensions.

The three licensed families also collectively include, as of December 31, 2021, two patent applications in the United States and 12 patent applications in Australia, Canada, China, Europe, Hong Kong, India, Japan, South Korea and Thailand directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and composition for use in treatment claims. The 20-year term of the issued patent and any patents issuing from pending patent applications in these families is presently estimated to expire between 2024 and 2031, absent any available patent term adjustments or extensions.

We have also exclusively licensed from Alnylam, as of December 31, 2021, three issued patents in the United States directed to composition of matter claims, pharmaceutical composition claims and method of treatment claims. The 20-year term of these patents is presently estimated to expire between 2022 and 2028, absent any available patent term adjustments or extensions.

We also have an exclusive license to additional Alnylam platform technology for HBV licensed products.

Antibody Platform

Licensed Patents

We have exclusively licensed from Rockefeller a patent family that includes, as of December 31, 2021, issued patents in Nigeria and OAPI (Africa), one pending patent application in the United States and 31 pending patent applications in ARIPO (Africa), Algeria, Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, the Dominican Republic, Ecuador, Eurasia, Europe, Guatemala, Hong Kong, Indonesia, Israel, India, Japan, Malaysia, Mexico, New Zealand, Panama, Peru, Philippines, Singapore, South Africa, South Korea, Thailand, the Ukraine and Vietnam. The applications in this family include composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of any patents issuing from the application in this family is presently estimated to expire in 2038, absent any available patent term adjustments or extensions.

We have exclusively licensed from IRB two patent families that relate to our antibody platform technology. One of these families includes, as of December 31, 2021, two issued patents in the United States directed to process (methods of producing) claims, and 23 issued patents in Austria, Australia, Belgium, Czechia, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Netherlands, Portugal, Romania, Singapore, Spain, Sweden, Switzerland, Turkey and the U.K. directed to process (methods of producing) claims. The two families also collectively include, as of December 31, 2021, one

pending patent applications in the United States directed to process (methods of producing) claims, as well as one patent application in the United States and 19 patent applications in Australia, Brazil, Canada, China, Eurasia, Europe, Hong Kong, India, Indonesia, Israel, Japan, Mexico, New Zealand, Singapore, South Africa, South Korea, Thailand and Ukraine directed to composition of matter claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of the issued patents and any patent issuing from the pending patent applications in these families is presently estimated to expire between 2024 and 2038, absent any available patent term adjustments or extensions.

In addition, we have non-exclusively licensed a group of patents and applications from Xencor. As of December 31, 2021, these patents and applications include 10 issued patents in the United States directed to composition of matter claims, methods of extending antibody serum half-life claims, pharmaceutical composition claims, method of treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2021, these patents and applications include 121 issued patents in Australia, Austria, Belgium, Bulgaria, Canada, China, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treatment claims and process (methods of producing) claims. The 20-year term of these patents is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions.

The patents and applications we have non-exclusively licensed from Xencor also include, as of December 31, 2021, three patent application pending in the United States and two patent applications pending in China and India, directed to composition of matter claims and process (methods of producing) claims. The 20-year term of any patents issuing from these patent applications is presently estimated to expire between 2023 and 2028, absent any available patent term adjustments or extensions.

T Cell Platform

Licensed Patents

We have exclusively licensed from OHSU 10 different patent families related to our T cell portfolio.

Eight of the 10 families collectively include, as of December 31, 2021, 13 issued patents in the United States, directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims and process (methods of producing) claims. The 20-year term of the issued patents in these families is presently estimated to expire between 2031 and 2037, absent any available patent term adjustments or extensions. In addition, nine of the 10 families collectively include, as of December 31, 2021, 253 issued patents in Albania, ARIPO (Africa), Australia, Austria, Belgium, Bulgaria, Canada, China, Croatia, Cyprus, Czechia, Denmark, Germany, Estonia, Finland, France, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, North Macedonia, Malta, Macao, Mexico, Monaco, Netherlands, Norway, New Zealand, OAPI (Africa), Poland, Portugal, Romania, San Marino, Serbia, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine and the U.K. directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treating claims and process (methods of producing) claims. The 20-year term of the issued patents in these families is presently estimated to expire between 2025 and 2037, absent any available patent term adjustments or extensions.

The 10 patent families also collectively include, as of December 31, 2021, eight patent applications in the United States, a pending PCT application and 74 patent applications in Algeria, ARIPO (Africa), Australia, Brazil, Canada, Chile, China, Colombia, Costa Rica, the Dominican Republic, Ecuador, Eurasia, Europe, Guatemala, Hong Kong, Indonesia, Israel, India, Japan, Mexico, New Zealand, Nigeria, Panama, Peru, Singapore, South Africa, South Korea, Thailand and the Ukraine directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treating claims and process (methods of producing) claims. The 20-year term of any patents issuing from pending patent applications in these families is presently estimated to expire between 2025 and 2040, absent any available patent term adjustments or extensions.

Patents Owned by Us

In addition, we own two patent families that include, as of December 31, 2021, two patent applications in the United States directed to composition of matter claims, pharmaceutical composition claims, method of treatment claims, composition for use in treating claims and process (method of producing) claims. The 20-year term of any patent issuing in these families is presently estimated to expire in 2042, absent any available patent term adjustments or extensions.

Innate Immunity Platform

We have know-how relating to our innate immunity platform and are continually developing our intellectual property in this area, as well as evaluating external technologies and assets that may also help grow this platform.

We do not currently license or own any patents related to our innate immunity platform.

Patent Term and Term Extensions

Individual patents have terms for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, utility patents issued for applications filed in the United States are granted a term of 20 years from the earliest effective filing date of a non-provisional patent application. In addition, in certain instances, the term of a U.S. patent can be extended to recapture a portion of the U.S. Patent and Trademark Office, or the USPTO, delay in issuing the patent as well as a portion of the term effectively lost as a result of the FDA regulatory review period. However, as to the FDA component, the restoration period cannot be longer than five years and the restoration period cannot extend the patent term beyond 14 years from FDA approval. In addition, only one patent applicable to an approved drug is eligible for the extension, and only those claims covering the approved drug, a method for using it, or a method of manufacturing may be extended. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. All taxes, annuities or maintenance fees for a patent, as required by the USPTO and various foreign jurisdictions, must be timely paid in order for the patent to remain in force during this period of time.

The actual protection afforded by a patent may vary on a product by product basis, from country to country, and can depend upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions and the availability of legal remedies in a particular country and the validity and enforceability of the patent.

Our patents and patent applications may be subject to procedural or legal challenges by others. We may be unable to obtain, maintain and protect the intellectual property rights necessary to conduct our business, and we may be subject to claims that we infringe or otherwise violate the intellectual property rights of others, which could materially harm our business. For more information, see the section titled “Risk Factors—Risks Related to Our Intellectual Property.”

Trademarks and Know-How

In connection with the ongoing development and advancement of our products and services in the United States and various international jurisdictions, we seek to create protection for our marks and enhance their value by pursuing trademarks and service marks where available and when appropriate. In addition to patent and trademark protection, we rely upon know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, by using confidentiality agreements with our commercial partners, collaborators, employees and consultants, and invention assignment agreements with our employees and consultants. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed by our employees and through relationships with third parties. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our contractors, commercial partners, collaborators, employees, and consultants use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. For more information, see the section titled “Risk Factors—Risks Related to Our Intellectual Property.”

Government Regulation and Product Approval

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety,

effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of drugs and biologics such as those we are developing.

In the United States, the FDA approves and regulates drugs under the Federal Food, Drug, and Cosmetic Act, or the FDCA. Biological products, or biologics, are licensed for marketing under the Public Health Service Act, or the PHSA, and regulated under the FDCA. A company, institution, or organization which takes responsibility for the initiation and management of a clinical development program for such products is typically referred to as a sponsor. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or trials or seek approval or licensure of our product candidates.

U.S. Biopharmaceuticals Regulation

The process required by the FDA before drug and biologic product candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests and animal trials performed in accordance with applicable regulations, including the FDA's Good Laboratory Practice, or GLP, regulations;
- design of a clinical protocol and submission to the FDA of an IND application which must become effective before clinical trials may begin;
- approval by an independent institutional review board or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials in accordance with FDA's Good Clinical Practice, or GCP, regulations to establish the safety and efficacy of a drug candidate and safety, purity and potency of a proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a new drug application, or NDA, or BLA, as applicable, after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of an NDA or BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMPs and of selected clinical investigation sites to assess compliance with GCPs;
- FDA review and approval of an NDA or BLA to permit commercial marketing of the product for particular indications for use in the United States; and
- completion of any post-approval requirements, including the potential requirement to implement a risk evaluation and mitigation strategy, or REMS, and any post-approval studies required by the FDA.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a product candidate, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol or protocols for preclinical studies and clinical trials. The IND also includes results of animal and in vitro studies assessing the toxicology, pharmacokinetics, pharmacology and pharmacodynamic characteristics of the product, chemistry, manufacturing and controls information, and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among

other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent institutional review board for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the trial until completed.

Regulatory authorities, the institutional review board or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some trials also include oversight by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board, which provides authorization for whether or not a trial may move forward at designated check points based on access to certain data from the trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy.

For purposes of biopharmaceutical development, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1.* The investigational product is initially introduced into patients with the target disease or condition. These trials are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- *Phase 2.* The investigational product is administered to a limited patient population to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks.
- *Phase 3.* The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 trials may be made a condition to approval of the application. Concurrent with clinical trials, companies may complete additional animal trials and develop additional information about the characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested and stability trials must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. The FDA or the sponsor or its data safety monitoring board may suspend a clinical trial at any time on various grounds, including a finding that the research patients or patients are being exposed to an unacceptable health risk. Similarly, an institutional review board can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the institutional review board’s requirements or if the biological product candidate has been associated with unexpected serious harm to patients.

A sponsor may choose, but is not required, to conduct a foreign clinical study under an IND. When a foreign clinical study is conducted under an IND, all IND requirements must be met unless waived by the FDA. When a foreign clinical study is not conducted under an IND, the sponsor must ensure that the study complies with certain regulatory requirements of the FDA in order to use the study as support for an IND or application for marketing approval. Specifically, the studies must be conducted in accordance with GCP, including undergoing review and receiving approval by an independent ethics committee and seeking and receiving informed consent from subjects.

Under the PHSA, sponsors of clinical trials are required to register and disclose certain clinical trial information on a public registry (clinicaltrials.gov) maintained by the NIH. In particular, information related to the product, patient population, phase of investigation, study sites and investigators and other aspects of the clinical trial is made public as part of the registration of the clinical trial. The failure to submit clinical trial information to clinicaltrials.gov, as required, is a prohibited act under the FDCA with violations subject to potential civil monetary penalties of up to $10,000 for each day the violation continues.

NDA/BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical trials and clinical trials are submitted to the FDA as part of an NDA or BLA, as applicable, requesting approval to market the product for one or more indications. The application must include all relevant data available from pertinent preclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. The submission of an application requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies. The FDA has sixty days from the applicant's submission to either issue a refusal to file letter, or RTF, or accept the application for filing, indicating that it is sufficiently complete to permit substantive review.

Once an NDA or BLA has been accepted for filing, the FDA's goal is to review standard applications within 10 months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews an NDA to determine whether a drug is safe and effective for its intended use and a BLA to determine whether a biologic is safe, pure and potent. The FDA also reviews whether the facility in which the product is manufactured, processed, packed or held meets standards designed to assure and preserve the product's identity, safety, strength, quality, potency and purity. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving an NDA or BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an application, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs.

After the FDA evaluates an application and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be manufactured, the FDA may issue an approval letter or a Complete Response letter, or CRL. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A CRL will describe all of the deficiencies that the FDA has identified in the application, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the CRL without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the CRL, the FDA may recommend actions that the applicant might take to place the application in condition for approval, including requests for additional information or clarification, which may include the potential requirement for additional clinical trials. The FDA may delay or refuse approval of an application if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the application with a REMS to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing trials.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for frequent interactions with the review team during product development and, once an NDA or BLA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the NDA or BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the application, the FDA agrees to accept sections of the application and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the application.

A product intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any marketing application for a drug or biologic submitted to the FDA for approval, including a product with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition. Priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date.

Additionally, products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical trials to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Fast track designation, breakthrough therapy designation and priority review do not change the standards for approval but may expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Emergency Use Authorization

In emergency situations, such as a pandemic, and with a declaration of a public health emergency by the Secretary of the Department of Health and Human Services, or HHS, the FDA has the authority to allow unapproved medical products or unapproved uses of cleared or approved medical products to be used to diagnose, treat or prevent serious or life-threatening diseases or conditions caused by chemical, biological, radiological or nuclear warfare threat agents when there are no adequate, approved, and available alternatives.

Under this authority, the FDA may issue an EUA if the following four statutory criteria have been met: (1) a serious or life-threatening condition exists; (2) evidence of effectiveness exists; (3) a risk-benefit analysis shows that the benefits of the product outweigh the risks; and (4) no other alternatives exist for diagnosing, preventing or treating the disease or condition. The "may be effective" standard for EUAs requires a lower level of evidence than the "effectiveness" standard that FDA uses for product clearances or approvals in non-emergency situations. The FDA assesses the potential effectiveness of a possible EUA product on a case-by-case basis using a risk-benefit analysis. In determining whether the known and potential benefits of the product outweigh the known and potential risks, the FDA examines the totality of the scientific evidence to make an overall risk-benefit determination. Such evidence, which could arise from a variety of sources, may include (but is not limited to) results of domestic and foreign clinical trials, in vivo efficacy data from animal models, in vitro data, as well as the quality and quantity of the available evidence.

Once granted, an EUA will remain in effect and generally terminate on the earlier of (1) the determination by the Secretary of HHS that the public health emergency has ceased or (2) a change in the approval status of the product such that the authorized use(s) of the product are no longer unapproved. After the EUA is no longer valid, the product is no longer considered to be legally marketed and one of the FDA's non-emergency premarket pathways would be necessary to resume or continue distribution of the subject product.

The FDA also may revise or revoke an EUA if the circumstances justifying its issuance no longer exist, the criteria for its issuance are no longer met, or other circumstances make a revision or revocation appropriate to protect the public health or safety.

On January 31, 2020, the Secretary of HHS issued a declaration of a public health emergency related to COVID-19. On February 4, 2020, HHS determined that COVID-19 represents a public health emergency that has a significant potential to affect national security or the health and security of U.S. citizens living abroad and, subsequently, declared on March 24, 2020, that circumstances exist to justify the authorization of emergency use of certain medical products, during the COVID-19 pandemic, subject to the terms of any authorization as issued by the FDA. The declaration of the Secretary of HHS has been further updated and the FDA has issued numerous guidances to sponsors seeking to obtain EUAs to diagnose and treat COVID-19.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting an NDA or BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process. Among the benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA or BLA application fee.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full NDA or BLA, to market the same drug or biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective. In September 2021, the Court of Appeals for the 11th Circuit held that, for the purpose of determining the scope of market exclusivity, the term "same disease or condition" in the statute means the designated "rare disease or condition" and could not be interpreted by the FDA to mean the "indication or use." Thus, the court concluded, orphan drug exclusivity applies to the entire designated disease or condition rather than the "indication or use." It is unclear how this court decision will be implemented by the FDA.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which the FDA assesses an annual program fee for each product identified in an approved NDA or BLA. Biopharmaceutical manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMPs and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMPs and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market trials or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning or untitled letters or holds on post-approval clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biopharmaceutical products. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products. In September 2021, the FDA published final regulations which describe the types of evidence that the FDA will consider in determining the intended use of a drug or biologic.

Biosimilars and Regulatory Exclusivity

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. The FDA has approved a number of biosimilars and the first interchangeable biosimilar product was approved on July 30, 2021, and a second product previously approved as a biosimilar was designated as interchangeable in October 2021.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity and potency, can be shown through analytical trials, animal trials and a clinical trial or trials. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. Since passage of the BPCIA, many states have passed laws or amendments to laws that address pharmacy practices involving biosimilar products.

Generic Drugs and Regulatory Exclusivity

Section 505 of the FDCA describes three types of marketing applications that may be submitted to the FDA to request marketing authorization for a new drug. A Section 505(b)(1) NDA is an application that contains full reports of investigations of safety and efficacy. A 505(b)(2) NDA is an application that contains full reports of investigations of safety and efficacy but where at least some of the information required for approval comes from investigations that were not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted. This regulatory pathway enables the applicant to rely, in part, on the FDA's prior findings of safety and efficacy for an existing product, or published literature, in support of its application. Section 505(j) establishes an abbreviated approval process for a generic version of approved drug products through the submission of an Abbreviated New Drug Application, or ANDA.

An ANDA provides for marketing of a generic drug product that has the same active ingredients, dosage form, strength, route of administration, labeling, performance characteristics and intended use, among other things, to a previously approved product. ANDAs are termed "abbreviated" because they are generally not required to include preclinical (animal) and clinical (human) data to establish safety and efficacy. Instead, generic applicants must scientifically demonstrate that their product is bioequivalent to, or performs in the same manner as, the innovator drug through in vitro, in vivo or other testing. The generic version must deliver the same amount of active ingredient(s) in the same amount of time as the innovator drug and can often be substituted by pharmacists under prescriptions written for the reference listed drug. In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's drug or a method of using the drug. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an ANDA or 505(b)(2) NDA.

Upon submission of an ANDA or a 505(b)(2) NDA, an applicant must certify to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA; (2) such patent has expired; (3) the date on which such patent expires; or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. Generally, the ANDA or 505(b)(2) NDA cannot be approved until all listed patents have expired, except where the ANDA or 505(b)(2) NDA applicant challenges a listed patent through the last type of certification, also known as a paragraph IV certification. The filing of a patent infringement lawsuit within 45 days after the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA or 505(b)(2) NDA until the earliest of 30 months after the receipt of the Paragraph IV notice, expiration of the patent and a decision in the infringement case that is favorable to the ANDA or 505(b)(2) NDA applicant. If the applicant does not challenge the listed patents, or indicates that it is not seeking approval of a patented method of use, the ANDA or 505(b)(2) NDA application will not be approved until all of the listed patents claiming the referenced product have expired.

The FDA also cannot approve an ANDA or 505(b)(2) application until all applicable non-patent exclusivities listed in the Orange Book for the branded reference drug have expired. For example, a pharmaceutical manufacturer may obtain five years of non-patent exclusivity upon NDA approval of a new chemical entity, or NCE, which is a drug containing an active moiety that has not been approved by FDA in any other NDA. This interpretation was confirmed with enactment of the Ensuring Innovation Act in April 2021. An "active moiety" is defined as the molecule responsible for the drug substance's physiological or pharmacologic action. During that five-year exclusivity period, the FDA cannot accept for filing (and therefore cannot approve) any ANDA seeking approval of a generic version of that drug or any 505(b)(2) NDA that relies on the FDA's approval of the drug, provided that the FDA may accept an ANDA four years into the NCE exclusivity period if the ANDA applicant also files a paragraph IV certification.

Pediatric Exclusivity

Pediatric exclusivity is a type of non-patent marketing exclusivity in the United States and, if granted, provides for the attachment of an additional six months of exclusivity. For drug products, the six-month exclusivity may be attached to the term of any existing patent or regulatory exclusivity, including the orphan exclusivity and regulatory exclusivities available under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act. For biologic products, the six-month period may be attached to any existing regulatory exclusivities but not to any patent terms. The conditions for pediatric exclusivity include the FDA's determination that information relating to the use of a new product in the pediatric population may produce health benefits in that population, the FDA making a written request for pediatric clinical trials, and the sponsor agreeing to perform, and reporting on, the requested clinical trials within the statutory timeframe. This six-month exclusivity may be granted if a sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted.

Patent Term Restoration and Extension

In the United States, a patent claiming a new product, its method of use or its method of manufacture may be eligible for a limited patent term extension under the Hatch-Waxman Act, which permits a patent extension of up to five years for patent term lost during product development and FDA regulatory review. Assuming grant of the patent for which the extension is sought, the restoration period for a patent covering a product is typically one-half the time between the effective date of the IND involving human beings and the submission date of the NDA or BLA, plus the time between the submission date of the application and the ultimate approval date. Patent term restoration cannot be used to extend the remaining term of a patent past a total of 14 years from the product's approval date in the United States. Only one patent applicable to an approved product is eligible for the extension, and the application for the extension must be submitted prior to the expiration of the patent for which extension is sought. A patent that covers multiple products for which approval is sought can only be extended in connection with one of the approvals. The U.S. Patent and Trademark Office reviews and approves the application for any patent term extension in consultation with the FDA.

Federal and State Fraud and Abuse, and Transparency Laws and Regulations

In addition to strict FDA regulation of marketing of biopharmaceutical products, federal and state healthcare laws strictly regulate business practices in the biopharmaceutical industry. These laws may impact, among other things, our current and future business operations, including our clinical research activities, and proposed sales, marketing and education programs and constrain the business or financial arrangements and relationships with healthcare providers and other parties through which we market, sell and distribute our products for which we obtain marketing approval. These laws include

anti-kickback and false claims laws and regulations, and transparency laws and regulations, including, without limitation, those laws described below.

The U.S. federal Anti-Kickback Statute prohibits any person or entity from, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value. The U.S. federal Anti-Kickback Statute has been interpreted to apply to, among others, arrangements between biopharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common arrangements and other activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. Courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated.

A person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act or the civil monetary penalties laws.

Federal civil and criminal false claims laws, including the federal civil False Claims Act, which can be enforced by individuals through civil whistleblower and qui tam actions, and civil monetary penalties laws, prohibit any person or entity from, among other things, knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. A number of biopharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing payments or other items of value to customers with the expectation that the customers would bill federal programs for their products or services. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, and thus non-reimbursable, uses.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

The federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), and teaching hospitals, and applicable manufacturers and applicable group purchasing organizations to report annually to CMS ownership and investment interests held by physicians and their immediate family members. As of January 2022, applicable manufacturers are also required to report such information regarding its payments and other transfers of value to physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists and certified nurse midwives during the previous year.

We may also be subject to state laws that require biopharmaceutical companies to comply with the biopharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures or drug pricing, and state and local laws that require the registration of biopharmaceutical sales representatives.

Because of the breadth of these laws and the narrowness of available statutory exceptions and regulatory safe harbors, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to significant criminal, civil and administrative penalties including damages, fines, imprisonment, disgorgement, additional reporting requirements and oversight if we become subject to a corporate

integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm, diminished profits and future earnings, exclusion from participation in government healthcare programs and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, implementation of corporate compliance programs, and reporting of payments or transfers of value to healthcare professionals.

Coverage and Reimbursement

The future commercial success of our product candidates, if approved, will depend in part on the extent to which third-party payors, such as governmental payor programs at the federal and state levels, including Medicare and Medicaid, private health insurers and other third-party payors, provide coverage of and establish adequate reimbursement levels for our product candidates. Third-party payors generally decide which products they will pay for and establish reimbursement levels for those products. In particular, in the United States, no uniform policy for coverage and reimbursement exists. Private health insurers and other third-party payors often provide coverage and reimbursement for products based on the level at which the government, through the Medicare program, provides coverage and reimbursement for such products, but also on their own methods and approval process apart from Medicare determinations. Therefore, coverage and reimbursement can differ significantly from payor to payor.

In the United States, the EU and other potentially significant markets for our product candidates, government authorities and third-party payors are increasingly attempting to limit or regulate the price of products, particularly for new and innovative products, which often has resulted in average selling prices lower than they would otherwise be. Further, the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the EU will put additional pressure on product pricing, reimbursement and usage. These pressures can arise from rules and practices of managed care groups, judicial decisions and laws and regulations related to Medicare, Medicaid and healthcare reform, biopharmaceutical coverage and reimbursement policies and pricing in general.

Third-party payors are increasingly imposing additional requirements and restrictions on coverage and limiting reimbursement levels for products. For example, federal and state governments reimburse products at varying rates generally below average wholesale price. These restrictions and limitations influence the purchase of products. Third-party payors may limit coverage to specific products on an approved list, or formulary, which might not include all of the FDA-approved products for a particular indication. Similarly, because certain of our product candidates are physician-administered, separate reimbursement for the product itself may or may not be available. Instead, the administering physician may only be reimbursed for providing the treatment or procedure in which our product is used. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of products, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic trials in order to demonstrate the medical necessity and cost-effectiveness of our product candidates, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Adequate third-party payor reimbursement may not be available to enable us to realize an appropriate return on our investment in product development. Legislative proposals to reform healthcare or reduce costs under government insurance programs may result in lower reimbursement for our product candidates, if approved, or exclusion of our product candidates from coverage and reimbursement. The cost containment measures that third-party payors and providers are instituting and any healthcare reform could significantly reduce our revenue from the sale of any approved product candidates.

Healthcare Reform

The United States and some foreign jurisdictions are considering enacting or have enacted a number of additional legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our product candidates profitably, if approved. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the biopharmaceutical industry has been a particular focus of these efforts, which include major legislative initiatives to reduce the cost of care through changes in the healthcare system, including limits on the pricing, coverage, and reimbursement of biopharmaceutical products, especially under government-funded healthcare programs, and increased governmental control of drug pricing.

There have been several U.S. government initiatives over the past few years to fund and incentivize certain comparative effectiveness research, including creation of the Patient-Centered Outcomes Research Institute under the ACA.

It is also possible that comparative effectiveness research demonstrating benefits in a competitor's product could adversely affect the sales of our product candidates.

The ACA became law in March 2010 and substantially changed the way healthcare is financed by third-party payors, and significantly impacts the U.S. biopharmaceutical industry. Among other measures that may have an impact on our business, the ACA established an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents; a new Medicare Part D coverage gap discount program; and a new formula that increased the rebates a manufacturer must pay under the Medicaid Drug Rebate Program. Additionally, the ACA extended manufacturers' Medicaid rebate liability, expands eligibility criteria for Medicaid programs, and expanded entities eligible for discounts under the PHSA. At this time, we are unsure of the full impact that the ACA will have on our business.

In March 2010, the United States Congress enacted the ACA, which, among other things, includes changes to the coverage and payment for pharmaceutical products under government healthcare programs. Other legislative changes have been proposed and adopted since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect in April 2013 and will remain in effect through 2031. Pursuant to the Coronavirus Aid, Relief and Economic Security Act, or CARES Act, and subsequent legislation, these Medicare sequester reductions have been suspended through the end of March 2022. From April 2022 through June 2022 a 1% sequester cut will be in effect, with the full 2% cut resuming thereafter.

Since enactment of the ACA, there have been, and continue to be, numerous legal challenges and Congressional actions to repeal and replace provisions of the law. For example, with enactment of the Tax Cuts and Jobs Act of 2017, or the Tax Act, which was signed by President Trump on December 22, 2017, Congress repealed the "individual mandate." The repeal of this provision, which requires most Americans to carry a minimal level of health insurance, became effective in 2019. On December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseverable feature of the ACA, and therefore because the mandate was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. The U.S. Supreme Court heard this case on November 10, 2020 and, on June 17, 2021, dismissed this action after finding that the plaintiffs do not have standing to challenge the constitutionality of the ACA. Litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results.

The prices of prescription pharmaceuticals have also been the subject of considerable discussion in the United States. There have been several recent U.S. Congressional inquiries, as well as proposed and enacted state and federal legislation designed to, among other things, bring more transparency to pharmaceutical pricing, review the relationship between pricing and manufacturer patient programs, and reduce the costs of pharmaceuticals under Medicare and Medicaid. In 2020 President Trump issued several executive orders intended to lower the costs of prescription products and certain provisions in these orders have been incorporated into regulations. These regulations include an interim final rule implementing a most favored nation model for prices that would tie Medicare Part B payments for certain physician-administered pharmaceuticals to the lowest price paid in other economically advanced countries, effective January 1, 2021. That rule, however, has been subject to a nationwide preliminary injunction and, on December 29, 2021, CMS issued a final rule to rescind it. With issuance of this rule, CMS stated that it will explore all options to incorporate value into payments for Medicare Part B pharmaceuticals and improve beneficiaries' access to evidence-based care.

In addition, in October 2020, HHS and the FDA published a final rule allowing states and other entities to develop a Section 804 Importation Program, or SIP, to import certain prescription drugs from Canada into the United States. The final rule is currently the subject of ongoing litigation, but at least six states (Vermont, Colorado, Florida, Maine, New Mexico, and New Hampshire) have passed laws allowing for the importation of drugs from Canada with the intent of developing SIPs for review and approval by the FDA. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The implementation of the rule has been delayed by the Biden administration from January 1, 2022 to January 1, 2023 in response to ongoing litigation. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a new safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers, the implementation of which have also been delayed by the Biden administration until January 1, 2023.

At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control biopharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual

hospitals are increasingly using bidding procedures to determine which drugs and suppliers will be included in their healthcare programs. A number of states, for example, require drug manufacturers and other entities in the drug supply chain, including health carriers, pharmacy benefit managers, and wholesale distributors, to disclose information about pricing of pharmaceuticals. Furthermore, there has been increased interest by third party payors and governmental authorities in reference pricing systems and publication of discounts and list prices. These measures could reduce future demand for our products or put pressure on our pricing.

Foreign Regulation

In order to market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of our product candidates. For example, in the EU, we must obtain authorization of a clinical trial application in each member state in which we intend to conduct a clinical trial. Whether or not we obtain FDA approval for a drug, we would need to obtain the necessary approvals by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the drug in those countries. The approval process varies from country to country and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others.

Further, some countries outside of the United States, including the EU member states, Switzerland and the U.K., have also adopted data protection laws and regulations, which impose significant compliance obligations. In the EU, the collection and use of personal health data is governed by the provisions of the General Data Protection Regulation, or GDPR. The GDPR, together with the national legislation of the EU member states governing the processing of personal data, impose strict obligations and restrictions on the ability to process personal data, including health data from clinical trials and adverse event reporting. For additional information regarding the GDPR, see the section titled “Business—Government Regulation and Product Approval—Privacy Laws.”

Privacy Laws

We, and our service providers, receive, process, store and use personal information and other data about our clinical trial participants, employees, collaborators and others. We are subject to numerous domestic and foreign laws and regulations regarding privacy and data security, the scope of which is changing, subject to differing applications and interpretations, and may be inconsistent among countries, or conflict with other rules.

At the federal level, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations, impose specific requirements on certain types of individuals and entities relating to the privacy, security and transmission of individually identifiable health information. HITECH, among other things, also increased the civil and criminal penalties that may be imposed for non-compliance with the law, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney’s fees and costs associated with pursuing federal civil actions. Penalties for failure to comply with a requirement of HIPAA and HITECH vary significantly, and include significant civil monetary penalties and, in certain circumstances, criminal penalties and/or imprisonment.

Various states, such as California and Massachusetts, have implemented privacy laws and regulations similar to HIPAA, such as the California Confidentiality of Medical Information Act, that impose restrictive requirements regulating the use and disclosure of health information. These laws and regulations are not necessarily preempted by HIPAA, particularly if a state affords greater protection to individuals than HIPAA. Where state laws are more protective, we have to comply with the stricter provisions. In addition to fines and penalties imposed upon violators, some of these state laws also afford private rights of action to individuals who believe their personal information has been misused. California’s patient privacy laws, for example, provide for penalties of up to $250,000 and permit injured parties to sue for damages.

Additionally, the California Consumer Privacy Act, the CCPA, which took effect on January 1, 2020, gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing, and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches, which is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability. It is anticipated that the CCPA will be expanded on January 1, 2023, when the California Privacy Rights Act of 2020, the CPRA, becomes operative. The CPRA will, among other things, give California residents the ability to limit use of certain sensitive personal information, further restrict the use of

cross-contextual advertising, establish restrictions on the retention of personal information, expand the types of data breaches subject to the CCPA's private right of action, provide for increased penalties for CPRA violations concerning California residents under the age of 16, and establish a new California Privacy Protection Agency to implement and enforce the new law. Some observers have noted that the CCPA and CPRA could mark the beginning of a trend toward more stringent state privacy, data protection and data security legislation in the U.S., which could increase our potential liability and adversely affect our business. Furthermore, the interplay of federal laws—such as HIPAA—and state laws may be subject to varying interpretations by courts and government agencies, creating complex compliance issues for us and data we receive, use and share, potentially exposing us to additional expense, adverse publicity and liability.

Regulation of privacy, data protection and data security has also become more stringent in foreign jurisdictions. For example, the EU adopted the GDPR, which imposes onerous and comprehensive privacy, data protection, and data security obligations onto data controllers and processors, including, as applicable, contractual privacy, data protection, and data security commitments, expanded disclosures to data subjects about how their personal information is used, honoring individuals' data protection rights, limitations on retention of personal information, additional requirements pertaining to sensitive information (such as health data) and pseudonymized (i.e., key-coded) data, data breach notification requirements, and higher standards for obtaining consent from data subjects. Penalties for non-compliance with the GDPR can be significant and include fines in the amount of the greater of €20 million or 4% of global turnover and restrictions or prohibitions on data processing, which could hinder our ability to do business in the EU, reduce demand for our services and adversely impact our business and results of operations. The GDPR also provides that EU member states may implement further laws and regulations limiting the processing of genetic, biometric, or health data, which could limit our ability to collect, use and share European data, or could cause our compliance costs to increase, require us to change our practices, adversely impact our business, and harm our financial condition. Assisting parties with whom we exchange personal data in complying with the GDPR, or complying with the GDPR ourselves, may cause us to incur substantial operational costs or require us to change our business practices.

Furthermore, European privacy, data protection, and data security laws, including the GDPR, generally restrict the transfer of personal information from the U.K., European Economic Area, or EEA, and Switzerland to the United States and most other countries unless the parties to the transfer have implemented specific safeguards to protect the transferred personal information. There is uncertainty as to how to implement such safeguards and how to conduct such transfers in compliance with the GDPR, and certain safeguards may not be available or applicable with respect to some or all of the personal information processing activities necessary to research, develop and market our products and services. One of the primary safeguards allowing U.S. companies to import personal information from Europe has been certification to the EU-U.S. Privacy Shield and Swiss-U.S. Privacy Shield frameworks. However, the EU-U.S. Privacy Shield framework was invalidated in July 2020 in a decision by the Court of Justice of the European Union and the Swiss-U.S. Privacy Shield Framework was declared as inadequate by the Swiss Federal Data Protection and Information Commissioner. The decision by the Court of Justice and the announcement by the Swiss Commissioner both raised questions about whether one of the primary alternatives to the Privacy Shield frameworks, the European Commission's Standard Contractual Clauses, can lawfully be used for personal information transfers from Europe to the United States or most other countries. Authorities in the U.K. may similarly invalidate use of the EU-U.S. Privacy Shield and raise questions on the viability of the Standard Contractual Clauses. In November 2020, EU regulators proposed a new set of Standard Contractual Clauses, which impose additional obligations and requirements with respect to the transfer of EU personal data to other jurisdictions, which may increase the legal risks and liabilities under the GDPR and local EU laws associated with cross-border data transfers, and result in material increased compliance and operational costs. If we are unable to implement a valid mechanism for personal information transfers to the United States and other countries, we may face increased exposure to regulatory actions, substantial fines, and injunctions against processing or transferring personal information from Europe, and we may be required to increase our data processing capabilities in Europe at significant expense. Inability to import personal information from Europe to the United States or other countries may limit our ability to conduct clinical trials in Europe and collaborate with other entities subject to European data protection laws. At present, there are few, if any, viable alternatives to the Privacy Shield and the Standard Contractual Clauses. Other countries outside of Europe have enacted or are considering enacting similar cross-border data transfer restrictions and laws requiring local data residency, which could increase the cost and complexity of delivering our services and operating our business.

In addition, it is unclear whether the transfer of personal information from the EU to the U.K. will continue to remain lawful under the GDPR in light of Brexit. Pursuant to a post-Brexit trade deal between the U.K. and the EU, transfers of personal information from the EEA to the U.K. are not considered restricted transfers under the GDPR for a period of up to four months from January 1, 2021 with a potential two-month extension. However, unless the EU Commission makes an adequacy finding with respect to the U.K. before the end of that period, the U.K. will be considered a "third country" under the GDPR and transfers of European personal information to the U.K. will require an adequacy mechanism to render such transfers lawful under the GDPR. Additionally, although U.K. privacy, data protection and data security laws are designed to be consistent with the GDPR, uncertainty remains regarding how data transfers to and from the U.K. will be regulated notwithstanding Brexit.

Compliance with U.S. and foreign privacy, data protection, and data security laws and regulations could cause us to incur substantial costs or require us to change our business practices and compliance procedures in a manner adverse to our business. Moreover, complying with these various laws could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. We may rely on others, such as health care providers, to obtain valid and appropriate consents from data subjects whose data we process. The failure of third parties to obtain consents that are valid under applicable law could result in our own non-compliance with privacy laws. Such failure to comply with U.S. and foreign privacy, data protection, and data security laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business. Claims that we have violated individuals' privacy rights, failed to comply with privacy, data protection, and data security laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend, could result in adverse publicity and could have a material adverse effect on our business, financial condition, and results of operations.

Legal Proceedings

From time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not currently a party to any material legal proceedings. Regardless of outcome, such proceedings or claims can have an adverse impact on us because of defense and settlement costs, diversion of resources and other factors, and there can be no assurances that favorable outcomes will be obtained.

Human Capital Management

Employees

As of December 31, 2021, we had 444 full-time employees, 318 of whom were primarily engaged in research and development activities. Substantially all of our employees are located in San Francisco, California; Portland, Oregon; and Bellinzona, Switzerland. None of our employees are represented by a labor union and we consider our employee relations to be good.

As the clinical development of our product candidates progresses, we expect to continue to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of research, development, regulatory affairs and, if any of our product candidates receives marketing approval, sales, marketing and distribution. In addition, we also expect to hire additional personnel in order to sustain operations as a public company.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and additional employees. The principal purpose of our equity incentive plan is to attract, retain, and motivate our employees, non-employee directors, and consultants through the granting of stock-based compensation and performance cash awards.

Response to COVID-19

With the global spread of the current COVID-19 pandemic, we have implemented a number of plans and policies designed to address and mitigate the impact of the COVID-19 pandemic on our employees and our business. We continue to closely monitor the COVID-19 situation and will evolve our plans and policies as needed going forward. As a result of these developments, in March 2020, we implemented work-from-home policies for most of our employees. We have also implemented plans, which continue to evolve based on the current climate and response to the ongoing COVID-19 pandemic, to reopen our offices to allow employees to return when appropriate. Although these plans are based on a phased approach consistent with local government requirements, and focused on employee safety, and contemplate returning to remote work should new restrictions be implemented, there is uncertainty regarding recent phased reopening, which may be rolled back, and restrictions re-implemented. We are also working to provide our employees with the support they need to ensure continuity of business operations.

Our Corporate Information

We were incorporated under the laws of the State of Delaware on April 7, 2016. Our principal executive offices are located at 499 Illinois Street, Suite 500, San Francisco, California 94158, and our telephone number is (415) 906-4324. Our corporate website address is www.vir.bio. Information contained on, or accessible through, our website shall not be deemed incorporated into and is not a part of this Annual Report on Form 10-K, and the inclusion of our website address in this report is an inactive textual reference only. We make available free of charge through our website our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. We make these reports available through our website as soon as reasonably practicable after we electronically file such reports with, or furnish such reports to, the SEC. We may use our website as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation Fair Disclosure promulgated by the SEC. These disclosures will be included on our website under the “Investors” section.

Item 1A. Risk Factors.

An investment in shares of our common stock involves a high degree of risk. You should carefully consider the following risk factors as well as the other information in this Annual Report on Form 10-K, including our audited consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K and "Management's Discussion and Analysis of Financial Condition and Results of Operations", before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and/or prospects or cause our actual results to differ materially from those contained in forward-looking statements we have made in this report and those we may make from time to time. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. You should consider all of the risk factors described when evaluating our business.

Risks Related to Our Financial Position and Capital Needs

We have incurred net losses and anticipate that we may continue to incur net losses in the foreseeable future and therefore, may not be able to maintain profitability.

Although we recorded net income for the year ended December 31, 2021, we have otherwise incurred accumulated net losses since inception in April 2016. We had net income of $528.6 million for the year ended December 31, 2021, and net loss of $298.7 million and $174.7 million for the years ended December 31, 2020 and 2019, respectively. As of December 31, 2021, we had an accumulated deficit of $138.6 million.

We expect to continue to incur significant expenses and may continue to incur net losses in the foreseeable future. Since inception, we have devoted substantially all of our efforts to identifying, researching and conducting preclinical and clinical activities of our product candidates, acquiring and developing our technology platforms and product candidates, organizing and staffing our company, business planning, raising capital and establishing our intellectual property portfolio. We have received an Emergency Use Authorization, or EUA, from the U.S. Food and Drug Administration, or FDA, and a positive scientific opinion from the Committee for Human Medicinal Products, or CHMP, in the European Union, or EU, for sotrovimab (previously VIR-7831). To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries. Although we (through our collaborator Glaxo Wellcome UK Limited and GlaxoSmithKline Biologicals S.A. (individually and collectively referred to as GSK)) have recently entered into procurement agreements to supply sotrovimab to governments around the world and began to recognize revenue for sotrovimab, the extent of future revenue remains uncertain. However, there are no assurances that we will secure additional supply commitments from governments. In addition, COVID-19 treatment standards are susceptible to rapid changes in epidemiology and the emergence of new variants, thus, sotrovimab may be rendered inferior or obsolete in the future. It could be several years, if ever, before we are able to commercialize any of our other product candidates. Any net losses we incur may fluctuate significantly from quarter to quarter and year to year. To remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our current and future product candidates, obtaining regulatory approval, procuring commercial-scale manufacturing, marketing and selling any products for which we obtain regulatory approval (including through third parties), as well as discovering or acquiring and developing additional product candidates. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may not be able to continue to generate revenue that is sufficient to offset our expenses and maintain profitability.

Because of the numerous risks and uncertainties associated with biopharmaceutical product development, we are unable to accurately predict the timing or amount of expenses, or if, we will be able to maintain profitability. If we are required by regulatory authorities to perform studies and trials in addition to those currently expected, or if there are any delays in the initiation and completion of our clinical trials or the development of any of our product candidates, our expenses could increase. For example, the FDA has asked for additional data to support our conclusion that the 500 mg IV dose of sotrovimab retains activity against the BA.2 Omicron subvariant based on our current modeling assumptions as well as safety data for higher doses. We could be required to perform additional studies and trials on sotrovimab based on any additional feedback we may receive from the FDA.

We may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to remain profitable would decrease the value of our company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations.

Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are a commercial-stage company founded in April 2016 and our operations to date have been largely focused on identifying, researching and conducting preclinical and clinical activities of our product candidates, acquiring and developing our technology platforms and product candidates, organizing and staffing our company, business planning, raising capital and establishing our intellectual property portfolio. Sotrovimab has received an EUA from the FDA and marketing authorization in the EU. To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries. We are in the early stages of seeking approval under a biologics license application, or BLA, and expanding our commercialization capabilities for sotrovimab. As an organization, we have not yet demonstrated an ability to successfully manufacture a BLA-approved, commercial-scale product or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

We currently have four technology platforms and eight product candidates in our development pipeline. We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives, including with respect to our technology platforms and product candidates.

We may require substantial additional funding to finance our operations. If we are unable to raise capital when needed, we could be forced to delay, reduce or terminate certain of our development programs or other operations.

As of December 31, 2021, excluding restricted cash, we had cash, cash equivalents and investments of $909.5 million and by also excluding the equity investment in Brii Biosciences Limited, or Brii Bio Parent, we had $766.4 million. Based upon our current operating plan, we believe that the $766.4 million as of December 31, 2021 will fund our current operating plans for at least the next 12 months. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional financing to fund our long-term operations sooner than planned. Moreover, it is particularly difficult to estimate with certainty our future expenses given the dynamic and rapidly evolving nature of our business and the COVID-19 pandemic environment generally. We may also need to raise additional capital to complete the development and commercialization of our EUA product or our product candidates and fund certain of our existing manufacturing and other commitments. We expect to finance our cash needs through public or private equity or debt financings, third-party (including government) funding and marketing and distribution arrangements, as well as other collaborations, strategic alliances and licensing arrangements, or any combination of these approaches. Our future capital requirements will depend on many factors, including:

- the timing, progress and results of our ongoing preclinical studies and clinical trials of our EUA product and other product candidates;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials of other product candidates that we may pursue;
- our ability to establish and maintain collaboration, license, grant and other similar arrangements, and the financial terms of any such arrangements, including timing and amount of any future milestones, royalty or other payments due thereunder;
- the costs, timing and outcome of regulatory review of our EUA product and other product candidates;
- the costs and timing of commercialization activities, including product manufacturing, marketing, sales and distribution, for our EUA product and any of our product candidates for which we receive marketing approval;
- the amount of revenue received from commercial sales of our EUA product or any product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- any expenses needed to attract, hire and retain skilled personnel;
- the costs of operating as a public company; and
- the extent to which we acquire or in-license other companies' product candidates and technologies.

The COVID-19 pandemic and the evolution of new and existing variants of COVID-19 have resulted in a significant disruption of global financial markets. If the disruption persists and deepens, we could experience an inability to access

additional capital, which could in the future negatively affect our capacity for certain corporate development transactions or our ability to make other important, opportunistic investments. In addition, market volatility, inflation and interest rate fluctuations may increase our cost of financing or restrict our access to potential sources of future liquidity. Adequate additional financing may not be available to us on acceptable terms, or at all. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or altogether terminate our research and development programs or commercialization efforts, which may adversely affect our business, financial condition, results of operations and prospects. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our product candidates.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through public or private equity or debt financings, third-party (including government) funding and marketing and distribution arrangements, as well as other collaborations, strategic alliances and licensing arrangements, or any combination of these approaches. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest in our company may be diluted and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt and equity financings, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as redeeming our shares, making investments, incurring additional debt, making capital expenditures, declaring dividends or placing limitations on our ability to acquire, sell or license intellectual property rights.

If we raise additional capital through future collaborations, strategic alliances or licensing arrangements, we may have to relinquish valuable rights to our intellectual property, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional capital when needed, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts or grant rights to develop and market product candidates that we would otherwise develop and market ourselves.

We received an EUA from the FDA for sotrovimab. If the FDA revokes or terminates our EUA for sotrovimab for the early treatment of COVID-19, the disease caused by the virus SARS-CoV-2, or the federally-declared COVID-19 public health emergency ends, we will be required to stop commercial distribution of sotrovimab in the United States unless we can obtain FDA approval for this product and its currently authorized uses.

Sotrovimab is currently made available pursuant to an EUA we received from the FDA on May 26, 2021 for the early treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at risk for progression to severe COVID-19, including hospitalization or death. The FDA will periodically review the circumstances and appropriateness of an EUA, including circumstances that might warrant revocation of the EUA. The review will include regular assessment based on additional information provided by the sponsor of the progress made with respect to the approval, licensure, or clearance of the unapproved product, or of the unapproved use of an approved product, for which an EUA was issued. The FDA may revise or revoke an EUA if the circumstances justifying its issuance no longer exist, the criteria for its issuance are no longer met, or other circumstances make a revision or revocation appropriate to protect the public health or safety. Such circumstances may include significant adverse inspectional findings; reports of adverse events linked to, or suspected of being caused by, the EUA product; a material change in the risk/benefit assessment based on evolving understanding of the disease or condition and/or availability of authorized medical products; or a change in the approval status of the product may make an EUA unnecessary. An EUA may also be terminated upon a declaration by the Secretary of the Health and Human Services, or HHS, that the public health emergency has ended. We cannot predict how long our EUA will remain in effect, and we may not receive advance notice from the FDA regarding revocation of our EUA or withdrawal of the public health emergency declaration. If our EUA is terminated or revoked, sotrovimab will no longer be available in the United States unless and until we have obtained FDA approval of a BLA for the product. Changing policies and regulatory requirements could limit, delay or prevent further commercialization of sotrovimab and could adversely impact our business, financial condition, results of operations and prospects.

We are committing substantial financial resources and personnel and making substantial capital commitments with third parties in connection with sotrovimab as a therapy for COVID-19. Market demand and utilization of sotrovimab or any of our other COVID-19 product candidates may be adversely impacted by factors such as the development of monoclonal antibodies, or mAbs, of other third parties, the rollout of vaccines and oral antivirals, the emergence of new viral variants, and the current challenges in the delivery and administration of mAbs to patients.

In response to the ongoing COVID-19 pandemic, we are pursuing various potential therapies to address the disease, including through mAbs using our antibody platform (in collaboration with several partners), such as sotrovimab and VIR-7832. Sotrovimab has received an EUA from the FDA and marketing authorization in the EU. To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries. Also, we (through our collaborator GSK) have recently entered into procurement agreements to supply sotrovimab to governments around the world; however, there are no assurances that we will secure additional supply commitments from governments. We have not received regulatory approval for any of our other product candidates.

We are committing substantial financial resources, both internally and externally, and personnel to the development of a therapy for COVID-19, which may cause delays in or otherwise negatively impact our other development programs. There are no assurances that there will be sufficient market demand for sotrovimab or our other COVID-19 product candidates. Market demand and utilization of sotrovimab or any of our other COVID-19 product candidates may be adversely impacted by factors such as the development of mAbs of other third parties, the rollout of vaccines and oral antivirals, the emergence of new viral variants, and the current challenges in the delivery and administration of mAbs to patients. In addition, COVID-19 treatment standards are susceptible to rapid changes in epidemiology and the emergence of new variants, thus, sotrovimab may be rendered inferior or obsolete in the future, even if it were to gain widespread market acceptance initially. If sotrovimab is rendered inferior or obsolete in the future, our financial condition and business may be adversely affected.

Our ability to develop a successful therapy will also depend on the success of our manufacturing capabilities, for which we are dependent on third-party manufacturing organizations and which will require significant additional funding. Our current estimated aggregate commitments to GSK under two separate master services agreements with Samsung Biologics Co., Ltd. and WuXi Biologics (Hong Kong) Limited, or WuXi Biologics, for drug substance, drug product and raw material were approximately $188 million as of December 31, 2021. For additional information regarding our obligations under these agreements, see the section titled “Business—Our Collaboration, License and Grant Agreements” and “Business—Manufacturing—Manufacturing Agreements.”

While we believe securing such manufacturing capacity and technological expertise is essential to the potential success of our SARS-CoV-2 antibody development programs, such capital commitments plus any future commitments, in the aggregate, may, in the future, exceed our available cash and cash equivalents and investments. We may also need to enter into additional manufacturing arrangements in the future in order to create an effective supply chain for sotrovimab and our other COVID-19 product candidates that will adequately support demand. In the event that there is not enough demand for the manufacturing capacity that we have already secured or regulatory approval of our product candidates is delayed or unsuccessful, we may remain obligated to pay for such excess manufacturing capacity, which could adversely affect our business, financial condition, results of operations and prospects. We will need to raise substantial additional capital to fund the development of sotrovimab and our other product candidates and meet our capital commitments to our manufacturing partners in connection therewith. There can be no assurance that sufficient funds will be available to us on attractive terms or at all and our ability to obtain additional capital could be adversely affected if there is a significant decline in the demand for our products or other significantly unfavorable changes in economic conditions. If we are unable to obtain additional funding from these or other sources, it may be necessary to significantly reduce our rate of spending through reductions in staff and delaying, scaling back, or stopping certain research and development programs. Insufficient liquidity may also require us to relinquish rights to product candidates at an earlier stage of development or on less favorable terms than we would otherwise choose. Our business could be negatively impacted by our allocation of significant resources to a global health threat that is unpredictable or against which our potential therapies, if developed, may not be partially or fully effective, and may ultimately prove unsuccessful or unprofitable. Furthermore, there are no assurances that we will secure additional supply commitments from governments, which may be material to the commercial success of sotrovimab and our product candidates, either in the United States or abroad.

There are also efforts by other companies in developing prophylactic vaccines against COVID-19. For example, in August 2021 Pfizer Inc.’s, or Pfizer, COVID-19 vaccine, Comirnaty®, which has been proven to be 95% effective in clinical trials, was approved by the FDA for individuals 16 years of age or older and is also available under EUA for individuals 12 through 15 years of age. In January 2022, Moderna, Inc.'s vaccine, Spikevax®, which has proven to be 94% effective in clinical trials, was approved by the FDA for individuals 18 years of age or older. In addition, in February 2021 Janssen Biotech, Inc. received EUA from the FDA for its COVID-19 vaccine, which has been proven to be 85% effective in clinical trials. These other entities may be more successful at developing, manufacturing or commercializing a therapy for COVID-19. Several of these other organizations are much larger than we are and have access to larger pools of capital, including U.S. government funding, and broader manufacturing infrastructure. There are no assurances that there will be sufficient market demand for our COVID-19 therapies, that we will secure U.S. government funding, that our manufacturing and supply chain infrastructure will remain uninterrupted and reliable, or that the third parties we rely on to manufacture our COVID-19

therapies will be able to satisfy demand in a timely manner and not have supply chain disruptions due to COVID-19 related shutdowns, stock-outs due to raw material shortages and/or greater than anticipated demand or quality issues given the operational challenges and raw material shortages that have been experienced during the COVID-19 pandemic, all of which may adversely impact our ability to commercialize a therapy for COVID-19. In addition, several organizations have already secured significant commitments from governments to purchase COVID-19 antibodies, oral antivirals, and vaccines. The success or failure of other entities, or perceived success or failure, may adversely impact our ability to obtain any future funding for our development and manufacturing efforts or to successfully commercialize a therapy for COVID-19. Additionally, the availability of superior or competitive therapies, or preventative measures such as vaccines or oral antivirals, coupled with the transient nature of pandemics, could negatively impact or eliminate demand for our COVID-19 therapies. For additional information regarding our competition see the section below titled "—Risks Related to the Development and Commercialization — We face substantial competition, which may result in others developing or commercializing products before or more successfully than us."

Our near-term success is dependent on the successful commercialization of sotrovimab for the early treatment of COVID-19, including our ability to enter into additional procurement contracts with government entities. If we are unable to successfully commercialize sotrovimab, our business, financial condition, results of operations and prospects may be adversely affected. In addition, sotrovimab may be rendered inferior or obsolete, even if it were to gain widespread market acceptance initially.

Our near-term success is dependent on the successful commercialization of sotrovimab, which is our only currently available commercial product. The commercial success of sotrovimab will depend on a number of factors, some of which are outside of our control, including the following:

- our ability to comply with all regulatory requirements applicable to our EUA, including applicable FDA marketing, manufacturing and post-market requirements and other requirements of our EUA;
- whether we are required by the FDA or other similar regulatory authorities to conduct additional clinical trials or to modify the design of our current trials to support the approval of sotrovimab;
- the receipt of additional marketing authorizations and approvals from the FDA and other similar regulatory authorities;
- our ability to achieve and maintain compliance with all regulatory requirements applicable to sotrovimab;
- perceptions by the public and members of the medical community, including physicians, as to the safety and efficacy of sotrovimab as well as the accuracy and sufficiency of clinical evidence supporting its performance;
- demand from the public and members of the medical community for sotrovimab;
- the availability, perceived advantages, relative cost, relative convenience and relative efficacy of sotrovimab compared to other COVID-19 therapies as well as the accuracy and sufficiency of clinical evidence supporting its performance;
- the ability of sotrovimab to be effective in patients with COVID-19 and its variants;
- positive or negative media coverage of sotrovimab;
- the effectiveness of our marketing and sales efforts;
- our ability to raise additional capital on acceptable terms, or at all, if needed to support the commercialization of sotrovimab;
- the ability to enter into additional procurement contracts with government entities, and our ability to meet our obligations under such contracts;
- our reliance on GSK and other collaborators for development, commercialization and manufacturing of sotrovimab;
- our ability to obtain, maintain and enforce our intellectual property rights;
- our ability to maintain a continued supply of sotrovimab that meets our quality control requirements;
- the ability of third-party manufacturing partners to meet demand in a timely manner, in accordance with our specifications, and in compliance with applicable regulatory requirements;

- limitation on use or warnings required by the FDA;
- our current and future arrangements with healthcare providers, physicians and third-party payors; and
- availability of, or changes in, coverage or reimbursement rates for sotrovimab from government or other commercial or healthcare payors.

In addition, COVID-19 treatment standards are susceptible to rapid changes in epidemiology and the emergence of new variants, thus, sotrovimab may be rendered inferior or obsolete, even if it were to gain widespread market acceptance initially. Initial feedback from the FDA question our conclusion that the 500 mg IV dose of sotrovimab retains activity against the BA.2 Omicron subvariant based on our current modeling assumptions, and the FDA has asked for additional data to support our position. The FDA also requested safety data for higher doses. Both have been provided to the FDA and we are awaiting further correspondence. We could be required to perform additional studies and trials on sotrovimab based on any additional feedback we may receive from the FDA or the FDA could amend the terms of our EUA to limit the circumstances under which sotrovimab could be used as an early treatment for COVID-19.

If we are unable to successfully commercialize sotrovimab, our business, financial condition, results of operations and prospects may be adversely affected.

Risks Related to the Development and Commercialization

Our future success is substantially dependent on the successful clinical development, regulatory approval and commercialization of our EUA product and product candidates in a timely manner. If we are not able to obtain required regulatory approvals, we will not be able to commercialize our product candidates and our ability to generate product revenue will be adversely affected.

We have invested a significant portion of our time and financial resources in the development of our product candidates. Our business is dependent on our ability to successfully complete development of, obtain regulatory approval for, and successfully commercialize our EUA product and other product candidates, if approved, in a timely manner. We may face unforeseen challenges in our product development strategy, and we can provide no assurances that our product candidates will be successful in clinical trials or will ultimately receive regulatory approval.

We initiated clinical trials for multiple product candidates. Sotrovimab has received an EUA from the FDA and marketing authorization in the EU. To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries. The FDA may, under certain circumstances, revise or revoke an EUA. If our EUA is terminated or revoked, sotrovimab will no longer be available in the United States unless and until we have obtained FDA approval of a BLA for the product. We have not obtained BLA approval for sotrovimab or any other product candidate to date. We operate in a highly regulated field, and it is possible that any product candidate we may seek to develop in the future will not obtain regulatory approval.

Prior to obtaining approval to commercialize any product candidate in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory authorities, that such product candidate is safe and effective for its intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we believe that the preclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval for further development, manufacturing or commercialization of our product candidates by the FDA and other regulatory authorities. The FDA may also require us to conduct additional preclinical studies or clinical trials for our product candidates either prior to or post-approval, or it may object to elements of our clinical development program, requiring their alteration.

Even if we eventually complete clinical testing and receive approval of a new drug application, or NDA, BLA, or foreign marketing application for our product candidates, the FDA or the comparable foreign regulatory authorities may grant approval or other marketing authorization contingent on the performance of costly additional clinical trials, including post-market clinical trials. The FDA or the comparable foreign regulatory authorities also may approve or authorize for marketing a product candidate for a more limited indication or patient population than we originally request, and the FDA or comparable foreign regulatory authorities may not approve or authorize the labeling that we believe is necessary or desirable for the successful commercialization of a product candidate. Any delay in obtaining, or inability to obtain, applicable regulatory approval or other marketing authorization would delay or prevent commercialization of that product candidate and would adversely impact our business and prospects.

In addition, the FDA or comparable foreign regulatory authorities may change their policies, adopt additional regulations or revise existing regulations or take other actions, which may prevent or delay approval of our future product candidates under development on a timely basis. Such policy or regulatory changes could impose additional requirements upon us that could delay our ability to obtain applicable regulatory approvals, increase the costs of compliance or restrict our ability to maintain any marketing authorizations we may have obtained.

Furthermore, even if we obtain regulatory approval for our product candidates, we may still need to develop a commercial organization, establish a commercially viable pricing structure and obtain approval for coverage and adequate reimbursement from third-party and government payors, including government health administration authorities. If we are unable to successfully commercialize our product candidates or if there is an insufficient demand for our product candidates, we may not be able to generate sufficient revenue to continue our business.

The development of additional product candidates is risky and uncertain, and we can provide no assurances that we will be able to replicate our approach for other diseases.

A core element of our business strategy is to expand our product candidate pipeline. Efforts to identify, acquire or in-license, and then develop product candidates require substantial technical, financial and human resources, whether or not any product candidates are ultimately identified. Our efforts may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development, approved products or commercial revenue for many reasons.

We have limited financial and management resources and, as a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater market potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, strategic alliances, licensing or other royalty arrangements in circumstances under which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate. In addition, we may not be successful in replicating our approach to development for other disease indications. If we are unsuccessful in identifying and developing additional product candidates or are unable to do so, our business may be harmed.

We are developing, and in the future may develop, other product candidates in combination with other therapies, which exposes us to additional risks.

We are developing VIR-2218 and VIR-3434 for the functional cure of hepatitis B virus, or HBV. Each of these product candidates has the potential to stimulate an effective immune response and also has direct antiviral activity against HBV. We believe that a functional cure for HBV will require an effective immune response, in addition to antiviral activity, based on the observation that severe immunosuppression can reactivate HBV disease. Monotherapy with each of these agents may provide a functional cure in some patients, while combination therapy may be necessary for others. We have an ongoing Phase 2 clinical trial that combines VIR-2218 with pegylated interferon-alpha and a Phase 2 clinical trial that combines VIR-2218 with VIR-3434. We are also evaluating additional combinations with other immunotherapy agents and direct acting antiviral agents. Even if any product candidate we develop were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA or comparable foreign regulatory authorities could revoke approval of the therapy used in combination with our product candidate. There is also a risk that safety, efficacy, manufacturing or supply issues could arise with these other existing therapies. This could result in our own products being removed from the market or being less successful commercially.

We may also evaluate our future product candidates in combination with one or more other therapies that have not yet been approved for marketing by the FDA or comparable foreign regulatory authorities. We will not be able to market any product candidate we develop in combination with any such unapproved therapies that do not ultimately obtain marketing approval.

If the FDA or comparable foreign regulatory authorities do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing or supply issues arise with, the drugs we choose to evaluate in combination with any product candidate we develop, we may be unable to obtain approval.

Success in preclinical studies or earlier clinical trials may not be indicative of results in future clinical trials and we cannot assure you that any ongoing, planned or future clinical trials will lead to results sufficient for the necessary regulatory approvals and market authorizations.

Success in preclinical testing and earlier clinical trials does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the efficacy and safety of a product candidate. Success in preclinical studies and earlier clinical trials does not ensure that later efficacy trials will be successful, nor does it predict final results. Our product candidates may fail to show the desired characteristics in clinical development sufficient to obtain regulatory approval, despite positive results in preclinical studies or having successfully advanced through earlier clinical trials.

A trial design that is considered appropriate for regulatory approval includes a sufficiently large sample size with appropriate statistical power, as well as proper control of bias, to allow a meaningful interpretation of the results. If we do not conduct clinical trials with a large enough patient sample size, we may not achieve statistically significant results or the same level of statistical significance, if any, that would have been possible to achieve in a larger trial.

As an organization, we have limited experience designing clinical trials and may be unable to design and execute a clinical trial to support regulatory approval, which could mean we will suffer setbacks. Any such setbacks could negatively impact our business, financial condition, results of operations and prospects.

Interim, "top-line" and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim, "top-line" or preliminary data from our clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary or "top-line" data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data is available. Differences between preliminary or interim data and final data could significantly harm our business prospects and may cause the trading price of our common stock to fluctuate significantly.

Clinical product development involves a lengthy and expensive process. We may incur additional costs and encounter substantial delays or difficulties in our clinical trials.

We may not commercialize, market, promote or sell any product candidate without obtaining marketing approval from the FDA or comparable foreign regulatory authority, and we may never receive such approvals. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans and will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive, is difficult to design and implement, can take many years to complete and is uncertain as to outcome. We cannot guarantee that any clinical trials will be conducted as planned or completed on schedule, if at all. A failure of one or more clinical trials can occur at any stage of testing. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products. We may experience numerous unforeseen events prior to, during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates.

Any inability to successfully complete preclinical and clinical development could result in additional costs to us or impair our ability to generate revenue from future product sales or other sources. In addition, if we make manufacturing or formulation changes to our product candidates, we may need to conduct additional testing to bridge our modified product candidate to earlier versions. Clinical trial delays could also shorten any periods during which we may have the exclusive right to commercialize our product candidates, if approved, or allow our competitors to bring competing products to market before we do, which could impair our ability to successfully commercialize our product candidates and may harm our business, financial condition, results of operations and prospects.

Additionally, if the results of our clinical trials are inconclusive or if there are safety concerns or serious adverse events associated with our product candidates, we may:

- be delayed in obtaining marketing approval, or not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;
- be subject to additional post-marketing testing requirements;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw, or suspend, their approval of the product or impose restrictions on its distribution in the form of a risk evaluation and mitigation strategy, or REMS;
- be subject to the addition of labeling statements, such as warnings or contraindications;
- be sued; or
- experience damage to our reputation.

Our product development costs will also increase if we experience delays in testing or obtaining marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, need to be restructured or be completed on schedule, if at all.

Furthermore, our product candidates are based on certain innovative technology platforms, which makes it even more difficult to predict the time and cost of product candidate development and obtaining necessary regulatory approvals, particularly for our small interfering ribonucleic acid, or siRNA, and cytomegalovirus, or CMV, vector technologies. Relatively few siRNA product candidates have ever been tested in humans and to date few have received regulatory approval and market authorizations. In addition, the compounds we are developing may not demonstrate in patients the chemical and pharmacological properties ascribed to them in preclinical studies, and they may interact with human biological systems in unforeseen, ineffective or harmful ways.

As part of our T cell platform, our approach is to use human CMV, or HCMV, as a vaccine vector to potentially treat and prevent pathogens refractory to current vaccine technologies because HCMV may induce potent and long-lasting T cell responses to a broader range of epitopes than observed for other viral vaccines. Safety and toxicity trials for this technology have so far only been conducted in animal species, in which HCMV has limited ability to replicate. If our first clinical trial for VIR-1111 causes unexpected side effects that are not tolerable in the treatment of the relevant patient group, the further development of the product candidates and any other potential products based on HCMV-vector technology may be significantly limited or become impossible. Also, because our HCMV-vector technology is novel, regulatory agencies may lack experience with product candidates such as VIR-1111, which may lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of our product candidates. In addition, our HCMV-vector technology utilizes live-attenuated, genetically-modified organisms for which the FDA, the EMA, and other comparable foreign regulatory authorities and other public health authorities, such as the Centers for Disease Control and Prevention and hospitals involved in clinical trials, have established additional safety and contagion rules and procedures, which could establish additional hurdles for the development, manufacture or use of our vectors. These hurdles may lead to delays in the conduct of clinical trials or in obtaining regulatory approvals for further development, manufacturing or commercialization of our product candidates.

Further, we, the FDA, a foreign regulatory authority or an institutional review board may place a full or partial hold on our clinical trials at any time if it appears that we or our collaborators are failing to conduct a trial in accordance with regulatory requirements, including the FDA's current Good Clinical Practice, or GCP, regulations, that we are exposing participants to unacceptable health risks, or if the FDA or foreign regulatory authority finds deficiencies in our investigational new drug, or IND, applications or clinical trial applications, respectively, or the conduct of these trials. Moreover, we may not be able to file INDs to commence additional clinical trials on the timelines we expect because our filing schedule is dependent on further preclinical and manufacturing progress. Therefore, we cannot predict with any certainty the schedule for commencement and completion of future clinical trials. If we experience delays in the commencement or completion of our clinical trials, or if we terminate a clinical trial prior to completion, the commercial prospects of our product candidates could be negatively impacted, and our ability to generate revenue from our product candidates may be delayed.

Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be delayed, made more difficult or rendered impossible by multiple factors outside our control.

Identifying and qualifying patients to participate in our clinical trials is critical to our success. We are developing sotrovimab and VIR-7832 for the treatment of COVID-19, VIR-2218 and VIR-3434 for the treatment of HBV, VIR-2482 for the prevention of influenza A, and VIR-1111 for the prevention of human immunodeficiency virus, or HIV. In particular, clinical trials for prophylaxis tend to require enrollment of a larger number of subjects than clinical trials for treatments. We may encounter difficulties in enrolling patients in our clinical trials, thereby delaying or preventing development and approval of our product candidates. Even once enrolled, we may be unable to retain a sufficient number of patients to complete any of our trials. Patient enrollment and retention in clinical trials depend on many factors, including the size of the patient population, the nature of the trial protocol, the existing body of safety and efficacy data, the number and nature of competing treatments and ongoing clinical trials of competing therapies for the same indication, the proximity of patients to clinical sites and the eligibility criteria for the trial. The enrollment and retention of patients in the clinical trials for sotrovimab and VIR-7832 for the treatment of COVID-19 may be disrupted or delayed as a result of clinicians' and patients' perceptions as to the potential advantages of sotrovimab and VIR-7832 in relation to other available therapies, including products that have been recently authorized under EUAs or approved and licensed through NDAs and BLAs to treat COVID-19 as well as any other new products that may be approved in the future for the treatment of COVID-19. While we have active clinical trial sites in the Ukraine and nearby European countries, if political or civil conditions require it, our sites may need to delay or suspend clinical trial activities. In addition, enrollment and retention of patients in clinical trials could be disrupted by geopolitical events, including civil or political unrest (such as the ongoing conflict between Ukraine and Russia), terrorism, insurrection or war, man-made or natural disasters, or public health pandemics or epidemics or other business interruptions, including, the current COVID-19 pandemic and future outbreaks of the disease.

Our efforts to build relationships with patient communities may not succeed, which could result in delays in patient enrollment in our clinical trials. Any negative results we may report in clinical trials of our product candidates may make it difficult or impossible to recruit and retain patients in other clinical trials of that same product candidate. Delays or failures in planned patient enrollment or retention may result in increased costs, program delays or both, which could have a harmful effect on our ability to develop our product candidates or could render further development impossible. In addition, we may rely on contract research organizations, or CROs, and clinical trial sites to ensure proper and timely conduct of our future clinical trials and, while we intend to enter into agreements governing their services, we will be limited in our ability to ensure their actual performance.

The continued spread of COVID-19 globally, or the evolution of new variants of COVID-19 that are more contagious, have more severe effects or are resistant to treatments or vaccinations, could adversely impact our preclinical or clinical trial operations in the United States, including our ability to enroll and retain patients as well as CROs and clinical trial site staff who, as healthcare providers, may have heightened exposure to COVID-19 if an outbreak occurs in their geography. In response to the COVID-19 pandemic, the FDA issued guidance on March 18, 2020, and subsequently updated it, to address the conduct of clinical trials during the pandemic. The guidance sets out a number of considerations for sponsors of clinical trials impacted by the pandemic, including the requirement to include in the clinical study report (or as a separate document) contingency measures implemented to manage the study, and any disruption of the study as a result of COVID-19; a list of all study participants affected by COVID-19-related study disruptions by a unique subject identifier and by investigational site, and a description of how the individual's participation was altered; and analyses and corresponding discussions that address the impact of implemented contingency measures (e.g., participant discontinuation from investigational product and/or study, alternative procedures used to collect critical safety and/or efficacy data) on the safety and efficacy results reported for the study. There is no assurance that this guidance governing clinical studies during the pandemic will remain in effect or, even if it does, that it will help address the risks and challenges enumerated above. Accordingly, an inability to enroll a sufficient number of patients for the clinical trials would result in significant delays or might require us to abandon one or more clinical trials altogether.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit their commercial potential or result in significant negative consequences following any potential marketing approval.

During the conduct of clinical trials, patients report changes in their health, including illnesses, injuries and discomforts, to their doctor. Often, it is not possible to determine whether or not the product candidate being studied caused these conditions. Regulatory authorities may draw different conclusions and may require us to pause our clinical trials or require additional testing to confirm these determinations, if they occur.

In addition, it is possible that as we test our product candidates in larger, longer and more extensive clinical trials, or as use of these product candidates becomes more widespread if they receive regulatory approval, illnesses, injuries, discomforts and other adverse events that were not observed in earlier trials, as well as conditions that did not occur or went undetected in

previous trials, will be reported by subjects or patients. Many times, side effects are only detectable after investigational products are tested in large-scale pivotal trials or, in some cases, after they are made available to patients on a commercial scale after approval. If additional clinical experience indicates that any of our product candidates have side effects or cause serious or life-threatening side effects, the development of the product candidate may fail or be delayed, or, if the product candidate has received regulatory approval, such approval may be revoked, which would harm our business, financial condition, results of operations and prospects.

We are a party to strategic collaboration and license agreements pursuant to which we are obligated to make substantial payments upon achievement of milestone events and, in certain cases, have relinquished important rights over the development and commercialization of certain current and future product candidates. We also intend to explore additional strategic collaborations, which may never materialize or may require that we relinquish rights to and control over the development and commercialization of our product candidates.

We are a party to various strategic collaboration and license agreements that are important to our business and to our current and future product candidates pursuant to which we license a number of technologies to form our technology platforms. These agreements contain obligations that require us to make substantial payments in the event certain milestone events are achieved. We may in the future be required to make these payments, which could adversely affect our financial condition. In addition, we cannot be certain that we will achieve the results or benefits that justify entering into these agreements. For additional information regarding these and other collaboration, license and grant agreements, see the section titled “Business—Our Collaboration, License and Grant Agreements.”

A core element of our business strategy also includes continuing to acquire or in-license additional technologies or product candidates for the treatment and prevention of serious infectious diseases. As a result, we intend to periodically explore a variety of possible strategic collaborations or licenses in an effort to gain access to additional product candidates, technologies or resources.

At this time, we cannot predict what form such strategic collaborations or licenses might take in the future. We are likely to face significant competition in seeking appropriate strategic collaborators, and strategic collaborations and licenses can be complicated and time-consuming to negotiate and document. We may not be able to negotiate strategic collaborations on acceptable terms, or at all. We are unable to predict when, if ever, we will enter into any additional strategic collaborations or licenses because of the numerous risks and uncertainties associated with establishing them. Any delays in entering into new strategic collaborations or licenses related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

Our current and future strategic collaborations and licenses could subject us to a number of risks, including the following:

- we may be required to undertake the expenditure of substantial operational, financial and management resources;
- we may be required to assume substantial actual or contingent liabilities;
- we may not be able to control the amount and timing of resources that our strategic collaborators devote to the development or commercialization of our product candidates;
- strategic collaborators may select indications or design clinical trials in a way that may be less successful than if we were doing so;
- strategic collaborators may delay clinical trials, provide insufficient funding, terminate a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new version of a product candidate for clinical testing;
- strategic collaborators may not pursue further development and commercialization of products resulting from the strategic collaboration arrangement or may elect to discontinue research and development programs;
- disputes may arise between us and our strategic collaborators that result in costly litigation or arbitration that diverts management’s attention and consumes resources;
- strategic collaborators may experience financial difficulties;

- strategic collaborators may not properly maintain, enforce or defend our intellectual property rights or may use our proprietary information in a manner that could jeopardize or invalidate our proprietary information or expose us to potential litigation; and
- strategic collaborators could terminate the arrangement or allow it to expire, which would delay the development and may increase the cost of developing our product candidates.

Furthermore, license agreements we enter into in the future may not provide exclusive rights to use intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology and products. As a result, we may not be able to prevent competitors from developing and commercializing competitive products in territories included in all of our licenses.

If the market opportunities for our product candidates are smaller than we believe they are or any approval we obtain is based on a narrower definition of the patient population, our business may suffer.

We currently focus our product development on product candidates for the treatment and prevention of serious infectious diseases. Our eligible patient population, pricing estimates and available coverage and reimbursement may differ significantly from the actual market addressable by our product candidates. Our estimates of the number of people who have these diseases, the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, and the market demand for our product candidates are based on our beliefs and analyses. These estimates have been derived from a variety of sources, including the scientific literature, patient foundations or market research, and may prove to be incorrect. Further, new trials may change the estimated incidence or prevalence of the diseases we are targeting. The number of patients may turn out to be lower than expected. Likewise, the potentially addressable patient population for each of our product candidates may be limited or may not be receptive to treatment with our product candidates, and new patients may become increasingly difficult to identify or access. Additionally, the availability of superior or competitive therapies from our competitors could negatively impact or eliminate market demand for our product candidates. If the market opportunities for our product candidates are smaller than we estimate, it could have an adverse effect on our business, financial condition, results of operations and prospects.

We face substantial competition, which may result in others developing or commercializing products before or more successfully than us.

The biopharmaceutical industry is characterized by rapidly advancing technologies, intense competition and an emphasis on proprietary products. We face potential competition from many different sources, including pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions.

Our commercialization potential could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than products that we may develop. The key competitive factors affecting the success of all our programs are likely to be efficacy, safety, convenience and timing. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market.

In addition, regulatory incentives to develop products for treatment of infectious diseases have increased interest and activity in this area and may lead to increased competition for clinical investigators and clinical trial subjects, as well as for future prescriptions, if any of our product candidates are successfully developed and approved.

Our competitors may have significantly greater financial resources, established presence in the market, expertise in research and development, manufacturing, preclinical and clinical testing, obtaining regulatory approvals and reimbursement and marketing approved products than we do. These competitors also compete with us in acquiring third-party contract manufacturing capacity and raw materials, recruiting and retaining qualified scientific, sales, marketing and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Additional mergers and acquisitions may result in even more resources being concentrated in our competitors.

Since the beginning of the COVID-19 pandemic, and even before, there has been substantial research in the development of new drugs and biologics to address diseases caused by the coronavirus. Numerous large and small

pharmaceutical and biotechnology companies are developing COVID-19 therapy programs with various mechanisms of actions, including prophylactic vaccines, oral antivirals, immunomodulators, and antibodies, some of which are further along in the development process than we are. Other parties may be successful in producing a more efficacious therapy for SARS-CoV-2 or in producing a therapy that is easier to deliver and administer to patients in a timelier manner, which may also lead to the diversion of funding away from us and toward other companies or lead to decreased demand for our potential therapies. Companies with antibodies in clinical development include AbbVie, Inc., Adagio Therapeutics, or Adagio, AstraZeneca plc, or AstraZeneca, Brii Bio, Celltrion Healthcare Co., Ltd., Eli Lilly and Company, or Eli Lilly, and Regeneron Pharmaceuticals, Inc. Companies with oral antivirals in clinical development include Shionogi Inc., Gilead Sciences, Inc., or Gilead, and others. Companies with prophylactic vaccines in clinical development include AstraZeneca, GSK, Novavax, Inc. and Sanofi S.A. The industry and competitive landscape for COVID-19 treatments is rapidly changing, and we could have more competition in the future.

The availability of superior or competitive therapies, or preventative measures such as vaccines, coupled with the unpredictable nature of pandemics and the prevalence of new variants of COVID-19, could negatively impact or eliminate demand for our COVID-19 therapies. Product candidates that we successfully develop and commercialize may compete with existing therapies, including prophylactic vaccines, competing antibody therapies, oral antivirals, and new therapies that may become available in the future. In addition, one or more of our competitors may be successful in producing a more efficacious therapy for SARS-CoV-2 and current and future variants or in producing a therapy that is easier to deliver and administer to patients in a timelier manner. For example, there are FDA-approved treatments for COVID-19 including an intravenously administered antiviral, remdesivir, marketed by Gilead, which is FDA approved for the treatment of COVID-19 in both outpatient and hospitalized settings, and several treatments and a prophylactic vaccine are available under EUA. Additionally, Pfizer's COVID-19 vaccine, Comirnaty®, is approved by the FDA for individuals 16 years of age or older, Moderna, Inc.'s COVID-19 vaccine, Spikevax®, is approved by the FDA for individuals 18 years of age or older and a COVID-19 vaccine is available in the United States under EUA from Janssen Biotech, Inc. In December 2021 the FDA approved EUAs for the oral antiviral, molnupiravir, from Merck & Co., Inc., or Merck, for the treatment of mild-to-moderate COVID-19 in adults with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death, and for whom alternative COVID-19 treatment options authorized by the FDA are not accessible or clinically appropriate, which has shown topline efficacy of 30% reduction in risk for hospitalization or death risk in early treatment clinical trials, and the oral antiviral, paxlovid, from Pfizer for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kilograms) with positive results of direct SARS-CoV-2 testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death, which has demonstrated an 89% reduction in risk of COVID-19-related hospitalization or death. In February 2022, the FDA approved an EUA for Eli Lilly's antibody, bebtelovimab, for the treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kilograms) with positive results of direct SARS-CoV-2 testing, and who are at high risk for progression to severe COVID-19, including hospitalization or death. Merck, Pfizer and Eli Lilly have all been successful in securing government support and funding. AstraZeneca's AZD7442, a cocktail of two monoclonal antibodies, showed topline efficacy of 50% reduction in risk for hospitalization or death risk in early treatment clinical trials. Other companies like AstraZeneca and Adagio have been successful in securing government support and funding, respectively, and are in the process of developing antibody therapies that, if successful, could be effective against known viral variants and be administered via intramuscular, or IM, injection.

As a result of these factors, our competitors may achieve patent protection or obtain regulatory approval of their products before we are able to, which may limit our ability to develop or commercialize our product candidates. Our competitors may also develop therapies that are safer, more effective, more widely accepted or less expensive than ours, and may also be more successful than we are in manufacturing and marketing their products. These advantages could render our product candidates obsolete or non-competitive before we can recover the costs of such product candidates' development and commercialization. For additional information regarding our competitors, see the section titled "Business—Competition."

Even if any product candidates receive marketing approval, they may fail to achieve market acceptance by physicians, patients, third-party payors or others in the medical community necessary for commercial success.

To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries. Even if any product candidates receive marketing approval, they may fail to gain market acceptance by physicians, patients, third-party payors and others in the medical community. If such product candidates do not achieve an adequate level of acceptance, we may not generate significant product revenue and may not become profitable. The degree of market acceptance of any product candidate, if approved for commercial sale, will depend on a number of factors, including but not limited to:

- the convenience and ease of administration compared to alternative treatments and therapies;

- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the efficacy and potential advantages compared to alternative treatments and therapies;
- the effectiveness of sales and marketing efforts;
- the strength of our relationships with patient communities;
- the cost of treatment in relation to alternative treatments and therapies, including any similar generic treatments;
- our ability to offer such product for sale at competitive prices;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement, and patients' willingness to pay out-of-pocket in the absence of third-party coverage or adequate reimbursement;
- the prevalence and severity of any side effects; and
- any restrictions on the use of the product together with other medications.

If any of our product candidates are approved but fail to achieve market acceptance among physicians, patients, third-party payors and others in the medical community, we will not be able to generate significant revenue, which would compromise our ability to become profitable.

Even if we obtain regulatory approvals for our product candidates, they will remain subject to ongoing regulatory oversight.

Even if we obtain regulatory approval in a jurisdiction, the regulatory authority may still impose significant restrictions on the indicated uses or marketing of our product candidates, or impose ongoing requirements for potentially costly post-approval trials, post-market surveillance or patient or drug restrictions. Additionally, the holder of an approved BLA is required to comply with FDA rules and is subject to FDA review and periodic inspections, in addition to other potentially applicable federal and state laws, to ensure compliance with current good manufacturing practices, or cGMP, and adherence to commitments made in the BLA.

If we or a regulatory agency discovers previously unknown problems with a product such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions relative to that product or the manufacturing facility, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. Moreover, product labeling, advertising and promotion for any approved product will be subject to regulatory requirements and continuing regulatory review. For example, a company may not promote "off-label" uses for its drug products. An off-label use is the use of a product for an indication that is not described in the product's FDA-approved or authorized label in the United States or for uses in other jurisdictions that differ from those approved by the applicable regulatory agencies. Physicians, on the other hand, may prescribe products for off-label uses. Although the FDA and comparable foreign regulatory agencies do not regulate a physician's choice of drug treatment made in the physician's independent medical judgment, they do restrict promotional communications from companies or their sales force with respect to off-label uses of products for which marketing clearance has not been issued.

Failure to comply with such requirements, when and if applicable, could subject us to a number of actions ranging from warning letters to product seizures or significant fines, among other actions. The FDA and other agencies, including the Department of Justice, or the DOJ, closely regulate and monitor the post-approval marketing and promotion of products to ensure that they are marketed and distributed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA and DOJ impose stringent restrictions on manufacturers' communications regarding off-label use and if we market our medicines for uses other than their respective approved indications, we may be subject to enforcement action for off-label marketing. Violations of the Food, Drug, and Cosmetic Act and other statutes, including the False Claims Act, relating to the promotion and advertising of prescription drugs may lead to investigations and enforcement actions alleging violations of federal and state health care fraud and abuse laws, as well as state consumer protection laws, which violations may result in the imposition of significant administrative, civil and criminal penalties. Any government investigation of alleged violations of laws or regulations could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize our product candidates and generate revenue. For additional information regarding regulatory approval and ongoing regulatory oversight, see the section titled "Business—Government Regulation and Product Approval."

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may not be successful in commercializing them, if and when they are approved.

To successfully commercialize any product candidate that may result from our development programs, we will need to build out our sales and marketing capabilities, either on our own or with others. The establishment and development of our own commercial team or the establishment of a contract sales force to market any product candidate we may develop will be expensive and time-consuming and could delay any product launch. Moreover, we cannot be certain that we will be able to successfully develop this capability, and have no experience as a company in commercializing products. Establishing sales and marketing capabilities will be particularly important to the commercial success of our product candidates that target diseases with large patient populations throughout the world. We may seek to enter into collaboration agreements with other entities to utilize their established marketing and distribution capabilities, but we may be unable to enter into such agreements on favorable terms, if at all. For example, GSK is primarily responsible for the commercialization of sotrovimab. If any current or future collaborators, including GSK, do not commit sufficient time or resources to commercialize our product candidates, or we are unable to develop the necessary capabilities on our own, we may be unable to generate sufficient revenue to sustain our business. We compete with many companies that currently have extensive, experienced and well-funded marketing and sales operations to recruit, hire, train and retain marketing and sales personnel, and will have to compete with those companies to recruit, hire, train and retain any of our own marketing and sales personnel. We will likely also face competition if we seek third parties to assist us with the sales and marketing efforts of our product candidates. Without an internal team or the support of a third party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies.

Even if we obtain and maintain approval for our product candidates from the FDA, we may never obtain approval outside the United States, which would limit our market opportunities.

Approval of a product candidate in the United States by the FDA does not ensure approval of such product candidate by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA. Sales of our product candidates outside the United States will be subject to foreign regulatory requirements governing clinical trials and marketing approval. Even if the FDA grants marketing approval for a product candidate, comparable foreign regulatory authorities also must approve the manufacturing and marketing of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and more onerous than, those in the United States, including additional preclinical studies or clinical trials. In many countries outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that country. In some cases, the price that we intend to charge for any product candidates, if approved, is also subject to approval. Obtaining approval for our product candidates in the EU from the European Commission following the opinion of the EMA if we choose to submit a marketing authorization application there, would be a lengthy and expensive process. Even if a product candidate is approved, the EMA may limit the indications for which the product may be marketed, require extensive warnings on the product labeling or require expensive and time-consuming additional clinical trials or reporting as conditions of approval. Approval of certain product candidates outside of the United States, particularly those that target diseases that are more prevalent outside of the United States will be particularly important to the commercial success of such product candidates. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our product candidates in certain countries.

In addition, on June 23, 2016, the electorate in the U.K. voted in favor of leaving the EU, commonly referred to as Brexit. Following protracted negotiations, the U.K. left the EU on January 31, 2020, and a transition period to December 31, 2020, was established to allow the U.K. and the EU to negotiate the U.K.'s withdrawal. As a result, effective January 1, 2021, the U.K. is no longer part of the European Single Market and European Union Customs Union. A co-operation agreement was signed between the U.K. and the EU in December 2020 which has been applied provisionally since January 1, 2021, until it is ratified by all parties to that agreement. The agreement addresses trade, economic arrangements, law enforcement, judicial cooperation and a governance framework including procedures for dispute resolution, among other things. As both parties continue to work on the rules for implementation, significant political and economic uncertainty remains about how the precise terms of the relationship between the parties will differ from the terms before withdrawal.

Since the regulatory framework for pharmaceutical products in the U.K. covering the quality, safety, and efficacy of pharmaceutical products, clinical trials, marketing authorization, commercial sales, and distribution of pharmaceutical products is derived from EU directives and regulations, the consequences of Brexit and the impact the future regulatory regime that applies to products and the approval of product candidates in the U.K. remains unclear. As of January 1, 2021, the Medicines and Healthcare products Regulatory Agency, or the MHRA, became responsible for supervising medicines and

medical devices in Great Britain, comprising England, Scotland and Wales under domestic law, whereas Northern Ireland will continue to be subject to EU rules under the Northern Ireland Protocol. The MHRA will rely on the Human Medicines Regulations 2012 (SI 2012/1916) (as amended), or the HMR, as the basis for regulating medicines. The HMR has incorporated into the domestic law of the body of EU law instruments governing medicinal products that pre-existed prior to the U.K.'s withdrawal from the EU. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, may force us to restrict or delay efforts to seek regulatory approval in the U.K. for our product candidates, which could significantly and materially harm our business.

Further, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. Also, regulatory approval for our product candidates may be withdrawn. If we fail to comply with the applicable regulatory requirements, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed and our business, financial condition, results of operations and prospects could be harmed.

If we commercialize our product candidates outside the United States, a variety of risks associated with international operations could harm our business.

We intend to seek approval to market our product candidates outside the United States, and may also do so for future product candidates. If we market approved products outside the United States, we expect that we will be subject to additional risks in commercialization.

We have no prior experience in these areas. In addition, there are complex regulatory, tax, labor and other legal requirements imposed by many of the individual countries in which we may operate, with which we will need to comply. Many biopharmaceutical companies have found the process of marketing their products in foreign countries to be challenging.

Negative developments and negative public opinion of new technologies on which we rely may damage public perception of our product candidates or adversely affect our ability to conduct our business or obtain regulatory approvals for our product candidates.

The clinical and commercial success of our product candidates will depend in part on public acceptance of the use of new technologies for the prevention or treatment of human diseases. For example, we use CMV, a commonly occurring virus in humans, as a vaccine vector to prevent and treat pathogens refractory to current vaccine technologies. We also use CRISPR gene-editing technology as a research tool to systematically identify human genes that control infection.

Public perception may be influenced by claims that CMV technology is unsafe and products incorporating this technology may not gain the acceptance of the public or the medical community, or that CRISPR gene-editing technology is unethical or immoral. Adverse public attitudes may adversely impact our ability to enroll clinical trials. Moreover, our success will depend upon physicians specializing in our targeted diseases prescribing, and their patients being willing to receive, our product candidates as treatments in lieu of, or in addition to, existing, more familiar, treatments for which greater clinical data may be available. Any increase in negative perceptions of the technologies that we rely on may result in fewer physicians prescribing our products or may reduce the willingness of patients to utilize our products or participate in clinical trials for our product candidates.

Increased negative public opinion or more restrictive government regulations in response thereto, would have a negative effect on our business, financial condition, results of operations or prospects and may delay or impair the development and commercialization of our product candidates or demand for such product candidates. Adverse events in our preclinical studies or clinical trials or those of our competitors or of academic researchers utilizing similar technologies, even if not ultimately attributable to product candidates we may discover and develop, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of potential product candidates we may identify and develop, stricter labeling requirements for those product candidates that are approved, a decrease in demand for any such product candidates and a suspension or withdrawal of approval by regulatory authorities of our product candidates.

Product liability lawsuits against us could cause us to incur substantial liabilities and could limit commercialization of any product candidate that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in clinical trials and may face an even greater risk if we commercialize any product candidate that we may develop. If we cannot successfully

defend ourselves against claims that any such product candidates caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidate that we may develop;
- loss of revenue;
- substantial monetary awards to trial participants or patients;
- significant time and costs to defend the related litigation;
- withdrawal of clinical trial participants;
- increased insurance costs;
- the inability to commercialize any product candidate that we may develop; and
- injury to our reputation and significant negative media attention.

Any such outcomes could negatively impact our business, financial condition, results of operations and prospects.

Our insurance policies may be inadequate and potentially expose us to unrecoverable risks.

Although we maintain product liability insurance coverage, such insurance may not be adequate to cover all liabilities that we may incur. We anticipate that we will need to increase our insurance coverage each time we commence a clinical trial and if we successfully commercialize any product candidate. Insurance availability, coverage terms and pricing continue to vary with market conditions. We endeavor to obtain appropriate insurance coverage for insurable risks that we identify such as cybersecurity-related issues; however, we may fail to correctly anticipate or quantify insurable risks, we may not be able to obtain appropriate insurance coverage and insurers may not respond as we intend to cover insurable events that may occur. Conditions in the insurance markets relating to nearly all areas of traditional corporate insurance change rapidly and may result in higher premium costs, higher policy deductibles and lower coverage limits. For some risks, we may not have or maintain insurance coverage because of cost or availability.

Risks Related to Regulatory Compliance

The regulatory pathways for our product candidates targeting SARS-CoV-2, the virus that causes COVID-19, are continually evolving, and may result in unexpected or unforeseen challenges.

Our product candidates targeting SARS-CoV-2, the virus that causes COVID-19, are in various development and approval stages. To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries. Sotrovimab completed a Phase 2 clinical trial evaluating an IM formulation. In the second quarter of 2021, we initiated and completed an additional Phase 3 clinical trial evaluating an IM formulation of sotrovimab and a Phase 1b/2a clinical trial for VIR-7832, also a SARS-CoV-2-neutralizing mAb. The speed at which companies and institutions are acting to create and test many therapeutics and vaccines for COVID-19 is unusual, and evolving or changing plans or priorities within the FDA, including changes based on new knowledge of COVID-19, variants of the disease and how the disease affects the human body, which may significantly affect the regulatory timelines for our COVID-19 product candidates. Results from our continued development and planned clinical trials may raise new questions and require us to redesign proposed clinical trials, including revising proposed endpoints or adding new clinical trial sites or cohorts of subjects. As part of these ongoing discussions, the FDA may require us to conduct additional preclinical studies and/or clinical trials than we originally anticipated, which could result in significant delay in our development program for these product candidates. For example, the FDA has asked for additional data to support our conclusion that the 500 mg IV dose of sotrovimab retains activity against the BA.2 Omicron subvariant based on our current modeling assumptions as well as safety data for higher doses. We could be required to perform additional studies and trials on sotrovimab based on any additional feedback we may receive from the FDA.

The FDA has the authority to grant an EUA to allow unapproved medical products to be used in an emergency to diagnose, treat, or prevent serious or life-threatening diseases or conditions when, based on the totality of scientific evidence, there is evidence of effectiveness of the medical product, and there are no adequate, approved, and available alternatives. Our EUA for sotrovimab, for example, authorizes us to distribute sotrovimab prior to full FDA approval. However, the FDA may revoke an EUA where it is determined that the underlying public health emergency no longer exists or warrants such authorization, and we cannot predict how long, if ever, an EUA would remain in place. Such revocation could adversely impact our business in a variety of ways, including if one of our COVID-19 product candidates, such as sotrovimab, is not

yet approved by the FDA and if we and our commercialization and manufacturing partners have invested in the commercialization and manufacturing of such product candidate under an EUA.

If any of our future small molecule drug product candidates obtain regulatory approval, competitors could enter the market with generic or follow-on versions of such products, which may result in a material decline in sales of affected products.

Under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, a pharmaceutical manufacturer may file an abbreviated new drug application, or ANDA, seeking approval of a generic version of an approved, small molecule innovator drug product. Under the Hatch-Waxman Act, a manufacturer may also submit an NDA under section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act that references the FDA's prior approval of the small molecule innovator product. A 505(b)(2) NDA product may be for a new or improved version of the original innovator product. The Hatch-Waxman Act also provides for certain periods of regulatory exclusivity, which preclude FDA approval (or in some circumstances, FDA filing and review) of an ANDA or 505(b)(2) NDA. In addition to the benefits of regulatory exclusivity, an innovator NDA holder may have patents claiming the active ingredient, product formulation or an approved use of the drug, which would be listed with the product in the FDA publication, "Approved Drug Products with Therapeutic Equivalence Evaluations," known as the Orange Book, see the section titled "—Risks Related to Our Intellectual Property— Patent terms may be inadequate to protect our competitive position on our product candidates or any products approved in the future for an adequate amount of time and additional competitors could enter the market with generic or biosimilar versions of such products."

Accordingly, if any of our future small molecule drug product candidates are approved, competitors could file ANDAs following the expiration of regulatory exclusivity for generic versions of these products or 505(b)(2) NDAs that reference our products. If competitors are able to obtain marketing approval for generics referencing our small molecule drug product candidates, such competitive products may be able to immediately compete with us in each indication for which our product candidates may have received approval. They may also be prescribed by healthcare providers for off-label uses that are otherwise protected by regulatory exclusivity. For additional information regarding competition, see the section titled "Business—Competition."

Any biologic, or large molecule, product candidates for which we intend to seek approval may face competition sooner than anticipated.

If we are successful in achieving regulatory approval to commercialize any biologic product candidate faster than our competitors, such product candidates may face competition from biosimilar products. In the United States, large molecule product candidates generally are regulated by the FDA as biologic products subject to approval and licensure under the BLA pathway. The Biologics Price Competition and Innovation Act of 2009, or BPCIA, creates an abbreviated pathway for the approval of biosimilar and interchangeable biologic products following the approval of an original BLA. For additional information regarding biosimilars and exclusivity, see the section titled "Business—Government Regulation and Product Approval—Biosimilars and Regulatory Exclusivity."

If competitors are able to obtain marketing approval for biosimilars referencing our large molecule product candidates, if approved and after the expiration of regulatory exclusivity, such products may become subject to competition from such biosimilars, with the attendant competitive pressure and potential adverse consequences. Such competitive products may be able to immediately compete with us in each indication for which our product candidates may have received approval. In addition, the extent to which any regulatory exclusivity may apply to products authorized under an EUA is unclear. For additional information regarding competition, see the section titled "Business—Competition".

In addition, we may also face competition from product candidates that receive EUA approval, which could negatively impact sales of our EUA product and other product candidates. For example, numerous large and small pharmaceutical and biotechnology companies are developing COVID-19 therapy programs, including prophylactic vaccines, oral antivirals, immunomodulators, and antibodies, some of which have received full approval or EUAs from the FDA. For additional information regarding competition, see the section titled "—Risks Related to the Development and Commercialization — We face substantial competition, which may result in others developing or commercializing products before or more successfully than us."

Our relationships with customers, physicians, and third-party payors are subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

Healthcare providers, physicians and third-party payors in the United States and elsewhere play a primary role in the recommendation and prescription of our EUA product and will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors subject us to various federal and state fraud and abuse laws and other healthcare laws, such as the U.S. federal Anti-Kickback Statute, federal civil and criminal false claims laws, the healthcare fraud provisions of the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, and the Physician Payments Sunshine Act.

These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our EUA product and additional product candidates, if approved. For additional information regarding these laws, see the section titled "Business—Government Regulation and Product Approval". Ensuring that our internal operations and business arrangements with third parties comply with applicable healthcare laws and regulations will likely be costly. It is possible that governmental authorities will conclude that our business practices, including our relationships with physicians and other healthcare providers, some of whom are compensated in the form of stock options for consulting services provided, may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in government-funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws, contractual damages, reputational harm and the curtailment or restructuring of our operations.

If the physicians or other providers or entities with whom we expect to do business are found not to be in compliance with applicable laws, they may be subject to significant civil, criminal or administrative sanctions, including exclusions from government-funded healthcare programs. Even if resolved in our favor, litigation or other legal proceedings relating to healthcare laws and regulations may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development, manufacturing, sales, marketing or distribution activities. Uncertainties resulting from the initiation and continuation of litigation or other proceedings relating to applicable healthcare laws and regulations could have an adverse effect on our ability to compete in the marketplace.

Coverage and adequate reimbursement may not be available for our EUA product and any product candidates that we commercialize, if approved, which could make it difficult for us to sell profitably.

Market acceptance and sales of our EUA product and any product candidates that we commercialize, if approved, may depend in part on the extent to which reimbursement for these product and related treatments will be available from third-party payors, including government health administration authorities, managed care organizations and other private health insurers. Third-party payors decide which therapies they will pay for and establish reimbursement levels. While no uniform policy for coverage and reimbursement exists in the United States, third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, decisions regarding the extent of coverage and amount of reimbursement to be provided for our EUA product and any product candidates that we develop will be made on a payor-by-payor basis. Therefore, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage, and adequate reimbursement, for the product. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate will be approved. Each payor determines whether or not it will provide coverage for a therapy, what amount it will pay the manufacturer for the therapy and on what tier of its formulary it will be placed. The position on a payor's list of covered drugs and biological products, or formulary, generally determines the co-payment that a patient will need to make to obtain the therapy and can strongly influence the adoption of such therapy by patients and physicians. Patients who are prescribed treatments for their conditions and providers prescribing such services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products. In addition, because our EUA product and certain of our product candidates are physician-administered, separate reimbursement for the product itself may or may

not be available. Instead, the administering physician may only be reimbursed for providing the treatment or procedure in which our product is used.

Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. We cannot be sure that coverage and reimbursement will be available for our EUA product or any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Inadequate coverage and reimbursement may impact the demand for, or the price of, our EUA product or any product for which we obtain marketing approval. If coverage and adequate reimbursement are not available, or are available only at limited levels, we may not be able to successfully commercialize our EUA product or any product candidates that we develop.

Healthcare legislative reform measures may have a negative impact on our business, financial condition, results of operations and prospects.

In the United States and some foreign jurisdictions, there have been, and we expect there will continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell our EUA product or any product candidates for which we obtain marketing approval. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare

We expect that additional U.S. federal healthcare reform measures will be adopted in the future, particularly in light of the new Presidential administration, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our current or any future product candidates or additional pricing pressures. It is possible that additional governmental action is taken in response to the COVID-19 pandemic. For example, on June 17, 2021, the U.S. Supreme Court dismissed a challenge on procedural grounds that argued the Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. Thus, the ACA will remain in effect in its current form. Additionally, in August 2011, the President signed into law the Budget Control Act of 2011, as amended, which, among other things, included aggregate reductions to Medicare payments to providers of 2% per fiscal year, which began in 2013 and, following passage of subsequent legislation, including the Bipartisan Budget Act of 2018, will continue through 2031. However, pursuant to the Coronavirus Aid, Relief and Economic Security Act, or the CARES Act, and subsequent legislation, these Medicare sequester reductions have been suspended through the end of March 2022. From April 2022 through June 2022 a 1% sequester cut will be in effect, with the full 2% cut resuming thereafter. Further, in February 2021 the FDA issued guidance strongly recommending that individual monoclonal antibody products be developed with the expectation that they will be combined with one or more monoclonal antibody products that bind to different epitopes to minimize the risk of losing activity against emergent variants. This type of government action could have a negative impact on our business, financial condition, results of operations and prospects.

Additionally, as a result of litigation challenging the interim final rule implementing President Trump's Most Favored Nation executive order, which would tie Medicare Part B payments for certain physician-administered drugs to the lowest price paid in other economically advanced countries, on August 10, 2021, the Centers for Medicare & Medicaid Services, or CMS, published a proposed rule that seeks to rescind the Most Favored Nation Model interim final rule. In July 2021 the Biden administration released an executive order, "Promoting Competition in the American Economy," with multiple provisions aimed at prescription drugs. In response to President Biden's executive order, on September 9, 2021, the U.S. Department of HHS released a Comprehensive Plan for Addressing High Drug Prices that outlines principles for drug pricing reform and sets out a variety of potential legislative policies that Congress could pursue to advance these principles. In addition, Congress is considering drug pricing as part of the budget reconciliation process. Further, it is possible that additional governmental action will be taken in response to the COVID-19 pandemic. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the United States or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing or new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our current or any future product candidates we may develop may lose any regulatory approval or marketing authorizations that may have been obtained and we may not achieve or sustain profitability. For additional information regarding other healthcare legislative reform measures, see the section titled "Business—Government Regulation and Product Approval—Healthcare Reform".

We expect that these and other healthcare reform measures that may be adopted in the future may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for our EUA product and any approved product, which could have an adverse effect on demand for our EUA product and other product candidates. Any

reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products.

We are subject to anti-corruption, anti-bribery, anti-money laundering, and similar laws, and non-compliance with such laws can subject us to criminal and/or civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act and other anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly to generally prohibit companies and their employees and third-party intermediaries from authorizing, offering or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. We interact with officials and employees of government agencies and government-affiliated hospitals, universities and other organizations. In addition, we may engage third-party intermediaries to promote our clinical research activities abroad or to obtain necessary permits, licenses and other regulatory approvals. We can be held liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, collaborators and agents, even if we do not explicitly authorize such activities.

While we have policies and procedures to address compliance with such laws in the United States, we cannot assure you that all of our employees and agents will not take actions in violation of our policies and applicable law, for which we may be ultimately held responsible. Detecting, investigating and resolving actual or alleged violations can require a significant diversion of time, resources and attention from senior management. In addition, noncompliance with anti-corruption, anti-bribery or anti-money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage and other collateral consequences. If any subpoenas or investigations are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, financial condition, results of operations and prospects could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees. Enforcement actions and sanctions could further harm our business, financial condition, results of operations and prospects.

Risks Related to Our Dependence on Third Parties

We intend to rely on third parties to produce clinical and commercial supplies of our product candidates.

We are currently manufacturing material for product candidates of three different modalities: mAbs, HCMV-based vaccines and siRNAs. Except for limited process development and quality control testing capabilities in certain of our facilities, we do not own or operate facilities for full process development or product manufacturing, storage and distribution, or testing. We are dependent on third parties to develop the manufacturing process and manufacture the clinical supplies of our current and any future product candidates. We have established relationships with multiple contract development and manufacturing organizations, or CDMOs, that have produced material to support our preclinical, Phase 1, 2, and 3 clinical trials. We have limited experience manufacturing our product candidates on a commercial scale, and we do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing of our future product candidates. Certain of our product candidates may have to compete with existing and future products, such as the annual flu vaccine or any current or future COVID-19 vaccine, that may have a lower price point. The actual cost to manufacture our product candidates could materially and adversely affect the commercial viability of our product candidates.

The facilities used by third-party manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our NDA or BLA to the FDA. We do not control the manufacturing process of, and are completely dependent on, third-party manufacturers for compliance with the cGMP requirements. If our third-party manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, we will not be able to secure and/or maintain regulatory approval for our product candidates. In addition, we have no control over the ability of our third-party manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. Any significant delay in the supply of a product

candidate, or the raw material components thereof, for an ongoing clinical trial due to the need to replace a third-party manufacturer could considerably delay completion of our clinical trials, product testing and potential regulatory approval of our product candidates.

We also intend to rely on third-party manufacturers to supply us with sufficient quantities of our product candidates to be used, if approved, for commercialization. There is, however, no assurance that our third-party manufacturers will meet our working assumptions of manufacturing titer and yield per batch of our product candidates. Any reduction in anticipated manufacturing titer and yield per batch may adversely impact our ability to meet market demand for any approved product. Furthermore, if we are not able to produce supply at low enough costs, it would negatively impact our ability to generate revenue, harm our reputation, and could have an adverse effect on our business, financial condition, results of operations and prospects.

In addition, we currently rely on a strategic collaborator and foreign CDMOs, including a CDMO in China, which we, in part, rely on for the clinical development, manufacturing, and commercialization of our proprietary antibodies developed for SARS-CoV-2, and will likely continue to rely on foreign CDMOs in the future. Foreign CDMOs may be subject to trade restrictions and other foreign regulatory requirements which could increase the cost or reduce the supply of material available to us, delay the procurement of such material or have an adverse effect on our ability to secure significant commitments from governments to purchase our potential therapies.

Additionally, the biopharmaceutical industry in particular in China is strictly regulated by the Chinese government. Changes to Chinese regulations or government policies affecting biopharmaceutical companies are unpredictable and may have a material adverse effect on our collaborators in China which could have an adverse effect on our business, financial condition, results of operations and prospects. Evolving changes in China's public health, economic, political, and social conditions and the uncertainty around China's relationship with other governments, such as the United States and the U.K., could also negatively impact our ability to manufacture our product candidates for our planned clinical trials or have an adverse effect on our ability to secure government funding, which could adversely affect our financial condition and cause us to delay our clinical development programs.

Further, our reliance on third-party suppliers and manufacturers entails risks to which we would not be exposed to if we manufactured product candidates ourselves, including:

- delay or inability to procure or expand sufficient manufacturing capacity;
- delays in process development;
- issues related to scale-up of manufacturing;
- excess manufacturing capacity due to insufficient market demand for our product candidates and responsibility for the associated costs;
- costs and validation of new equipment and facilities required for scale-up;
- inability of our third-party manufacturers to execute technology transfers, manufacturing procedures and other logistical support requirements appropriately or on a timely basis;
- inability to negotiate manufacturing agreements with third parties under commercially reasonable terms, if at all;
- breach, termination or nonrenewal of manufacturing agreements with third parties in a manner or at a time that is costly or damaging to us;
- reliance on single sources for product raw materials or components;
- lack of qualified backup suppliers for those raw materials or components that are currently purchased from a sole or single-source supplier;
- lack of ownership to the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our product candidates;
- disruptions to operations of our third-party manufacturers or suppliers by conditions unrelated to our business or operations, including the bankruptcy of the manufacturer or supplier;
- disruptions caused by geopolitical events, including civil or political unrest (such as the ongoing conflict between Ukraine and Russia), terrorism, insurrection or war, man-made or natural disasters or public health pandemics or epidemics, including, for example, the ongoing COVID-19 pandemic; and

- carrier disruptions or increased costs that are beyond our control.

We cannot be sure that single source suppliers for our product raw materials or components will remain in business or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these raw materials or components for our intended purpose. In addition, the lead time needed to establish a relationship with a new supplier can be lengthy and we may experience delays in meeting demand in the event we must switch to a new supplier. The time and effort to qualify a new supplier could result in additional costs, diversion of resources or reduced manufacturing yields, any of which would negatively impact our operating results.

Furthermore, there are a limited number of suppliers and manufacturers that supply synthetic siRNAs. Alnylam Pharmaceuticals, Inc., or Alnylam, is currently supplying clinical material for our VIR-2218 Phase 1/2 clinical trial through its CDMOs. We will assume responsibility for technology transfer and manufacturing ahead of any Phase 3 clinical trials for VIR-2218. Alnylam currently relies on a limited number of suppliers and CDMOs for our supply of synthetic siRNAs. There are risks inherent in pharmaceutical manufacturing that could affect the ability of Alnylam and Alnylam's CDMOs to meet our delivery time requirements or provide adequate amounts of synthetic siRNAs to meet our needs. Included in these risks are potential delays or raw materials and component shortages including as a result of the ongoing COVID-19 pandemic, synthesis and purification failures and/or contamination during the manufacturing process, as well as other issues with the CDMO's facility and ability to comply with the applicable manufacturing requirements, including use of the proper raw materials and components, which could result in unusable product. This would cause delays in our manufacturing timelines and ultimately delay our clinical trials and potentially put at risk commercial supply, as well as result in additional expense to us. To fulfill our siRNA requirements, we may need to secure alternative suppliers of synthetic siRNAs and/or key raw materials and components, and such alternative suppliers are limited and may not be readily available, or we may be unable to enter into agreements with them on reasonable terms and in a timely manner.

In addition, manufacturers may have little or no experience with viral vector products and therefore may require a significant amount of support from us in order to implement and maintain the infrastructure and processes required to manufacture our HCMV vector-based product candidates. The challenges to HCMV-based vaccine manufacturing include the large size of the virus, which precludes terminal sterile filtration, and the attenuation of the engineered human virus, which dramatically reduces high growth yields during manufacturing. To address these challenges, we have made significant internal investments in process development and scale-up, largely funded by grants from the Bill & Melinda Gates Foundation. We have established a cGMP process in support of Phase 1 and Phase 2 clinical trials that has been successfully transferred and executed at CDMOs specializing in live vaccine manufacturing. However, the existing process will require additional process development and scale-up for later stages of clinical development and commercial supply.

Any of these events could lead to clinical trial delays or failure to obtain regulatory approval or impact our ability to successfully commercialize our current or any future product candidates once approved. Some of these events could be the basis for FDA action, including injunction, request for recall, seizure or total or partial suspension of production.

Changes in U.S. and international trade policies, particularly with respect to China, may adversely impact our business and operating results.

The U.S. government has made statements and taken actions in recent years that have led to certain changes and may lead to additional changes to U.S. and international trade policies, including imposing several rounds of tariffs affecting certain products manufactured in China. In March 2018, the Trump administration announced the imposition of tariffs on steel and aluminum entering the United States and in June 2018 announced further tariffs targeting goods imported from China. Both China and the United States have each imposed tariffs indicating the potential for further trade barriers. It is unknown whether and to what extent new tariffs (or other new laws or regulations) will be adopted, or the effect that any such actions would have on us or our industry, and it is unclear whether the Biden administration will work to reverse these measures or pursue similar policy initiatives. While we have only recently started commercialization of sotrovimab under EUA, any unfavorable government policies on international trade, such as export controls, capital controls or tariffs, may affect the demand for sotrovimab or our product candidates, the competitive position of sotrovimab or our product candidates, and import or export of raw materials and product used in our drug development activities and commercial manufacturing, particularly with respect to raw materials and product that we import from China, including pursuant to our manufacturing arrangements with WuXi Biologics. If any new tariffs, export controls, legislation and/or regulations are implemented, or if existing trade agreements are renegotiated or, in particular, if the U.S. government takes retaliatory trade actions due to the recent U.S.-China trade tension, such changes could have an adverse effect on our business, financial condition and results of operations.

Our business involves the use of hazardous materials and we and our third-party manufacturers and suppliers must comply with environmental, health and safety laws and regulations, which can be expensive and restrict how we do, or interrupt our, business.

Our research and development activities and our third-party manufacturers' and suppliers' activities involve the generation, storage, use and disposal of hazardous materials, including the components of our product candidates and other hazardous compounds and wastes. We and our manufacturers and suppliers are subject to environmental, health and safety laws and regulations governing, among other matters, the use, manufacture, generation, storage, handling, transportation, discharge and disposal of these hazardous materials and wastes and worker health and safety. In some cases, these hazardous materials and various wastes resulting from their use are stored at our and our manufacturers' facilities pending their use and disposal. We cannot eliminate the risk of contamination or injury, which could result in an interruption of our commercialization efforts, research and development efforts and business operations, damages and significant cleanup costs and liabilities under applicable environmental, health and safety laws and regulations. We also cannot guarantee that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials and wastes generally comply with the standards prescribed by these laws and regulations. We may be held liable for any resulting damages costs or liabilities, which could exceed our resources, and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental, health and safety laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. Failure to comply with these environmental, health and safety laws and regulations may result in substantial fines, penalties or other sanctions. We do not currently carry hazardous waste insurance coverage.

We rely on third parties to conduct, supervise and monitor our preclinical studies and clinical trials, and if those third parties perform in an unsatisfactory manner, it may harm our business.

We do not currently have the ability to independently conduct any clinical trials. We intend to rely on CROs and clinical trial sites to ensure the proper and timely conduct of our preclinical studies and clinical trials, and we expect to have limited influence over their actual performance. We rely on CROs to monitor and manage data for our clinical programs, as well as the execution of future preclinical studies. We expect to control only certain aspects of our CROs' activities. Nevertheless, we will be responsible for ensuring that each of our preclinical studies and clinical trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on the CROs does not relieve us of our regulatory responsibilities.

We and our CROs are required to comply with the good laboratory practices, or GLPs, and GCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities in the form of International Conference on Harmonization guidelines for any of our product candidates that are in preclinical and clinical development. The regulatory authorities enforce GCPs through periodic inspections of trial sponsors, principal investigators and clinical trial sites. Although we rely on CROs to conduct GCP-compliant clinical trials, we remain responsible for ensuring that each of our GLP preclinical studies and clinical trials is conducted in accordance with its investigational plan and protocol and applicable laws and regulations. If we or our CROs fail to comply with GCPs, the clinical data generated in our clinical trials may be deemed unreliable, and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. Accordingly, if our CROs fail to comply with these regulations or fail to recruit a sufficient number of subjects, we may be required to repeat clinical trials, which would delay the regulatory approval process.

Our reliance on third parties to conduct clinical trials will result in less direct control over the management of data developed through clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with CROs and other third parties can be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. If our CROs do not successfully carry out their contractual duties or obligations, fail to meet expected deadlines or fail to comply with regulatory requirements, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for any other reasons, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize, any product candidate that we develop. As a result, our financial results and the commercial prospects for any product candidate that we develop would be harmed, our costs could increase, and our ability to generate revenue could be delayed. While we will have agreements governing their activities, our CROs will not be our employees and we will not control whether or not they devote sufficient time and resources to our future clinical and preclinical programs. These CROs may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other product development activities which could harm our business. We face the risk of potential

unauthorized disclosure or misappropriation of our intellectual property by CROs, which may reduce our trade secret protection and allow our potential competitors to access and exploit our proprietary technology.

If our relationship with any of these CROs terminates, we may not be able to enter into arrangements with alternative CROs or do so on commercially reasonable terms. Switching or adding additional CROs involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can negatively impact our ability to meet our desired clinical development timelines. While we intend to carefully manage our relationships with our CROs, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a negative impact on our business, financial condition, results of operations and prospects.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA. The FDA may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the trial. The FDA may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval or rejection of our marketing applications by the FDA and may ultimately lead to the denial of marketing approval of our product candidates.

Risks Related to Our Intellectual Property

If we breach our license agreements or any of the other agreements under which we acquired, or will acquire, the intellectual property rights to our product candidates, we could lose the ability to continue the development and commercialization of the related product candidates.

We license a number of technologies to form our antibody platform and T cell platform, and the technology we use in our siRNA platform is licensed from Alnylam. We have also developed certain product candidates using intellectual property licensed from third parties. A core element of our business strategy includes continuing to acquire or in-license additional technologies or product candidates for the treatment and prevention of serious infectious diseases.

If we fail to meet our obligations under these agreements, our licensors may have the right to terminate our licenses. If any of our license agreements are terminated, and we lose our intellectual property rights under such agreements, this may result in a complete termination of our product development and any commercialization efforts for the product candidates which we are developing under such agreements. While we would expect to exercise all rights and remedies available to us, including seeking to cure any breach by us, and otherwise seek to preserve our rights under such agreements, we may not be able to do so in a timely manner, at an acceptable cost or at all. We may also be subject to risks related to disputes between us and our licensors regarding the intellectual property subject to a license agreement.

If we are unable to obtain and maintain patent protection for our product candidates and technology, or if the scope of the patent protection obtained is not sufficiently broad or robust, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to successfully commercialize our product candidates and technology may be adversely affected.

Our success depends, in large part, on our ability to obtain and maintain patent protection in the United States and other countries with respect to our product candidates and our technology. We and our licensors have sought, and intend to seek, to protect our proprietary position by filing patent applications in the United States and abroad related to our product candidates and our technology that are important to our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has, in recent years, been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or product candidates or which effectively prevent others from commercializing competitive technologies and product candidates. Because patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we or our licensors were the first to file a patent application relating to any particular aspect of a product candidate. Furthermore, if third parties have filed such patent applications with a priority date before March 16, 2013, an interference proceeding in the United States can be initiated by such third party, or by the U.S. Patent and

Trademark Office, or USPTO, itself, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications.

The patent prosecution process is expensive, time-consuming and complex, and we may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. In addition, changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. Similarly, changes in patent law and regulations in other countries or jurisdictions, changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we own or have licensed or that we may obtain in the future.

We or our licensors have not pursued or maintained, and may not pursue or maintain in the future, patent protection for our product candidates in every country or territory in which we may sell our products, if approved. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from infringing our patents in all countries outside the United States, or from selling or importing products that infringe our patents in and into the United States or other jurisdictions.

Moreover, the coverage claimed in a patent application can be significantly reduced before the patent is issued and its scope can be reinterpreted after issuance. Even if the patent applications we license or own do issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us or otherwise provide us with any competitive advantage. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative products in a non-infringing manner.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and product candidates. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. In addition, if the breadth or strength of protection provided by the patents and patent applications we hold with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates, or could result in licensees seeking release from their license agreements.

Furthermore, our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. For example, the research resulting in certain of our owned and in-licensed patent rights and technology was funded in part by the U.S. government. As a result, the government may have certain rights, or march-in rights, to such patent rights and technology. When new technologies are developed with government funding, the government generally obtains certain rights in any resulting patents, including a nonexclusive license authorizing the government to use the invention for noncommercial purposes. These rights may permit the government to disclose our confidential information to third parties and to exercise march-in rights to use or allow third parties to use our licensed technology. The government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. Any exercise by the government of such rights could harm our competitive position, business, financial condition, results of operations and prospects.

Obtaining and maintaining our patent rights depends on compliance with various procedural, document submission, fee payment and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for noncompliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In addition, periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents and/or patent applications will

have to be paid to the USPTO and various government patent agencies outside the United States over the lifetime of our owned and licensed patents and/or applications and any patent rights we may own or license in the future. We rely on our service providers or our licensors to pay these fees. The USPTO and various non-U.S. government patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and we are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, nonpayment of fees and failure to properly legalize and submit formal documents. If we or our licensors fail to maintain the patents and patent applications covering our product candidates or technologies, including as a result of geopolitical events such as civil or political unrest (including the ongoing conflict between Ukraine and Russia), we may not be able to use such patents and patent applications or stop a competitor from marketing products that are the same as or similar to our product candidates, which would have an adverse effect on our business. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market and this circumstance could harm our business.

In addition, if we fail to apply for applicable patent term extensions or adjustments, we will have a more limited time during which we can enforce our granted patent rights. In addition, if we are responsible for patent prosecution and maintenance of patent rights in-licensed to us or out-licensed by us, any of the foregoing could expose us to liability to the applicable patent owner or licensee, respectively.

Patent terms may be inadequate to protect our competitive position on our product candidates or any products approved in the future for an adequate amount of time and additional competitors could enter the market with generic or biosimilar versions of such products.

Patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its first effective filing date. Although various extensions may be available, the life of a patent and the protection it affords is limited. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. If we do not have sufficient patent life to protect our products, our business and results of operations could be adversely affected.

Given the amount of time required for the development, testing and regulatory review of our product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. We expect to seek extensions of patent terms in the United States and, if available, in other countries where we have or will obtain patent rights. In the United States, the Hatch-Waxman Act permits a patent term extension of up to five years beyond the normal expiration of the patent, provided that the patent is not enforceable for more than 14 years from the date of drug approval, which is limited to the approved indication (or any additional indications approved during the period of extension). Furthermore, only one patent per approved product can be extended and only those claims covering the approved product, a method for using it or a method for manufacturing it may be extended. However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

Also, there are detailed rules and requirements regarding the patents that may be submitted to the FDA for listing in the FDA publication, "Approved Drug Products with Therapeutic Equivalence Evaluations," known as the Orange Book. We may be unable to obtain patents covering our product candidates that contain one or more claims that satisfy the requirements for listing in the Orange Book. Even if we submit a patent for listing in the Orange Book, the FDA may decline to list the patent, or a manufacturer of generic drugs may challenge the listing. If one of our product candidates is approved and a patent covering that product candidate is not listed in the Orange Book, a manufacturer of generic drugs would not have to provide advance notice to us of any ANDA filed with the FDA to obtain permission to sell a generic version of such product candidate. We cannot predict which, if any, patents in our current portfolio or patents we may obtain in the future will be eligible for listing in the Orange Book, how any generic competitor would address such patents, whether we would sue on any such patents or the outcome of any such suit. For additional information regarding the Hatch-Waxman Act and exclusivity, see the section titled "Business—Government Regulation and Product Approval."

We may not be successful in securing or maintaining proprietary patent protection for products and technologies we develop or license. Moreover, if any of our owned or in-licensed patents are successfully challenged by litigation, the affected product could immediately face competition and its sales would likely decline rapidly. Any of the foregoing could harm our competitive position, business, financial condition, results of operations and prospects.

Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or otherwise violating their intellectual property rights, the outcome of which would be uncertain and could have a negative impact on the success of our business.

Our commercial success depends, in part, upon our ability and the ability of others with whom we may collaborate to develop, manufacture, market and sell our current and any future product candidates and use our proprietary technologies without infringing, misappropriating or otherwise violating the proprietary rights and intellectual property of third parties. The biotechnology and pharmaceutical industries are characterized by extensive and complex litigation regarding patents and other intellectual property rights. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our EUA product and other product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our EUA product and other product candidates may give rise to claims of infringement of the patent rights of others. We may in the future become party to, or be threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our current and any future product candidates and technology, including interference proceedings, derivation proceedings, post grant review and inter-partes review before the USPTO. If we are found to infringe a third party's valid and enforceable intellectual property rights, we could be required to obtain a license from such third party to continue developing, manufacturing and marketing our product candidate(s) and technology. Under any such license, we would most likely be required to pay various types of fees, milestones, royalties or other amounts. Moreover, we may not be able to obtain any required license on commercially reasonable terms or at all, and if such an instance arises, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business. Parties making claims against us may also seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our EUA product or other product candidates.

The licensing or acquisition of third-party intellectual property rights is a competitive area, and more established companies may also pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or product candidate, which could have an adverse effect on our business, financial condition, results of operations and prospects. Furthermore, even if we were able to obtain a license, it could be nonexclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. We could be forced, including by court order, to cease developing, manufacturing and commercializing the infringing technology or product candidate. We may also have to redesign our products, which may not be commercially or technically feasible or require substantial time and expense. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right. We may be required to indemnify collaborators or contractors against such claims. A finding of infringement could prevent us from manufacturing and commercializing our EUA product or current or any future product candidates or force us to cease some or all of our business operations, which could harm our business. Even if we are successful in defending against such claims, litigation can be expensive and time-consuming and would divert management's attention from our core business. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have an adverse effect on the price of our common stock.

Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business, financial condition, results of operations and prospects.

We may be subject to claims asserting that our employees, consultants or advisors have wrongfully used or disclosed alleged trade secrets of their current or former employers or claims asserting ownership of what we regard as our own intellectual property.

Certain of our employees, consultants or advisors are currently, or were previously, employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these individuals or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

In addition, we may in the future be subject to claims by our former employees or consultants asserting an ownership right in our patents or patent applications as a result of the work they performed on our behalf. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Although it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own, and we cannot be certain that our agreements with such parties will be upheld in the face of a potential challenge or that they will not be breached, for which we may not have an adequate remedy. The assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property.

We may be involved in lawsuits to protect or enforce our patents, the patents of our licensors or our other intellectual property rights, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe, misappropriate or otherwise violate our patents, the patents of our licensors or our other intellectual property rights. To counter infringement or unauthorized use, we may be required to file legal claims, which can be expensive and time-consuming and are likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities.

In addition, in an infringement proceeding, a court may decide that a patent of ours or our licensors is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our owned or licensed patents at risk of being invalidated or interpreted narrowly and could put our owned or licensed patent applications at risk of not issuing. The initiation of a claim against a third party might also cause the third party to bring counterclaims against us, such as claims asserting that our patent rights are invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement or lack of statutory subject matter. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant material information from the USPTO, or made a materially misleading statement, during prosecution. Third parties may also raise similar validity claims before the USPTO in post-grant proceedings such as ex parte reexaminations, inter-partes review, post-grant review, or oppositions or similar proceedings outside the United States, in parallel with litigation or even outside the context of litigation. Third parties may also challenge inventorship through a derivation proceeding or other litigation proceeding challenging inventorship, which can include claims of misappropriation of intellectual property, filing a patent application without authorization of the true inventor, not listing inventors, or listing non-inventors as inventors. The outcome following legal assertions of invalidity and unenforceability is unpredictable. We cannot be certain that there is or will be no invalidating prior art, of which we and the patent examiner were unaware during prosecution. For the patents and patent applications that we have licensed, we may have limited or no right to participate in the defense of any licensed patents against challenge by a third party. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of any future patent protection on our current or future product candidates. Such a loss of patent protection could harm our business.

We may not be able to prevent, alone or with our licensors, misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States. Our business could be harmed if in litigation the prevailing party does not offer us a license, or if the license offered as a result is not on commercially reasonable terms. Any litigation or other proceedings to enforce our intellectual property rights may fail and, even if successful, may result in substantial costs and distract our management and other employees.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have an adverse effect on the price of our common stock.

We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating or from successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have an adverse effect on our ability to compete in the marketplace.

We may not be able to protect our intellectual property rights throughout the world, which could negatively impact our business.

Filing, prosecuting and defending patents covering our current and any future product candidates and technology platforms in all countries throughout the world would be prohibitively expensive. Competitors may use our technologies in jurisdictions where we or our licensors have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we may obtain patent protection but where patent enforcement is not as strong as that in the United States. These products may compete with our products in jurisdictions where we do not have any issued or licensed patents, and any future patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Issued patents may be challenged by third parties in the courts or patent offices in various countries throughout the world. Invalidation proceedings may result in patent claims being narrowed, invalidated or held unenforceable. Uncertainties regarding the outcome of such proceedings, as well as any resulting losses of patent protection, could harm our business.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. Some countries do not enforce patents related to medical treatments, or limit enforceability in the case of a public emergency. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

If the U.S. government, the World Trade Organization, or WTO, or other governmental body imposes an intellectual property rights waiver, our ability to successfully commercialize our COVID-19 product candidates and protect our related technology could be adversely affected.

The WTO is currently considering a waiver of intellectual property rights for COVID-19 vaccines and the U.S. government recently took a stance in support of the waiver. The current proposal is for a temporary waiver of intellectual property rights that cover COVID-19 vaccines, however, the ultimate timing and scope of the waiver, if approved, is unknown. The scope and timing of such waiver will likely be subject to extensive negotiations given the complexity of the matter, which may result in prolonged uncertainty, which could adversely affect our business. If a waiver is approved and

covers COVID-19 treatments or prophylactics, such as sotrovimab and VIR-7832, our ability to successfully commercialize our COVID-19 product candidates and protect our related technology could be adversely affected.

The current waiver proposal is the result of public health concerns from the COVID-19 pandemic and an effort to make vaccines more widely available worldwide. This proposal may also lead to similar waivers of intellectual property rights in the future in connection with other public health pandemics or epidemics or other situations of public health concern. Given that our business is focused on treating and preventing infectious diseases, there is a risk that our business and our ability to protect our technology could be adversely affected in situations beyond COVID-19.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent and trademark protection for our product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. Because we rely on third parties to help us discover, develop and manufacture our current and any future product candidates, or if we collaborate with third parties for the development, manufacturing or commercialization of our current or any future product candidates, we must, at times, share trade secrets with them. We may also conduct joint research and development programs that may require us to share trade secrets under the terms of our research and development collaborations or similar agreements.

We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of these parties to use or disclose our confidential information, including our trade secrets. We also enter into invention or patent assignment agreements with our employees, advisors and consultants. Despite our efforts to protect our trade secrets, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Moreover, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our confidential information or proprietary technology and processes. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. If any of the collaborators, scientific advisors, employees, contractors and consultants who are parties to these agreements breaches or violates the terms of any of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets as a result. Moreover, if confidential information that is licensed or disclosed to us by our partners, collaborators or others is inadvertently disclosed or subject to a breach or violation, we may be exposed to liability to the owner of that confidential information. Enforcing a claim that a third-party illegally or unlawfully obtained and is using our trade secrets, like patent litigation, is expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets.

In addition, our competitors may independently develop knowledge, methods and know-how equivalent to our trade secrets. Competitors could purchase our products and replicate some or all of the competitive advantages we derive from our development efforts for technologies on which we do not have patent protection. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure could have an adverse effect on our business, financial condition, results of operations and prospects.

We also seek to preserve the integrity and confidentiality of our data and other confidential information by maintaining physical security of our premises and physical and electronic security of our information technology systems. Additionally, the risk of cyber-attacks or other privacy or data security incidents may be heightened as a result of our moving increasingly towards a remote working environment, which may be less secure and more susceptible to hacking attacks. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and detecting the disclosure or misappropriation of confidential information and enforcing a claim that a party illegally disclosed or misappropriated confidential information is difficult, expensive and time-consuming, and the outcome is unpredictable. Further, we may not be able to obtain adequate remedies for any breach. In addition, our confidential information may otherwise become known or be independently discovered by competitors, in which case we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us.

Any trademarks we may obtain may be infringed or successfully challenged, resulting in harm to our business.

We rely and expect to continue to rely on trademarks as one means to distinguish any of our products and product candidates that are approved for marketing from the products of our competitors. Additionally, the process of obtaining trademark protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable trademark applications at a reasonable cost or in a timely manner or obtain trademark protection in all jurisdictions that we consider to be important to our business. Once we select trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose our trademark applications or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks, and we may not have adequate resources to enforce our trademarks.

In addition, any proprietary product name we propose to use with our current or any other product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. The FDA typically conducts a review of proposed product names, including an evaluation of the potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable proprietary product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

The exercise by the Bill & Melinda Gates Foundation of its licenses to certain of our intellectual property and its development and commercialization of products that we are also developing and commercializing could have an adverse impact on our market position.

We entered into an amended and restated letter agreement with the Bill & Melinda Gates Foundation, or the Gates Agreement, in January 2022, which amends and restates the letter agreement with the Billi & Melinda Gates Foundation that we entered into in December 2016. In connection with the Gates Agreement, the Bill & Melinda Gates Foundation purchased $20.0 million of shares of our convertible preferred stock and purchased $40.0 million of shares of our common stock. We are obligated to use the proceeds of the Bill & Melinda Gates Foundation's investment in furtherance of its charitable purposes to perform certain activities set forth in the Gates Agreement. For additional information regarding our obligations under the Gates Agreement, see the section titled "Business—Our Collaboration, License and Grant Agreements—Amended and Restated Letter Agreement with the Bill & Melinda Gates Foundation."

If we fail to comply with (i) our obligations to use the proceeds of the Bill & Melinda Gates Foundation's investment for the purposes described in the paragraph above and to not use such proceeds for specified prohibited uses, (ii) specified reporting requirements or (iii) specified applicable laws, or if we materially breach our specified global access commitments (any such failure or material breach, a specified default), we will be obligated to redeem or arrange for a third party to purchase all of our stock purchased by the Bill & Melinda Gates Foundation under the Gates Agreement, at the Bill & Melinda Gates Foundation's request, at a price equal to the greater of (1) the original purchase price or (2) the fair market value, which amount may increase in the event of a sale of our company or all of our material assets relating to the Gates Agreement. Additionally, if a specified default occurs or if we are unable or unwilling to continue the HIV program, tuberculosis program, vaccinal antibody program or, if applicable, the mutually agreed additional program (except for scientific or technical reasons), or if we institute bankruptcy or insolvency proceedings, then the Bill & Melinda Gates Foundation will have the right to exercise a non-exclusive, fully-paid license (with the right to sublicense) under our intellectual property to the extent necessary to use, make and sell products arising from such programs, in each case solely to the extent necessary to benefit people in the developing countries in furtherance of the Bill & Melinda Gates Foundation's charitable purpose.

The exercise by the Bill & Melinda Gates Foundation of any of its non-exclusive licenses to certain of our intellectual property (or its right to obtain such licenses), and its development and commercialization of product candidates and products that we are also developing and commercializing, could have an adverse impact on our market position.

Risks Related to Our Business Operations, Employee Matters and Managing Growth

We are highly dependent on our key personnel, and if we are not able to retain these members of our management team or recruit and retain additional management, clinical and scientific personnel, our business will be harmed.

We are highly dependent on our management, scientific and medical personnel, including our Chief Executive Officer, Dr. Scangos. Our key personnel may currently terminate their employment with us at any time. The loss of the services of any of these persons could impede the achievement of our research, development and commercialization objectives.

Additionally, we do not currently maintain “key person” life insurance on the lives of our executives or any of our employees.

Recruiting and retaining other senior executives, qualified scientific and clinical personnel and, if we progress the development of any of our product candidates, commercialization, manufacturing and sales and marketing personnel, will be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize our product candidates. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high-quality personnel, our ability to pursue our growth strategy will be limited.

Our future performance will also depend, in part, on our ability to successfully integrate newly hired executive officers into our management team and our ability to develop an effective working relationship among senior management. Our failure to integrate these individuals and create effective working relationships among them and other members of management could result in inefficiencies in the development and commercialization of our product candidates, harming future regulatory approvals, sales of our product candidates and our results of operations.

We have in the past and may in the future acquire or invest in other companies or technologies, which could divert our management’s attention, result in dilution to our stockholders and otherwise disrupt our operations and adversely affect our operating results.

We have in the past and may in the future seek to acquire or invest in additional businesses and/or technologies that we believe complement or expand our product candidates, enhance our technical capabilities or otherwise offer growth opportunities in the United States and internationally. The pursuit of potential acquisitions and investments may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated. In addition, we are exposed to market risks related to our investments, including changes in fair value of equity securities we hold, which is discussed in greater detail under Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

For example, we acquired TomegaVax, Inc., or TomegaVax, in September 2016, Humabs BioMed SA, or Humabs, in August 2017, Agenovir Corporation, or Agenovir, in January 2018 and Statera Health, LLC, or Statera, in February 2018. Realizing the benefits of these acquisitions will depend upon the successful integration of the acquired technology into our existing and future product candidates. Furthermore, we may not be able to integrate the acquired personnel, operations and technologies successfully, or effectively manage the combined business following the acquisition. We also may not realize the anticipated benefits from any acquired business. We face many risks in connection with acquisitions and investments, whether or not consummated. A significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. If our acquisitions do not yield expected returns, we may in the future be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our business, financial condition, results of operations and prospects.

In addition, in connection with our acquisitions of TomegaVax, Humabs and Agenovir, we are required to make future contingent payments upon the achievement of certain milestones. We may in the future be required to make these payments, which could adversely affect our financial condition. For additional information regarding our obligations under these agreements, see the section titled “Business—Our Acquisition Agreements”.

Furthermore, acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our business, financial condition, results of operations and prospects may suffer. We cannot assure you that we will be successful in integrating the businesses or technologies we may acquire. The failure to successfully integrate these businesses could have a material adverse effect on our business, financial condition, results of operations and prospects.

We have experienced significant growth in our organization in recent years and expect to continue to expand, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of December 31, 2021, we had 444 full-time employees, an increase of 117 employees compared to December 31, 2020. We have experienced significant growth in the number of our employees and the scope of our operations in recent years, particularly in the areas of research, development and regulatory affairs, and we expect to continue to experience growth as the clinical development of our product candidates progresses. In addition, if any of our product candidates receives marketing approval, we will need to build out our sales and marketing capabilities, either on our own or with others. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel all within the context of the rapidly evolving global pandemic of COVID-19. We continue to closely monitor the COVID-19 pandemic and will evolve our expansion plans as needed. As a result of the global pandemic, the majority of our workforce has been working from home since March 2020. Despite this, we must continue to effectively integrate, develop and motivate a growing number of new employees, and maintain the beneficial aspects of our corporate culture. We have implemented plans to reopen our offices to allow employees to return when appropriate. Although these plans are consistent with local government requirements, and focused on employee safety, and contemplate returning to remote work should the COVID-19 situation change, there is uncertainty regarding the long-term impact that the COVID-19 pandemic has had on the nature of the office environment and remote working, which could present operational and workplace culture challenges as we seek to expand our organization. The expansion of our operations may lead to significant costs and may divert our management and business development resources. We may not be able to effectively manage the expansion of our operations, recruit and train additional qualified personnel, or succeed at effectively integrating employees that have joined during the global pandemic. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our CDMOs, CROs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, public health pandemics or epidemics (including, for example, the ongoing COVID-19 pandemic), geopolitical events, including civil or political unrest (such as the ongoing conflict between Ukraine and Russia), terrorism, insurrection or war, and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

Our ability to develop our product candidates could be disrupted if our operations or those of our suppliers are affected by geopolitical events, man-made or natural disasters or other business interruptions. Our corporate headquarters are located in California near major earthquake faults and fire zones. The ultimate impact on us, our significant suppliers and our general infrastructure of being located near major earthquake faults and fire zones and being consolidated in certain geographical areas is unknown, but our operations and financial condition could suffer in the event of a major earthquake, fire or other natural disaster.

Our business could be materially adversely affected by the effects of health pandemics or epidemics, including the current outbreak of COVID-19 pandemic and future outbreaks of the disease.

Our business could be materially adversely affected by the effects of health pandemics or epidemics, including the current COVID-19 pandemic, the multiple SARS-CoV-2 variants that have further complicated the fight to subdue the global pandemic and any future outbreaks of the disease. The COVID-19 pandemic has resulted in travel restrictions, quarantines orders and other restrictions by governments to reduce the spread of the disease. As a result, the majority of our workforce has been working from home since March 2020.

The effects of the restrictions related to the COVID-19 pandemic and our work-from-home policies, including the evolving nature of such policies, may negatively impact productivity, disrupt our business and delay our clinical programs and timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course. In addition, due to the COVID-19 pandemic and our remote workforce, we have experienced an increased risk to our information technology assets and data. We have implemented plans to reopen our offices when appropriate. We may face several challenges or disruptions upon a return back to the workplace, including re-integration challenges by our employees and distractions to management related to such transition. These and

similar, and perhaps more severe, disruptions in our operations could negatively impact our business, operating results and financial condition.

Quarantines, shelter-in-place and similar government orders, or the perception that such orders or other restrictions on the conduct of business operations could occur, related to COVID-19 or other infectious diseases could impact personnel at third-party manufacturing facilities in the United States and other countries, or the availability or cost of materials, which would disrupt our supply chain. In particular, some of our CDMOs that we use to supply our early-stage product candidates are located in China, where the COVID-19 outbreak was first reported and where there have been government-imposed quarantines. While many of these materials may be obtained by more than one supplier, including suppliers outside of China, port closures and other restrictions resulting from the COVID-19 outbreak in the region or other regions may disrupt our supply chain or limit our ability to obtain sufficient materials for our product candidates.

In addition, our clinical trials have been affected by the ongoing COVID-19 pandemic. Site initiation and patient enrollment has been and may be further delayed due to prioritization of hospital resources toward the COVID-19 pandemic, and some patients may not be able or willing to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services. Similarly, our ability to recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19, has been delayed or disrupted, which has adversely impacted our clinical trial operations.

The continued spread of COVID-19, which has caused a broad impact globally, may materially affect us economically. While the potential economic impact brought by, and the duration of, the COVID-19 pandemic, may be difficult to assess or predict, it has already resulted in significant disruption of global financial markets. This disruption, if sustained or recurrent, could make it more difficult for us to access capital, which could in the future negatively affect our liquidity. In addition, a recession or market correction resulting from the spread of COVID-19 could materially affect our business and the value of our common stock.

The global pandemic of COVID-19 and the evolution of new and existing variants of COVID-19 that are resistant to existing treatments or vaccinations continue to rapidly evolve. The ultimate impact of the ongoing COVID-19 pandemic or a similar health pandemic or epidemic is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, our clinical trials, healthcare systems or the global economy as a whole. These effects could have a material impact on our operations, and we will continue to monitor the COVID-19 situation closely.

If our information systems, or those maintained on our behalf, fail or suffer security breaches, such events could result in, without limitation, the following: a significant disruption of our product development programs; an inability to operate our business effectively; unauthorized access to or disclosure of the personal information we process; and other adverse effects on our business, financial condition, results of operations and prospects.

Our computer and information technology systems, cloud-based computing services and those of our current and any future collaborators, service providers and other parties upon whom we rely are potentially vulnerable to malware, computer viruses, denial-of-service attacks (such as credential stuffing), ransomware attacks, user error or malfeasance, data corruption, cyber-based attacks, natural disasters, public health pandemics or epidemics (including, for example, the ongoing COVID-19 pandemic), terrorism, war and telecommunication and electrical failures that may result in damage to or the interruption or impairment of key business processes, or the loss or corruption of our information, including intellectual property, proprietary business information and personal information. We may also experience server malfunction, software or hardware failures, supply-chain cyber-attacks, loss of data or other computer assets and other similar issues. We have recently experienced security breaches of our information technology systems, such as through business email compromises. The techniques used to sabotage or to obtain unauthorized access to information systems, and networks in which cyber threat actors store data or through which they transmit data change frequently and we may be unable to implement adequate preventative measures. Any significant system failure, accident or security breach could have a material adverse effect on our business, financial condition and operations.

We may be required to expend significant resources (including financial), fundamentally change our business activities and practices, or modify our operations, including our clinical trial activities, or information technology in an effort to protect against security breaches and to mitigate, detect, and remediate actual and potential vulnerabilities. Relevant laws, regulations, industry standards and contractual obligations, may require us to implement specific security measures or use industry-standard or reasonable measures to protect against security breaches. The costs to us to mitigate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and while we have implemented security measures to protect our data security and information technology systems, our efforts to address

these problems may not be successful, and these problems could result in unexpected interruptions, data loss or corruption, delays, cessation of service and other harm to our business and our competitive position. If the information technology systems of our third-party vendors become subject to disruptions or security breaches, we may have insufficient recourse against such third parties and we may have to expend significant resources to mitigate the impact of such an event, and to develop and implement protections to prevent future events of this nature from occurring. Although we maintain cybersecurity insurance coverage, such insurance may not be adequate to cover all liabilities that we may incur. Furthermore, if a security breach were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information or other similar disruptions.

For example, we, our third-party vendors, and our partners' third-party vendors have experienced social engineering efforts (including phishing attacks) designed to gain unauthorized access to our systems and information, including recent business email and system compromises. Similarly, we and our partners' third-party vendors may be a target of other phishing attacks, social engineering attacks and other cyber-attacks in the future. If a data security breach affects our or third parties' systems upon which we rely, corrupts our data or results in the unauthorized disclosure or release of personally identifiable information, our reputation could be materially damaged or our operations disrupted. In addition, such a breach may require notification to governmental agencies, supervisory bodies, credit reporting agencies, the media, individuals, collaborators or others pursuant to various federal, state and foreign data protection, privacy and security laws, regulations and guidelines, industry standards, our policies and our contracts, if applicable. Such laws may include HIPAA and the Health Information Technology for Economic and Clinical Health Act, or HITECH. Under these laws specifically, notice of certain security breaches must be made to affected individuals, the Secretary of the Department of HHS, and, for extensive breaches, to the media or state attorneys general. Such a notice could further harm our reputation and our ability to compete. Such disclosures are costly, and the disclosure or the failure to comply with such requirements could lead to a material adverse effect on our reputation, business, or financial condition. Furthermore, a data security breach could result in fines, increased costs or loss of revenue and we could incur liability (such as through regulatory fines and penalties as well as private claims), our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed. Additionally, federal, state and foreign laws and regulations can expose us to enforcement actions and investigations by regulatory authorities, and potentially result in regulatory penalties and significant legal liability, if our information technology security efforts fail.

We receive, process, store and use personal information and other data, which subjects us to governmental regulation and other legal obligations, liability and risks related to privacy, security, and data protection, and our actual or perceived failure to comply with such obligations could lead to government enforcement actions (that could include fines and penalties), a disruption of our clinical trials or commercialization of our products, private litigation, harm to our reputation, or other adverse effects on our business or prospects.

We receive, process, store and use personal information and other data about our clinical trial participants, employees, collaborators and others. We are, or may become, subject to numerous domestic and foreign laws and regulations regarding privacy, data protection, and data security, industry standards, as well as policies, contracts and other obligations that apply to the processing of personal information by us and on our behalf, the scope of which is changing, subject to differing applications and interpretations and may be inconsistent among countries, or conflict with other rules. We strive to comply with all applicable data protection requirements and obligations; however new laws, policies, codes of conduct and legal obligations may arise, continue to evolve, be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and conflict with one another. Any failure or perceived failure by us or third parties working on our behalf to comply with applicable data protection requirements may result in governmental enforcement actions (including fines, penalties, judgments, settlements, additional reporting requirements and/or oversight, temporary or permanent bans on all or some processing of personal information, orders to destroy or not use personal information, imprisonment of company officials and public censure), civil claims, litigation, damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, operations and financial performance, interrupt or stop clinical trials, limit our ability to develop or commercialize our products, or require us to revise or restructure our operations. With substantial uncertainty over the interpretation and application of these laws, regulations and other obligations, we may face challenges in addressing their requirements and making necessary changes to our policies and practices, and may incur significant costs and expenses in our efforts to do so. For additional information regarding these laws, see the section titled "Business—Government Regulation and Product Approval—Privacy Laws."

Our employees, principal investigators, consultants and commercial partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, principal investigators, consultants and commercial partners. Misconduct by these parties could include intentional failures, reckless and/or negligent conduct or unauthorized activities that violates (i) the laws and regulations of FDA and other regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities, (ii) manufacturing standards, (iii) federal and state data privacy, security, fraud and abuse and other healthcare laws and regulations in the U.S. and abroad, (iii) laws that require the true, complete and accurate reporting of financial information or data and (iv) insider trading laws that restrict the buying and selling of shares of our common stock while in possession of material non-public information. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct also could involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, creating fraudulent data in our preclinical studies or clinical trials or illegal misappropriation of drug product, which could result in regulatory sanctions and cause serious harm to our reputation. In addition, during the course of our operations, our directors, executives and employees may have access to material non-public information regarding our business, our results of operations or potential transactions we are considering. We may not be able to prevent a director, executive or employee from violating our insider trading policies and buying or selling, or "tipping" others who might buy or sell, shares of our common stock on the basis of, or while having access to, material non-public information. If a director, executive or employee was to be investigated, or an enforcement action was to be brought against a director, executive or employee for insider trading, it could have a negative impact on our reputation and our stock price

It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us and we are not successful in defending ourselves or asserting our rights, those actions could result in significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in government-funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws, contractual damages, reputational harm and the curtailment or restructuring of our operations, any of which could have a negative impact on our business, financial condition, results of operations and prospects.

Our ability to use our net operating losses, or NOLs, to offset future taxable income may be subject to certain limitations.

Although we recorded net income for the year ended December 31, 2021, we have otherwise incurred accumulated net losses since inception and have no assurances that we will continue to be profitable in the near future. As of December 31, 2021, we had net operating loss carryforwards of $24.2 million for federal tax purposes and $126.6 million for state tax purposes. If not utilized, federal carryforwards will begin expiring in 2035 and state carryforwards will begin expiring in 2031. Our ability to use our federal and state net operating losses to offset potential future taxable income is dependent upon our generation of future taxable income before any expiration dates of the net operating losses, and we cannot predict with certainty when, or whether, we will generate sufficient taxable income to use all of our net operating losses.

In general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" (generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a rolling three-year period) is subject to limitations on its ability to utilize its pre-change NOLs to offset future taxable income. We may have experienced ownership changes in the past or as a result of the IPO and may experience ownership changes as a result of future offerings and/or subsequent changes in our stock ownership (some of which shifts are outside our control). In addition, Agenovir has experienced at least one ownership change in the past resulting in a limitation under Section 382 of the Code, which has been accounted for in calculating our available NOL carryforwards. As a result, if, and to the extent that we earn net taxable income, our ability to use our pre-change NOLs to offset such taxable income may be subject to limitations.

The Tax Cuts and Jobs Act of 2017 and the CARES Act include, among other things, changes to U.S. federal tax rates and the rules governing NOL carryforwards. For example, NOLs arising in tax years ending after December 31, 2017 can be carried forward indefinitely, but the deductibility of such federal NOLs may be limited to 80% of current year taxable income for tax years beginning on or after January 1, 2021. Deferred tax assets for NOLs will need to be measured at the applicable

tax rate in effect when the NOL is expected to be utilized. The changes in the carryforward periods, as well as the new limitation on use of NOLs may impact our ability to utilize our NOLs to offset taxable income in the future.

Risks Related to Ownership of Our Common Stock

Our financial condition and results of operations may fluctuate from quarter to quarter and year to year, which makes them difficult to predict.

We expect our financial condition and results of operations to fluctuate from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. Accordingly, you should not rely upon the results of any quarterly or annual periods as indications of future operating performance. In addition, we are exposed to market risks related to our investments, including changes in fair value of equity securities we hold which may fluctuate from quarter to quarter and year to year, which is discussed in greater detail under Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

The market price of our common stock has been, and in the future, may be, volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.

Our stock price has been, and in the future, may be, subject to substantial volatility. From October 11, 2019, our first day of trading on The Nasdaq Global Select Market, or Nasdaq, through February 22, 2022, the closing price of our stock ranged from $11.83 per share to $83.07 per share. As a result of the volatility in our stock price, our stockholders could incur substantial losses.

The stock market in general and the market for biopharmaceutical and pharmaceutical companies in particular, has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The ongoing COVID-19 pandemic, for example, has negatively affected some sectors of the stock market and investor sentiment and has resulted in significant volatility. As a result of this volatility, you may not be able to sell your common stock at or above the price you paid for your shares. Market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from selling their shares at or above the price paid for the shares and may otherwise negatively affect the liquidity of our common stock.

In addition, public statements by us, government agencies, our competitors, the media or others relating to the ongoing COVID-19 pandemic (including regarding our and others' efforts to develop COVID-19 therapies) and the impact of such statements on investors' general perception of our company and our business have in the past resulted, and may in the future result, in significant fluctuations in our stock price. Given the global focus on the COVID-19 pandemic, information in the public arena on this topic, whether or not accurate, has had and will likely continue to have an outsized impact (positive or negative) on our stock price. Moreover, sales of a substantial number of shares of our common stock by our stockholders in the public market or the perception that these sales might occur, have in the past, and may in the future depress the market price of our common stock. Information related to our development, manufacturing, regulatory and commercialization efforts with respect to sotrovimab and VIR-7832, or information regarding such efforts by competitors with respect to their potential therapies, may meaningfully impact our stock price.

Some companies that have experienced volatility in the trading price of their shares have been the subject of securities class action litigation. Any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms. Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our business practices. Defending against litigation is costly and time-consuming and could divert our management's attention and our resources. Furthermore, during the course of litigation, there could be negative public announcements of the results of hearings, motions or other interim proceedings or developments, which could have a negative effect on the market price of our common stock.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Our executive officers, directors and stockholders who own more than 5% of our outstanding common stock beneficially own a significant percentage of our outstanding common stock. If these persons acted together, they may be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. The concentration of voting power and

transfer restrictions could delay or prevent an acquisition of our company on terms that other stockholders may desire or result in the management of our company in ways with which other stockholders disagree.

If research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or financial analysts publish about us or our business. If any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if the clinical trials and operating results fail to meet the expectations of analysts, our stock could decline. If analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

You should not rely on an investment in our common stock to provide dividend income. We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain in the foreseeable future.

We have incurred and we will continue incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we have incurred and we will continue to incur significant legal, accounting, investor relations and other expenses. In addition, the Sarbanes-Oxley Act and rules subsequently implemented by the Securities and Exchange Commission, or SEC, and Nasdaq have imposed various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act was enacted, pursuant to which the SEC adopted rules and regulations related to corporate governance and executive compensation, such as “say on pay” and proxy access. Emerging growth companies are permitted to implement many of these requirements over time, however, we are no longer an emerging growth company as of December 31, 2020, and expect to incur additional compliance-related expenses as a result.

Stockholder activism, the current political environment and the current high level of U.S. government intervention and regulatory reform may also lead to substantial new regulations and disclosure obligations, which may in turn lead to additional compliance costs and impact the manner in which we operate our business in ways we do not currently anticipate. Our management and other personnel will need to devote a substantial amount of time to comply with these requirements. Moreover, these requirements will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements.

As a public company, we may also be subject to more stringent state law requirements, such as California Senator Bill 826, which generally requires public companies with principal executive offices in California to have a minimum number of females on the company’s board of directors, and California Assembly Bill 979, which generally requires public companies with principal executive offices in California to include specified numbers of directors from “underrepresented communities.” We are currently compliant with the requirements, but there are no assurances that we will be compliant in the future. If we fail to comply with either Senator Bill 826 or Assembly Bill 979, we could be fined by the California Secretary of State, with a $100,000 fine for the first violation and a $300,000 for each subsequent violation, and our reputation may be adversely affected.

If we fail to maintain proper and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

Pursuant to Section 404 of the Sarbanes-Oxley Act, or Section 404, we are required to furnish a report by our management on our internal control over financial reporting, including an attestation report on internal control over financial

reporting issued by our independent registered public accounting firm. We were previously not required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting while we were an emerging growth company. However, we are no longer an emerging growth company as of December 31, 2020. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the Sarbanes-Oxley Act, the requirements of being a reporting company under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and any complex accounting rules in the future, we may need to upgrade our information technology systems; implement additional financial and management controls, reporting systems and procedures; and hire additional accounting and finance staff. We are currently in the process of hiring additional accounting and finance staff as we grow our business. If we are unable to hire the additional accounting and finance staff necessary to comply with these requirements, we may need to retain additional outside consultants. If we or, if required, our auditors, are unable to conclude that our internal control over financial reporting is effective, investors may lose confidence in our financial reporting and the trading price of our common stock may decline.

We cannot assure you that there will not be material weaknesses in our internal control over financial reporting in the future. Our previous acquisitions and strategic transactions and resulting international operations have increased the complexity of our accounting, and additional acquisitions and transactions and further geographic expansion will likely increase this complexity and the related accounting challenges. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines that we have a material weakness in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States.

Generally accepted accounting principles in the United States are subject to interpretation by the Financial Accounting Standards Board, or FASB, or the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, may retroactively affect previously reported results, could cause unexpected financial reporting fluctuations and may require us to make costly changes to our operational processes and accounting systems.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. For a summary of these provisions, see the section titled “Anti-Takeover Provisions of Delaware Law and Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws—Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws” in Exhibit 4.3 Description of Capital Stock filed as part of this Annual Report on Form 10-K.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the

District of Delaware) will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action or proceeding asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, officers or other employees to us or our stockholders;
- any action or proceeding asserting a claim against us or any of our current or former directors, officers or other employees, arising out of or pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws;
- any action or proceeding to interpret, apply, enforce or determine the validity of our certificate of incorporation or our bylaws; and
- any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act of 1933, as amended, or the Securities Act, creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation further provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act of 1933, unless we consent in writing to the selection of an alternative forum. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our amended and restated certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive-forum provisions may limit a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage these types of lawsuits. Furthermore, the enforceability of similar choice of forum provisions in other companies’ certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. If a court were to find the exclusive-forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving such action in other jurisdictions, all of which could harm our business.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters are located in San Francisco, California, where we lease approximately 183,027 square feet of office, research and development, engineering, and laboratory space pursuant to three lease agreements that expire at various dates through 2033, two of which are renewable for additional one and five years, respectively.

We also have several other locations, including St. Louis, Missouri, where we lease approximately 60,649 square feet of office, research and development, and laboratory space pursuant to two lease agreements that expire at various dates through 2028; Portland, Oregon, where we lease approximately 10,559 square feet of office, research and development, engineering, and laboratory space pursuant to two lease agreements that expire at various dates through 2027, one of which is renewable for an additional five years; and Bellinzona, Switzerland, where we lease approximately 12,500 square feet of office, research and development, engineering, and laboratory space pursuant to a lease agreement which expires on December 31, 2028, with an option to extend for five years.

We believe that our existing facilities are adequate for our near-term needs, but expect to need additional space as we grow, and we believe that suitable additional alternative spaces will be available in the future on commercially reasonable terms, if required.

Item 3. Legal Proceedings.

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not currently party to any material legal proceedings, and we are not aware of any pending or threatened legal proceeding against us that we believe could have an adverse effect on our business, operating results or financial condition.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information for Common Stock

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "VIR" since October 11, 2019.

Holders of Record

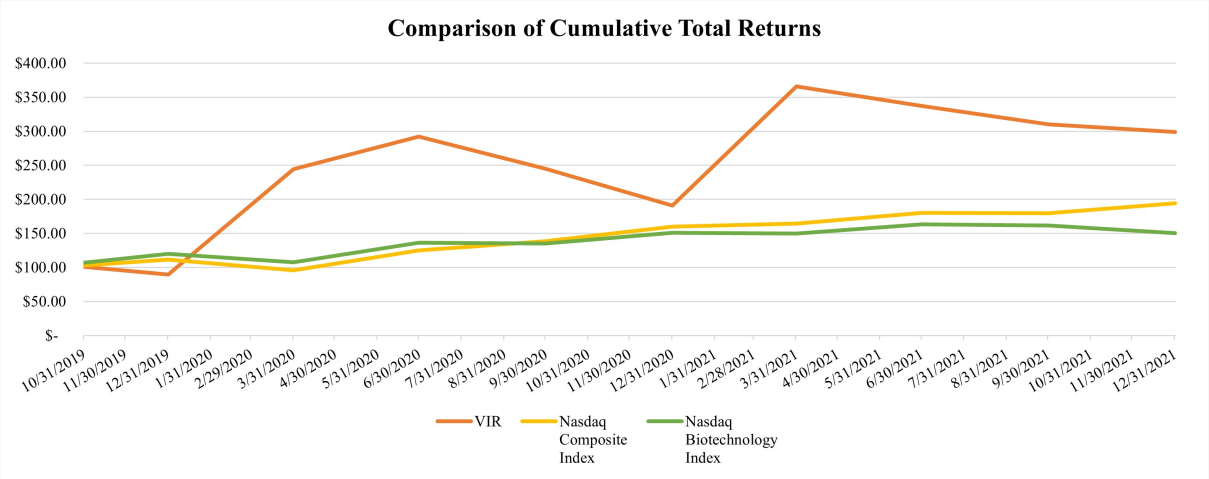
As of February 22, 2022, there were approximately 162 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Dividend Policy

We currently intend to retain future earnings, if any, for use in operation of our business and to fund future growth. We have never declared or paid any cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

Stock Performance Graph

The following graph shows the total stockholder's return on an investment of $100 in cash at market close on October 11, 2019 (the first day of trading of our common stock), through December 31, 2021 for (i) our common stock, (ii) the Nasdaq Composite Index and (iii) the Nasdaq Biotechnology Index. Pursuant to applicable Securities and Exchange Commission, or SEC, rules, all values assume reinvestment of the full amount of all dividends, however, no dividends have been declared on our common stock to date. The stockholder return shown on the graph below is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder return. This graph shall not be deemed "soliciting material" or be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or the Securities Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.



	VIR	Nasdaq Composite Index	Nasdaq Biotechnology Index
10/11/2019	$ 100.00	$ 100.00	$ 100.00
10/31/2019	$ 100.57	$ 102.92	$ 106.95
12/31/2019	$ 89.69	$ 111.36	$ 120.19
3/31/2020	$ 244.44	$ 95.57	$ 107.67
6/30/2020	$ 292.23	$ 124.84	$ 136.40
9/30/2020	$ 244.86	$ 138.61	$ 135.11
12/31/2020	$ 191.01	$ 159.96	$ 151.06
3/31/2021	$ 365.69	$ 164.41	$ 149.97
6/30/2021	$ 337.23	$ 180.02	$ 163.40
9/30/2021	$ 310.41	$ 179.33	$ 161.40
12/31/2021	$ 298.64	$ 194.18	$ 150.10

Securities Authorized for Issuance Under Equity Compensation Plans

The information required by this Item regarding equity compensation plans is incorporated by reference to the information set forth in PART III Item 12 of this Annual Report on Form 10-K.

Use of Proceeds from Registered Securities

On October 10, 2019, we completed our initial public offering, or IPO, and issued 7,142,858 shares of our common stock at an initial offering price of $20.00 per share. We received net proceeds from the IPO of approximately $126.4 million, after deducting underwriting discounts and commissions of approximately $10.0 million and expenses of approximately $6.4 million. None of the expenses associated with the IPO were paid to directors, officers, persons owning 10% or more of any class of equity securities, or to their associates, or to our affiliates. Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, Cowen and Company, LLC and Barclays Capital Inc. acted as book-running managers for the IPO.

Shares of our common stock began trading on The Nasdaq Global Select Market on October 11, 2019. The offer and sale of the shares were registered under the Securities Act on Registration Statement on Form S-1 (Registration No. 333-233604), which was declared effective on October 10, 2019.

There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC on October 11, 2019, pursuant to Rule 424(b)(4). As of December 31, 2021, we have used all of the net offering proceeds from the IPO.

Recent Sales of Unregistered Equity Securities

None.

Issuer Purchases of Equity Securities

None.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our audited consolidated financial statements and notes and other financial information included elsewhere in this Annual Report on Form 10-K. Unless the context requires otherwise, references in this Annual Report on Form 10-K to the "Company", "Vir," "we," "us" and "our" refer to Vir Biotechnology, Inc. and its consolidated subsidiaries.

Our discussion and analysis below are focused on our financial results and liquidity and capital resources for the years ended December 31, 2021 and 2020, including year-over-year comparisons of our financial performance and condition for these years. Discussion and analysis of the year ended December 31, 2019 specifically, as well as the year-over-year comparison of our financial performance and condition for the years ended December 31, 2020 and 2019, are located in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in the Annual Report on Form 10-K for the year ended December 31, 2020, as filed with the SEC on February 25, 2021. For a detailed discussion on our business environment, please read Item 1. Business, included in this Annual Report on Form 10-K. For additional information on the risks that could negatively impact our business, please read Item 1A. Risk Factors, included in this Annual Report on Form 10-K.

Overview

We are a commercial-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. Infectious diseases are among the leading causes of death worldwide and can cause trillions of dollars of direct and indirect economic burden each year – as evidenced by the coronavirus disease 2019, or COVID-19, pandemic. We believe that now is the time to apply the recent and remarkable advances in immunology to combat current and prepare for future infectious diseases. Our approach begins with identifying the limitations of the immune system in combating a particular pathogen, the vulnerabilities of that pathogen and the reasons why previous approaches have failed. We then bring to bear powerful technologies that we believe, individually or in combination, will lead to effective therapies.

Our current pipeline consists of sotrovimab (previously VIR-7831; and where marketing authorization has been granted, marketed under the brand name Xevudy®) and other product candidates targeting COVID-19, hepatitis B virus, or HBV, influenza A virus, and human immunodeficiency virus, or HIV. We have assembled four technology platforms, focused on antibodies, T cells, innate immunity and small interfering ribonucleic acid, or siRNA, through internal development, collaborations and acquisitions. We have built an industry-leading team that has deep experience in immunology, infectious diseases, and product development and commercialization. Given the global impact of infectious diseases, we are committed to developing cost-effective treatments that can be delivered at scale.

COVID-19

Sotrovimab is an investigational severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2, neutralizing monoclonal antibody, or mAb, that incorporates Xencor, Inc.'s, or Xencor, Xtend™ technology.

- In May 2021, the U.S. Food and Drug Administration, or FDA, granted an Emergency Use Authorization, or EUA, to sotrovimab for the early treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and at high risk for progression to severe COVID-19, including hospitalization or death. We also received a positive scientific opinion from the Committee for Human Medicinal Products in the European Union, or EU, for sotrovimab in May 2021. In June 2021, we announced confirmatory full results for the Phase 3 COVID-19 Monoclonal antibody Efficacy Trial - Intent to Care Early, or COMET-ICE, trial, which resulted in an adjusted relative risk reduction of 79% ($p<0.001$) in all-cause hospitalization for more than 24 hours or death due to any cause by Day 29 compared to placebo, meeting the primary endpoint of the trial. In December 2021, the European Commission granted marketing authorization to Xevudy® (sotrovimab) in the EU for the treatment of adults and adolescents at increased risk of progressing to severe COVID-19.
- We have made significant progress increasing global patient access to sotrovimab in collaboration with Glaxo Wellcome UK Limited and GlaxoSmithKline Biologicals S.A. (individually and collectively referred to as GSK). Sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name Xevudy®) in more than 40 countries.

- To date, binding agreements have been received for the sale of approximately 1.7 million doses of sotrovimab worldwide.
    - In November 2021, we and GSK announced the sale of more than 750,000 doses globally to date, including multiple contracts with the U.S. government. Approximately 90% of those doses were delivered in 2021 and the remainder are expected to be delivered throughout the first half of 2022. The delivered doses led to the recognition of $917.2 million of sotrovimab collaboration revenue in 2021.
    - In January 2022, we and GSK announced the sale of an additional 600,000 doses to the U.S. government, which are expected to be delivered throughout the first quarter of 2022, and the sale of approximately 350,000 additional doses to other countries, which are expected to be delivered throughout the first half of 2022. Based solely on the binding agreements received to date, we expect to recognize approximately $1.1 billion of sotrovimab collaboration revenues when the doses are delivered in the first half of 2022.
- We and GSK expect to manufacture approximately two million doses of sotrovimab in the first half of 2022, and additional doses in the second half of 2022.
- During and following the fourth quarter, we announced preclinical data generated through pseudovirus testing demonstrating that sotrovimab retains neutralizing activity against the highly divergent Omicron variant (B.1.1.529).
- In February 2022, we published pseudovirus data demonstrating a 16-fold shift in neutralization activity against the Omicron BA.2 subvariant. Our BA.2 results were derived from 10 independent experiments that were conducted using an optimized pseudovirus assay. This is the same assay that was used to generate data for previous variants. These data have been shared with regulatory agencies around the world. Initial feedback from the FDA question our conclusion that the 500 mg intravenous, or IV, dose of sotrovimab retains activity against the BA.2 Omicron subvariant based on our current modeling assumptions, and the FDA has asked for additional data to support our position. The FDA also requested safety data for higher doses. Both have been provided to the FDA and we are awaiting further correspondence.
- The Health Care Provider Fact Sheet was recently updated to show that sotrovimab's neutralization activity was reduced an average fold change in EC_{50} value of 16-fold against the SARS-CoV-2 Omicron B.1.1.529/BA.2 spike variant compared to wild-type. The Fact Sheet also noted that the clinical relevance of the 16-fold reduction in sotrovimab activity against the SARS-CoV-2 Omicron B.1.1.529/BA.2 variant is unknown.
- As of February 28, 2022, the FDA noted on its EUA website that sotrovimab is currently authorized in all U.S. regions until further notice by the FDA.
- In November 2021, we announced the results of the Phase 3, randomized, open-label COMET-Treatment of Acute COVID-19 with Intramuscular monocLonal antibody, or COMET-TAIL trial, which achieved its primary endpoint, demonstrating that 500 mg intramuscular, or IM, administration of sotrovimab (n=376) was non-inferior to 500 mg IV administration (n=378) for the early treatment of mild to moderate COVID-19 in high-risk, non-hospitalized adults and adolescents. Low rates of serious adverse events (≤1% in both arms) were observed. Based on the results of the COMET-TAIL trial, in January 2022, we and GSK submitted an application to the FDA requesting an amendment to the EUA for sotrovimab to include IM administration.
- We and GSK plan to submit a Biologics License Application, or BLA, for sotrovimab to the FDA in the second half of 2022.
- We and GSK are collaborating to assess the use of sotrovimab in uninfected immunocompromised patients to determine whether sotrovimab can prevent symptomatic COVID-19 infection. Two Phase 3 trials are expected to start in the second quarter of 2022. One is a platform trial and one is a company sponsored trial, COVID-19 Monoclonal antibody Efficacy Trial – Stop Transmission of Acute SARS-COV-2, or COMET-STAR. The primary endpoint for both trials is incidence of symptomatic PCR-confirmed COVID-19. The analysis of the primary endpoint of COMET-STAR will be event driven, and could be as early as the second half of 2022.
- Sotrovimab is also being evaluated among patients hospitalized with COVID-19 in the U.K. as part of the Randomized Evaluation of COVID-19 Therapy, or RECOVERY, trial. Initial data are expected in the second half of 2022.

VIR-7832 is an investigational vaccinal SARS-CoV-2-neutralizing mAb that incorporates Xencor's Xtend and other Fc technologies. VIR-7832 shares the same characteristics as sotrovimab and has been engineered to potentially be a therapeutic T cell vaccine to further help treat and/or prevent COVID-19. The U.K.'s National Health Service-supported AGILE

initiative evaluating VIR-7832 in a Phase 1b/2a trial of adults with mild to moderate COVID-19 remains ongoing. To date, no safety signals have been reported for the 50 mg, 150 mg and 500 mg dose cohorts. The first patient in the Phase 2a portion of the trial was dosed in February 2022. Additional data are expected in the first half of 2022.

HBV

VIR-2218 is an investigational HBV-targeting siRNA.

- In June 2021, we announced clinical data from our Phase 2 trial of VIR-2218 alone and in combination with pegylated interferon alpha, or PEG-IFN-α. First, with VIR-2218 as monotherapy, the trial demonstrated a strong safety profile and a substantial, durable and dose dependent reduction of hepatitis B virus surface antigen, or HBsAg, through 48 weeks. Second, evaluating VIR-2218 alone and in combination with PEG-IFN-α for 12 weeks, more rapid and substantial declines in HBsAg compared to VIR-2218 alone were observed.
- In November 2021, we announced additional data evaluating VIR-2218 in combination with PEG-IFN-α for 24 weeks. New findings demonstrated that concurrent initiation of VIR-2218 and PEG-IFN-α therapy resulted in earlier and more substantial HBsAg reductions compared to VIR-2218 alone or with PEG-IFN-α following a VIR-2218 lead-in. Also, three participants achieved HBsAg loss below the lower limit of quantification by Week 24; two of three achieved anti-HBs seroconversion. Additional data are expected in the first half of 2022.
- VIR-2218 is also being evaluated in additional clinical trials with collaborators.

VIR-3434 is an investigational HBV-neutralizing mAb that incorporates Xencor's Xtend and other Fc technologies.

- In July 2021, we initiated the Phase 2 Monoclonal Antibody siRNA Combination against Hepatitis B, or MARCH, trial to evaluate the combination of VIR-2218 and VIR-3434 as a functional cure regimen for chronic HBV infection. Initial data are expected in the first half of 2022. As some of our clinical trial sites are in Ukraine and Moldova, we are monitoring the situation to determine any impact resulting from the current conflict in this region.
- In November 2021, we announced that a single dose of six mg, 18 mg, or 75 mg of VIR-3434 resulted in rapid HBsAg reductions in most participants within approximately one week post-dose, and the largest and most sustained reductions in HBsAg were observed in the 75 mg cohort. Initial data are expected in the first half of 2022.

Influenza A virus

VIR-2482 is an investigational mAb designed for the prevention of influenza A that incorporates Xencor's Xtend technology. In August 2019, we initiated dosing in the Phase 1/2 clinical trial for VIR-2482. VIR-2482 has been well-tolerated in the approximately 100 healthy volunteers dosed in Phase 1. Anticipating an increase in the incidence of influenza in the Northern Hemisphere this coming winter, we expect to initiate a Phase 2 trial in the second half of 2022.

Additionally, we and GSK are evaluating the potential of several next-generation mAbs for influenza treatment and prevention, functional genomics applications for respiratory targets, and mAbs for non-influenza diseases under the collaboration agreement with GSK executed in May 2021, or the 2021 GSK Agreement. For details regarding the 2021 GSK Agreement, see Note 7—Collaboration and License Agreements to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

HIV

VIR-1111 is an investigational HIV T cell vaccine based on human cytomegalovirus, or HCMV. In December 2020, we initiated a Phase 1 trial of VIR-1111. No safety signals have been reported to date and we expect to have additional clinical data in the first half of 2022.

In January 2022, we announced an expansion of our collaboration with the Bill & Melinda Gates Foundation to include the advancement of innovative platform technologies in the development of broadly neutralizing antibodies designed to provide a "vaccinal effect" aimed at a functional cure of HIV and the prevention of malaria.

Financial Overview

We were incorporated in April 2016 and commenced principal operations later that year. To date, we have focused primarily on organizing and staffing our company, business planning, raising capital, identifying, acquiring, developing and in-licensing our technology platforms and product candidates, and conducting preclinical studies and clinical trials.

We have financed our operations primarily through sales of our common stock from our initial public offering, subsequent follow-on offering and convertible preferred securities, and payments received under our grant and collaboration agreements. As of December 31, 2021, excluding restricted cash, we had $909.5 million in cash, cash equivalents and investments, and after excluding the equity investment in Brii Biosciences Limited, or Brii Bio Parent, we had $766.4 million. Based upon our current operating plan, we believe that $766.4 million as of December 31, 2021 will enable us to fund our operations for at least the next 12 months. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional financing to fund our long-term operations sooner than planned. See the section titled "Liquidity, Capital Resources and Capital Requirements—Future Funding Requirements" below for additional information.

Although we recorded net income for the year ended December 31, 2021, we have otherwise incurred accumulated net losses since inception and may continue to incur net losses in the foreseeable future. To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name, Xevudy®) in more than 40 countries. Although we (through our collaborator GSK) have recently entered into procurement agreements to supply sotrovimab to governments around the world and began to recognize revenue for sotrovimab, the extent of future revenue remains uncertain. We have not obtained regulatory approval for any other product candidates, and we do not expect to generate significant revenue from the sale of our other product candidates until we complete clinical development, submit regulatory filings and receive approvals from the applicable regulatory bodies for such product candidates, if ever. Our net income was $528.6 million for the year ended December 31, 2021. Our net losses were $298.7 million and $174.7 million for the years ended December 31, 2020 and 2019, respectively. As of December 31, 2021, we had an accumulated deficit of $138.6 million. Our primary use of our capital resources is to fund our operating expenses, which consist primarily of expenditures related to identifying, acquiring, developing, manufacturing and in-licensing our technology platforms and product candidates, and conducting preclinical studies and clinical trials, and to a lesser extent, selling, general and administrative expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable and accrued expenses. Although we began recognizing revenue for sotrovimab and have substantial deferred revenue under our 2021 GSK Agreement, we may continue to incur net operating losses for at least the next several years as the extent of future revenue remains uncertain. In particular, we expect our expenses and losses to increase as we continue our research and development efforts, advance our product candidates through preclinical and clinical development, seek regulatory approval, prepare for commercialization, as well as hire additional personnel, protect our intellectual property and incur additional costs associated with being a public company. We also expect to increase the size of our administrative functions to support the growth of our business. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials and our expenditures on other research and development activities.

We are currently manufacturing product candidates from three of our platforms: antibodies, T cells and siRNAs. We have established our own internal process development, manufacturing and quality capabilities and are working with contract development and manufacturing organizations, or CDMOs, to supply our early- and late-stage product candidates in the near term. We continue to expand our internal capabilities and resources in process development, analytical development, quality, manufacturing and supply chain, which are supported by our San Francisco, California, and Portland, Oregon facilities that include laboratories for process development, production of HCMV research viral seed stock and selected quality control testing for our product candidates. We have established relationships with multiple CDMOs and have produced material to support preclinical studies and Phase 1 through Phase 3 clinical trials. Material for Phase 3 clinical trials and commercial supply will generally require large-volume, low-cost-of-goods production. For example, for our COVID-19 program, we and our collaborator GSK have executed manufacturing agreements with CDMOs having large-scale capacity to support future scale-up and product supply, particularly for potential commercialization.

COVID-19 Business Update

We have implemented a number of plans and policies designed to address and mitigate the impact of the ongoing COVID-19 pandemic on our employees and our business. We continue to closely monitor the COVID-19 situation and will evolve our plans and policies as needed going forward. As a result of these developments, in March 2020, we implemented work-from-home policies for most of our employees. We have also implemented plans, which continue to evolve based on the current climate and response to the ongoing COVID-19 pandemic, to reopen our offices to allow employees to return when appropriate. Although these plans are based on a phased approach consistent with local government requirements, and

focused on employee safety, and contemplate returning to remote work should new restrictions be implemented, there is uncertainty regarding the recent phased reopening, which may be rolled back, and restrictions re-implemented. We are also working to provide our employees with the support they need to ensure continuity of business operations. We are working closely with our CDMOs to manage our supply chain activities and mitigate any potential disruptions to our clinical trial supplies as a result of the COVID-19 pandemic. However, there are no assurances that our manufacturing and supply chain infrastructure will remain uninterrupted and reliable, or that the CDMOs will be able to satisfy demand in a timely manner and not have supply chain disruptions due to COVID-19 related shutdowns, stock-outs due to raw material shortages and/or greater than anticipated demand or quality issues given the operational challenges and raw material shortages that have been experienced during the COVID-19 pandemic. For some of our clinical development programs, we are experiencing, and may continue to experience, a disruption or delay in our ability to initiate trial sites and enroll and assess patients. In addition, we rely on contract research organizations or other third parties to assist us with clinical trials, and we cannot guarantee that they will continue to perform their contractual duties in a timely and satisfactory manner as a result of the COVID-19 pandemic.

Our Collaboration, License and Grant Agreements

We have entered into collaboration, license and grant arrangements with various third parties. For details regarding these and other agreements, see the section titled "Business—Our Collaboration, License and Grant Agreements" and Note 6—Grant Agreements and Note 7—Collaboration and License Agreements to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Our Acquisitions

We have completed various acquisitions. For details regarding our acquisitions, see the section titled "Business—Our Acquisition Agreements" and Note 4—Acquisitions to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Components of Operating Results

Revenues

To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name, Xevudy®) in more than 40 countries. We (through our collaborator GSK) have recently entered into procurement agreements to supply sotrovimab to governments around the world, and we have begun recognizing revenue from our profit share under our definitive collaboration agreement with GSK executed in June 2020, or the 2020 GSK Agreement. However, the extent of future revenue remains uncertain. We have not obtained regulatory approval for any other product candidates, and we do not expect to generate any significant revenue from the sale of our other product candidates until we complete clinical development, submit regulatory filings and receive approvals from the applicable regulatory bodies for such product candidates, if ever.

Our revenues consist of the following:

Collaboration revenue includes recognition of our profit share from the sales of sotrovimab pursuant to the 2020 GSK Agreement. Our contractual share of 72.5% from the sales of sotrovimab is applied to the revenue reported in the period by GSK, net of cost of goods sold and allowable expenses from both GSK and us (e.g., medical affairs, selling and marketing expenses) and adding back our expenses that appear elsewhere in the consolidated statement of operations (e.g., cost of revenue).

Contract revenue includes recognition of revenue generated from license rights issued to GSK, from research and development services under other third-party contracts, and from a clinical supply agreement with Brii Biosciences Offshore Limited, or Brii Bio.

Grant revenue is comprised of revenue derived from grant agreements with government-sponsored and private organizations.

License revenue from a related party is comprised of revenue related to Brii Bio's exercise of its option to obtain exclusive rights to develop and commercialize compounds arising from VIR-2218 in greater China recognized in the prior year.

Operating Expenses

Cost of Revenue

Cost of revenue currently represents royalties earned by third-party licensors on net sales of sotrovimab by us or our collaborators. We recognize these royalties as cost of revenue when we recognize the corresponding revenue that gives rise to payments due to our licensors.

Research and Development

To date, our research and development expenses have related primarily to discovery efforts and preclinical and clinical development of our product candidates. Research and development expenses are recognized as incurred and payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods or services are received. We do not track research and development expenses by product candidate.

Research and development expenses consist primarily of costs incurred for our product candidates in development and prior to regulatory approval, which include:

- expenses related to license and collaboration agreements, and change in fair value of certain contingent consideration obligations arising from business acquisitions;
- personnel-related expenses, including salaries, benefits and stock-based compensation for personnel contributing to research and development activities;
- expenses incurred under agreements with third-party contract manufacturing organizations, contract research organizations, and consultants;
- clinical costs, including laboratory supplies and costs related to compliance with regulatory requirements; and
- other allocated expenses, including expenses for rent and facilities maintenance, and depreciation and amortization.

We expect our research and development expenses to increase substantially in absolute dollars for the foreseeable future as we advance our product candidates into and through preclinical studies and clinical trials and pursue regulatory approval of our product candidates. The process of conducting the necessary clinical research to obtain regulatory approval is costly and time-consuming. The actual probability of success for our product candidates may be affected by a variety of factors including: the safety and efficacy of our product candidates, early clinical data, investment in our clinical programs, the ability of collaborators to successfully develop our licensed product candidates, competition, manufacturing capability and commercial viability. To date, sotrovimab has been granted EUA, temporary authorization or marketing approval (under the brand name, Xevudy®) in more than 40 countries. However, we may never succeed in achieving BLA or other similar approvals for sotrovimab or any of our product candidates. In addition, COVID-19 treatment standards are susceptible to rapid changes in epidemiology and the emergence of new variants, thus, sotrovimab may be rendered inferior or obsolete in the future. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate significant revenue from the commercialization and sale of sotrovimab or any of our product candidates. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. We anticipate that we will make determinations as to which product candidates to pursue and how much funding to direct to each product candidate on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical trials, regulatory developments, our ongoing assessments as to each product candidate’s commercial potential and the impact of public health epidemics, such as the COVID-19 pandemic. In addition, we cannot forecast which product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

Our clinical development costs may vary significantly based on factors such as:

- whether a collaborator is paying for some or all of the costs;
- per patient trial costs;
- the number of trials required for approval;
- the number of sites included in the trials;

- the countries in which the trials are conducted;
- the length of time required to enroll eligible patients;
- the number of patients that participate in the trials;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring requested by regulatory agencies;
- the duration of patient participation in the trials and follow-up;
- the cost and timing of manufacturing our product candidates;
- the phase of development of our product candidates; and
- the efficacy and safety profile of our product candidates.

Selling, General and Administrative

Our selling, general and administrative expenses consist primarily of personnel-related expenses for personnel in executive, finance and other administrative functions, facilities and other allocated expenses, other expenses for outside professional services, including legal, audit and accounting services, insurance costs and change in fair value of certain contingent consideration obligations arising from business acquisitions. Personnel-related expenses consist of salaries, benefits and stock-based compensation.

We expect our selling, general and administrative expenses to increase substantially in absolute dollars in the foreseeable future as we continue to support our continued research and development activities, and commercialization activities for our EUA product or any of our product candidates, if approved, and to grow our business. We also anticipate incurring additional expenses associated with operating as a public company, including increased expenses related to audit, legal, regulatory, and tax-related services associated with maintaining compliance with the rules and regulations of the SEC and standards applicable to companies listed on a national securities exchange, additional insurance expenses, investor relations activities and other administrative and professional services.

Change in Fair Value of Equity Investments

Change in fair value of equity investments consists of the remeasurement of our investment in Brii Bio Parent's ordinary shares based on the quoted market price at each reporting date.

Interest Income

Interest income consists of interest earned on our cash, cash equivalents and investments.

Other Income (Expense), Net

Other income (expense), net consists of gains and losses from foreign currency transactions and the remeasurement of contingent consideration related to our acquisition of TomegaVax, Inc., or TomegaVax.

Provision for Income Taxes

Provision for income taxes consisted primarily of income tax on our domestic and foreign operations.

Results of Operations

Comparison of Years Ended December 31, 2021 and 2020

The following table summarizes our results of operations for the periods presented:

	Year Ended December 31,		
	2021	2020	Change
		(in thousands)	
Revenues:			
Collaboration revenue	$ 917,194	$ —	$ 917,194
Contract revenue	169,874	44,498	125,376
Grant revenue	8,347	9,123	(776)
License revenue from a related party	—	22,747	(22,747)
Total revenues	1,095,415	76,368	1,019,047
Operating expenses:			
Cost of revenue	65,865	—	65,865
Research and development	448,006	302,411	145,595
Selling, general and administrative	160,793	70,937	89,856
Total operating expenses	674,664	373,348	301,316
Income (loss) from operations	420,751	(296,980)	717,731
Other income (expense):			
Change in fair value of equity investments	138,049	—	138,049
Interest income	439	2,836	(2,397)
Other expense, net	(9,437)	(4,467)	(4,970)
Total other income (expense)	129,051	(1,631)	130,682
Income (loss) before provision for income taxes	549,802	(298,611)	848,413
Provision for income taxes	(21,218)	(54)	(21,164)
Net income (loss)	$ 528,584	$ (298,665)	$ 827,249

Revenues

The increase in collaboration revenue for the year ended December 31, 2021 compared to the same period in 2020 was due to our profit-sharing arrangement with GSK for the sale of sotrovimab under our 2020 GSK Agreement, for which there were no comparable revenues recognized in the prior year. Our contractual share of 72.5% from the sales of sotrovimab is applied to the revenue reported in the period by GSK, net of cost of goods sold and allowable expenses from both GSK and us (e.g., medical affairs, selling, and marketing expenses) and adding back our expenses that appear elsewhere in the consolidated statement of operations (e.g., cost of revenue).

The increase in contract revenue for the year ended December 31, 2021 compared to the same period in 2020 was primarily due to $168.3 million related to the license granted to GSK upon execution of the 2021 GSK Agreement, partially offset by $43.3 million related to the license granted to GSK upon execution of our 2020 GSK Agreement in the prior year.

The decrease in grant revenue for the year ended December 31, 2021 compared to the same period in 2020 was primarily due to a decrease of $3.4 million recognized under the amended grant agreement, originally entered into in January 2018, with the Bill & Melinda Gates Foundation relating to our HIV program attributable to a supplemental award received in the first quarter of 2020, partially offset by $2.2 million recognized in the fourth quarter of 2021 under the grant agreement entered into in November 2021 with the Bill & Melinda Gates Foundation.

The decrease in license revenue from a related party for the year ended December 31, 2021 compared to the same period in 2020 was due to the $22.7 million of revenue related to Brii Bio’s exercise of its option to obtain exclusive rights to develop and commercialize compounds arising from VIR-2218 in greater China recognized in the prior year.

Research and Development Expenses

The following table shows the primary components of our research and development expenses for the periods presented:

	Year Ended December 31,		
	2021	2020	Change
	(in thousands)		
Licenses, collaborations and contingent consideration	$ 132,355	$ 110,378	$ 21,977
Personnel	121,779	69,624	52,155
Contract manufacturing	31,613	36,985	(5,372)
Clinical costs	97,505	29,660	67,845
Other	64,754	55,764	8,990
Total research and development expenses	$ 448,006	$ 302,411	$ 145,595

The increase in research and development expenses for the year ended December 31, 2021 compared to the same period in 2020 was primarily due to the following factors:

- clinical costs increased by $67.8 million, which was primarily attributable to activities related to our sotrovimab, VIR-2218 and VIR-3434 clinical trials;
- personnel-related expenses increased by $52.2 million, which was primarily attributable to an increase in our headcount;
- licenses, collaborations and contingent consideration expenses increased by $22.0 million, which was primarily attributable to increases of $58.9 million in costs under our collaboration agreements with GSK, $9.2 million in fair value of the contingent consideration from our acquisition of Humabs Biomed SA, or Humabs, due to the achievement of certain milestones in 2021 as well as changes in assumptions and probabilities used in calculating the fair value of the remaining liability, and $1.0 million in third-party milestone payments, partially offset by decreases of $31.8 million due to achievement of the first development milestone under our amended collaboration agreement with Alnylam Pharmaceuticals, Inc., or the Amended Alnylam Agreement, in the first quarter of 2020, $10.0 million payment to Alnylam resulting from Brii Bio's exercise of its option for VIR-2218 in the second quarter of 2020, and $6.4 million in collaboration costs under our Amended Alnylam Agreement;
- other research and development expenses increased by $9.0 million, which was primarily attributable to increases of $6.4 million in the allocation of facilities and other costs due to an increase in our headcount and higher lease expense, and $2.7 million in sublicense fees due under a license agreement; and
- contract manufacturing expense decreased by $5.4 million, which was primarily attributable to a decrease of $13.5 million in costs related to our COVID-19 product candidates mainly resulting from the completion of clinical manufacturing activities in the third quarter of 2020, partially offset by an increase of $8.2 million related to our HBV drug supply in the fourth quarter of 2021.

Selling, General and Administrative Expenses

The increase in selling, general and administrative expenses for the year ended December 31, 2021 compared to the same period in 2020 was primarily due to increases of $39.4 million in fair value of the contingent consideration related to sales-based milestones from our acquisition of Humabs that were achieved in the fourth quarter of 2021, $39.0 million in personnel-related expenses resulting from additional headcount, and $10.6 million in external consulting services.

Change in Fair Value of Equity Investments

In July 2021, Brii Bio Parent became a publicly traded company on the Stock Exchange of Hong Kong Limited. In connection with the initial public offering, our investment in shares of Brii Bio Parent became a marketable equity investment and subsequently remeasured to fair value at each reporting period. For the year ended December 31, 2021, we recognized an unrealized gain of $138.0 million due to the change in fair value of the equity investment. No comparable amount was incurred for the same period in 2020.

Interest Income

The decrease in interest income was primarily due to lower interest rates and higher amortization of premium on investment balances for the year ended December 31, 2021 compared to the same period in 2020.

Other Expense, Net

The increase in other expenses for the year ended December 31, 2021 compared to the same period in 2020 was primarily related to the change in fair value of the contingent consideration related to our acquisition of TomegaVax.

Provision for Income Taxes

The increase in provision for income taxes for the year ended December 31, 2021 compared to the same period in 2020 was primarily due to taxable income for 2021 attributable to significant collaboration revenue from the sale of sotrovimab as well as unrealized gain from the equity investment in Brii Bio Parent.

Liquidity, Capital Resources and Capital Requirements

Sources of Liquidity

To date, we have financed our operations primarily through sales of our common stock from our initial public offering and follow-on offering; sales of our convertible preferred securities; and payments received under our grant and collaboration agreements. As of December 31, 2021, excluding restricted cash, we had $909.5 million cash, cash equivalents and investments, and after excluding the equity investment in Brii Bio Parent, we had $766.4 million. In addition, as of December 31, 2021, we had a positive working capital balance and an accumulated deficit of $138.6 million. We have also entered into a sales agreement, or the Sales Agreement, with Cowen and Company, LLC, or Cowen, in 2020 pursuant to which we may from time to time offer and sell shares of our common stock for an aggregate offering price of up to $300.0 million, through or to Cowen, acting as sales agent or principal. We will pay Cowen a commission of up to 3.0% of the aggregate gross proceeds from each sale of shares, reimburse legal fees and disbursements and provide Cowen with customary indemnification and contribution rights. As of December 31, 2021, no shares have been issued under the Sales Agreement.

Our primary use of our capital resources is to fund our operating expenses, which consist primarily of expenditures related to identifying, acquiring, developing, manufacturing and in-licensing our technology platforms and product candidates, and conducting preclinical studies and clinical trials, and to a lesser extent, selling, general and administrative expenditures.

Future Funding Requirements

Based upon our current operating plan, we believe that our existing cash, cash equivalents and investments as of December 31, 2021 as noted above will enable us to fund our operations for at least the next 12 months. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional financing to fund our long-term operations sooner than planned. Moreover, it is particularly difficult to estimate with certainty our future revenue and expenses given the dynamic and rapidly evolving nature of our business and the COVID-19 pandemic environment generally. We may also need to raise additional capital to complete the development and commercialization of our product candidates and fund certain of our existing manufacturing and other commitments. We anticipate raising additional capital through the sale of our equity securities, incurring debt, entering into collaboration, licensing or similar arrangements with third parties, or receiving research contributions, grants or other sources of financing to fund our operations. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, licenses and other similar arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us and/or may reduce the value of our common stock. There can be no assurance that sufficient funds will be available to us on attractive terms or at all. If we are unable to obtain additional funding from these or other sources, it may be necessary to significantly reduce our rate of spending through reductions in staff and delaying, scaling back, or stopping certain research and development programs. Insufficient liquidity may also require us to relinquish rights to product candidates at an earlier stage of development or on less favorable terms than we would otherwise choose. In addition, the COVID-19 pandemic

continues to rapidly evolve and has already resulted in a significant disruption of global financial markets. If the disruption persists and deepens, we could experience an inability to access additional capital, which could in the future negatively affect our capacity for certain corporate development transactions or our ability to make other important, opportunistic investments. Market volatility, inflation, interest rate fluctuations and concerns related to the COVID-19 pandemic may have a significant impact on the availability of funding sources and the terms on which any funding may be available.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect and we may use all of our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development and commercialization of biotechnology products, we are unable to estimate the exact amount of our operating capital requirements. See the section titled "Risk Factors—Risks Related to Our Financial Position and Capital Needs" for a description of certain risks that will affect our future capital requirements.

We have various operating lease arrangements for office and laboratory spaces located in California, Oregon, Missouri, and Switzerland with contractual lease periods expiring between 2022 and 2033. As of December 31, 2021, we expect to make total lease payments of $185.4 million through 2033.

To date, we have entered into collaboration, license and acquisition agreements where the payment obligations are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones, and we are required to make royalty payments in connection with the sale of products developed under those agreements. For additional information regarding these agreements, including our payment obligations thereunder, see the sections titled "Business—Our Collaboration, License and Grant Agreements" and "Business—Our Acquisition Agreements," as well as Note 4—Acquisitions and Note 7—Collaboration and License Agreements to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K. For information related to our future commitments under our facilities and manufacturing agreements, see Note 9—Commitments and Contingencies to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (47,589)	$ (190,941)
Investing activities	(140,814)	(9,862)
Financing activities	100,331	529,474
Net (decrease) increase in cash and cash equivalents and restricted cash and cash equivalents	$ (88,072)	$ 328,671

Operating Activities

During the year ended December 31, 2021, net cash used in operating activities was $47.6 million. This consisted primarily of net income of $528.6 million and non-cash charges of $203.3 million, offset by an unrealized gain of $138.0 million on our equity investment, payment of contingent consideration of $8.1 million for the achievement of a milestone related to our TomegaVax acquisition, a gain of $4.8 million from a sublease termination, and an increase in our net operating assets of $628.4 million. The change in our net operating assets of $628.4 million was primarily due to an increase in receivable from collaboration by $773.1 million resulting from our profit share from the sale of sotrovimab, and an increase in prepaid expenses and other current assets of $3.7 million, partially offset by an increase in deferred revenue of $92.0 million driven by the upfront fee received under the 2021 GSK Agreement, and an increase in accrued liabilities and other long-term liabilities of $58.5 million due to timing of payments. The non-cash charges of $203.3 million primarily consisted of $91.8 million for revaluation of contingent consideration, $83.8 million for stock-based compensation expense, $15.2 million for deferred income tax expense, $6.2 million for noncash lease expense, and $5.3 million for depreciation and amortization.

During the year ended December 31, 2020, net cash used in operating activities was $190.9 million. This consisted primarily of a net loss of $298.7 million and payments on contingent consideration of $15.8 million related to the milestones achieved related to our Humabs acquisition, partially offset by a decrease in our net operating assets of $29.5 million and non-cash charges of $94.0 million. The change in our net operating assets of $29.5 million was primarily due to an increase in accrued liabilities and other long-term liabilities by $46.6 million, which was partially offset by a decrease in deferred revenue of $7.0 million related to revenue recognized from the Bill & Melinda Gates Foundation grants, a decrease in operating lease liabilities of $3.7 million due to lease payments, and an increase of $4.5 million in prepaid expenses and other current assets primarily related to prepayment of clinical trial cost for our research and development activities. The non-cash charges of $94.0 million primarily consisted of $38.4 million for revaluation of contingent consideration related to our Humabs acquisition, $16.8 million for the change in fair value of the derivative liability under the Alnylam Agreement, $27.6 million for stock-based compensation expense, and $4.4 million for depreciation and amortization.

Investing Activities

During the year ended December 31, 2021, net cash used in investing activities was $140.8 million. This consisted primarily of purchases of investments of $420.2 million and property and equipment of $21.8 million, partially offset by $301.2 million in proceeds received from investments that matured during the period.

During the year ended December 31, 2020, net cash used in investing activities was $9.9 million. This consisted primarily of purchases of investments of $403.8 million and purchases of property and equipment of $6.5 million, partially offset by $400.3 million in proceeds received from investments which matured during the period.

Financing Activities

During the year ended December 31, 2021, net cash provided by financing activities was $100.3 million. This consisted primarily of proceeds received from the issuance of our common stock to Glaxo Group Limited (an affiliate of GSK) of $85.2 million in March 2021, from exercises of stock options of $13.1 million, and from issuance of common stock under our employee stock purchase plan of $2.3 million.

During the year ended December 31, 2020, net cash provided by financing activities was $529.5 million. This consisted primarily of proceeds received from the issuance of our common stock to GSK of $206.7 million in April 2020, the issuance of our common stock related to our follow-on offering of $323.2 million and from exercises of stock options of $4.1 million, partially offset by payments of contingent consideration related to our Humabs acquisition of $4.2 million.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of our consolidated financial statements requires us to make assumptions and estimates about future events and apply judgments that affect the reported amounts of assets, liabilities, revenue and expenses and the related disclosures. We base our estimates on historical experience and other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates. The critical accounting policies, estimates and judgments that we believe to have the most significant impacts to our consolidated financial statements are described below. For more detail on our critical accounting policies, refer to Note 2—Summary of Significant Accounting Policies to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

Revenue Recognition

Collaboration, License and Contract Revenue

Under Accounting Standards Codification, or ASC, Topic 606, Revenue from Contracts with Customers, or ASC 606, we recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods and services. To determine revenue recognition for arrangements within the scope of ASC 606, we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when or as we satisfy a performance obligation.

For collaborative arrangements that fall within the scope of ASC 808, Collaborative Arrangements, or ASC 808, we first determine which elements of the collaboration are deemed to be a performance obligation with a customer within the scope of ASC 606. For elements of collaboration arrangements that are accounted for pursuant to ASC 808 and are not

subject to the guidance in ASC 606, we apply the revenue recognition model under ASC 606 or other guidance, as deemed appropriate. When we are considered an agent in elements of collaboration arrangements within the scope of ASC 808, we record our share of collaboration revenue in the period in which such sales occur. We are considered an agent when the collaboration partner controls the product before transfer to the customers and has the ability to direct the use of and obtain substantially all of the remaining benefits from the product. In these instances, collaboration revenue is based upon the revenue reported by our collaboration partners, net of cost of goods sold and allowable expenses (e.g. medical affairs, selling and marketing expenses) in the period. In order to record collaboration revenue, we utilize certain information from our collaboration partner, including revenue from the sale of the product, and costs incurred for development and sales activities. For the periods covered in the financial statements presented, there have been no material changes to prior period estimates of revenues and expenses.

We have entered into a number of license and collaboration agreements that fall within the scope of ASC 606. We evaluate the promised goods or services in these agreements to determine which ones represent distinct performance obligations. These agreements may include the following types of promised goods or services: (i) grants of licenses, (ii) performance of research and development services, and (iii) participation on joint research and/or development committees. They also may include options to obtain licenses to our intellectual property.

Prior to recognizing revenue, we make estimates of the transaction price, including variable consideration that is subject to a constraint. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur and when the uncertainty associated with the variable consideration is subsequently resolved. These estimates are re-assessed each reporting period as required. These agreements may include the following types of consideration: non-refundable upfront payments, reimbursement for research services, research, development or regulatory milestone payments, profit-sharing arrangements, and royalty and commercial sales milestone payments.

If there are multiple distinct performance obligations, we allocate the transaction price to each distinct performance obligation based on their estimated standalone selling prices, or SSP. We estimate the SSP for each distinct performance obligation by considering information such as market conditions, entity-specific factors, and information about our customer that is reasonably available to us. We consider estimation approaches that allow us to maximize the use of observable inputs. These estimation approaches may include the adjusted market assessment approach, the expected cost plus a margin approach or the residual approach. We also consider whether to use a different estimation approach or a combination of approaches to estimate the SSP for each distinct performance obligation. Developing various assumptions, including treatable patient population, expected market share, probability of success and product profitability, and discount rate based on weighted-average cost of capital, to determine the estimated SSP of a distinct performance obligation requires significant judgment. Accordingly, these assumptions are subject to uncertainty, and changing the methodology and/or assumptions could materially impact the estimated SSP for distinct performance obligations, and as a result, the amount and/or timing of revenue recognition.

For performance obligations satisfied over time, we estimate the efforts needed to complete the performance obligation and recognize revenue by measuring the progress towards complete satisfaction of the performance obligation using an input measure. For arrangements that include sales-based royalties, including commercial milestone payments based on pre-specified level of sales, we recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). Achievement of these royalties and commercial milestones may solely depend upon the performance of the licensee.

Management may be required to exercise considerable judgment in estimating revenue to be recognized. Judgment is required in identifying performance obligations, estimating the transaction price, estimating the SSP of identified performance obligations, and estimating the progress towards satisfaction of performance obligations.

Contingent Consideration and Embedded Derivatives

Contingent consideration related to business combinations and obligations required to be accounted for as embedded derivative financial instruments under Topic ASC 815, Derivatives and Hedging, are considered to be Level 3 instruments that are initially measured at their estimated fair values on the transaction date and subsequently remeasured with changes recorded in the consolidated statement of operations each subsequent reporting period.

The estimated fair value of the contingent consideration related to the Humabs acquisition was determined by calculating the probability-weighted clinical and regulatory milestone payments based on the assessment of the likelihood

and estimated timing that certain milestones would be achieved, as well as the use of Monte Carlo simulation model that includes significant estimates and assumptions pertaining to commercialization events and sales targets. The most significant unobservable inputs are the probabilities of achieving clinical and regulatory approval of the development projects and the subsequent commercial success and discount rates.

The estimated fair value of the contingent consideration related to our acquisition of TomegaVax was determined based on a Monte Carlo simulation model that includes significant estimates and assumptions pertaining to probability and timing to achieve the required share price of our common stock, expected volatility and discount rate. Although the TomegaVax acquisition was accounted for as an asset acquisition, such contingent consideration met the definition of an embedded derivative financial instrument.

For the periods covered in the financial statements presented, there have been no material changes to prior period estimates of the fair value of our contingent consideration liability.

Recent Accounting Pronouncements Not Yet Adopted

See Note 2—Summary of Significant Accounting Policies to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for information about recent accounting pronouncements, the timing of their adoption, and our assessment, to the extent we have made one yet, of their potential impact on our financial condition or results of operations.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business. These risks primarily relate to interest rate and market price sensitivities.

Interest Rate Risk

We had cash, cash equivalents and restricted cash and cash equivalents of $363.4 million as of December 31, 2021, which primarily consisted of money market funds. We also had short- and long-term investments of $418.6 million as of December 31, 2021. The primary objective of our investment activities is to preserve capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. Because our investments are primarily short-term in duration and our holdings in U.S. government treasury bonds mature prior to our expected need for liquidity, we believe that our exposure to interest rate risk is not significant, and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We had no debt outstanding as of December 31, 2021.

Foreign Currency

The functional currency of our foreign subsidiaries is the U.S. dollar. Monetary assets and liabilities of our foreign subsidiaries are translated into U.S. dollars at period-end exchange rates and non-monetary assets and liabilities are translated to U.S. dollars using historical exchange rates. Revenue and expenses are translated at average rates throughout the respective periods. As of the date of this Annual Report on Form 10-K, we are exposed to foreign currency risk primarily related to the operations of our Swiss and Australian subsidiaries and consequently the Swiss Franc and Australian dollar. Transaction gains and losses are included in other income (expenses), net on the consolidated statements of operations and were not material for the years ended December 31, 2021, 2020 and 2019.

Equity Investment Risk

We hold ordinary shares of Brii Bio Parent, which we acquired in connection with our collaboration, option and license agreement. These equity securities are measured at fair value with any changes in fair value recognized in our consolidated statements of operations. The fair value of these equity securities was approximately $143.1 million as of December 31, 2021. Changes in the fair value of these equity securities are impacted by the volatility of the stock market and changes in general economic conditions, among other factors. A hypothetical 10% increase or decrease in the stock prices of these equity securities would increase or decrease their fair value as of December 31, 2021 by approximately $14.3 million.

Item 8. Financial Statements and Supplementary Data.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
of Vir Biotechnology, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vir Biotechnology, Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) and our report dated February 28, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Initial accounting for Stock Purchase Agreement with Glaxo Group Limited and Preliminary and Definitive Collaboration Agreement with Glaxo Wellcome UK Limited (collectively "2021 Expanded GSK Collaboration")

Description of the Matter	As discussed in Note 7 to the consolidated financial statements, the Company entered into the 2021 Expanded GSK Collaboration. Auditing management's initial application of the relevant US GAAP guidance under Accounting Standards Codification (ASC) 606, *Revenue From Contracts With Customers* and ASC 808, *Collaborative Arrangements*, related to the 2021 Expanded GSK Collaboration, was especially challenging due to the complex nature of its terms and conditions and the significant judgment required in estimating the standalone selling price for the identified performance obligations. In particular, the determination of estimated standalone selling price was based on various assumptions, including treatable patient population, expected market share, probability of success and product profitability.
How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's review of the terms and conditions of the 2021 Expanded GSK Collaboration and application of the appropriate accounting guidance. We also tested controls over management's process to estimate the standalone selling price for the distinct performance obligations. For example, we tested controls over management's review of the significant assumptions used to develop the standalone selling price estimates. We also tested controls to validate that the data used in the standalone selling price estimates were complete and accurate. To test the Company's application of the accounting guidance to the 2021 Expanded GSK Collaboration, we performed audit procedures that included, among others, reviewing the related contracts, obtaining direct confirmation of contract terms and conditions with GSK, assessing management's application of the appropriate accounting guidance, evaluating the Company's use of appropriate estimation methodologies with the assistance from a valuation specialist, evaluating sensitivity analyses to determine which assumptions had the greatest impact on the overall standalone selling price allocation, and testing the completeness and accuracy of the underlying data. Our procedures over the most significant assumptions included comparing assumptions to current industry, market, and economic trends. For example, we evaluated the probability of success rates used by considering the phase of development for the related programs at the transaction date and compared those rates to published industry benchmarks.

/s/ Ernst & Young, LLP

We have served as the Company's auditor since 2017.

Redwood City, California
February 28, 2022

VIR BIOTECHNOLOGY, INC.

Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31,	
	2021	**2020**
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 347,815	$ 436,575
Short-term investments	217,182	300,286
Restricted cash and cash equivalents, current	8,594	7,993
Receivable from collaboration	773,079	—
Equity investments	143,148	—
Prepaid expenses and other current assets	73,003	27,511
Total current assets	1,562,821	772,365
Intangible assets, net	33,287	33,820
Goodwill	16,937	16,937
Property and equipment, net	42,834	17,946
Operating right-of-use assets	87,220	61,947
Restricted cash and cash equivalents, noncurrent	7,006	6,919
Long-term investments	201,388	—
Other assets	2,775	8,827
TOTAL ASSETS	$ 1,954,268	$ 918,761
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 6,521	$ 5,077
Accrued and other liabilities	236,512	76,936
Deferred revenue, current portion	98,209	6,451
Contingent consideration, current portion	—	10,600
Total current liabilities	341,242	99,064
Deferred revenue, noncurrent	3,815	3,815
Operating lease liabilities, noncurrent	133,561	66,556
Contingent consideration, noncurrent	22,822	25,374
Deferred tax liability	18,439	3,253
Other long-term liabilities	2,540	3,847
TOTAL LIABILITIES	522,419	201,909
Commitments and contingencies (Note 9)		
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized as of December 31, 2021 and 2020, respectively; no shares issued and outstanding as of December 31, 2021 and 2020	—	—
Common stock, $0.0001 par value; 300,000,000 shares authorized as of December 31, 2021 and 2020, respectively; 131,161,404 and 127,416,740 shares issued and outstanding as of December 31, 2021 and 2020, respectively	13	13
Additional paid-in capital	1,571,535	1,385,301
Accumulated other comprehensive loss	(1,099)	(1,278)
Accumulated deficit	(138,600)	(667,184)
TOTAL STOCKHOLDERS' EQUITY	1,431,849	716,852
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 1,954,268	$ 918,761

The accompanying notes are an integral part of these consolidated financial statements.

VIR BIOTECHNOLOGY, INC.

Consolidated Statements of Operations
(in thousands, except share and per share data)

	Year Ended December 31,		
	2021	**2020**	**2019**
Revenues:			
Collaboration revenue	$ 917,194	$ —	$ —
Contract revenue	169,874	44,498	711
Grant revenue	8,347	9,123	7,380
License revenue from a related party	—	22,747	—
Total revenues	1,095,415	76,368	8,091
Operating expenses:			
Cost of revenue	65,865	—	—
Research and development	448,006	302,411	148,472
Selling, general and administrative	160,793	70,937	37,598
Total operating expenses	674,664	373,348	186,070
Income (loss) from operations	420,751	(296,980)	(177,979)
Other income (expense):			
Change in fair value of equity investments	138,049	—	—
Interest income	439	2,836	8,511
Other expense, net	(9,437)	(4,467)	(5,061)
Total other income (expense)	129,051	(1,631)	3,450
Income (loss) before provision for income taxes	549,802	(298,611)	(174,529)
Provision for income taxes	(21,218)	(54)	(154)
Net income (loss)	$ 528,584	$ (298,665)	$ (174,683)
Net income (loss) per share, basic	$ 4.07	$ (2.51)	$ (5.76)
Net income (loss) per share, diluted	$ 3.96	$ (2.51)	$ (5.76)
Weighted-average shares outstanding, basic	129,884,967	119,159,424	30,349,920
Weighted-average shares outstanding, diluted	133,437,126	119,159,424	30,349,920

The accompanying notes are an integral part of these consolidated financial statements.

VIR BIOTECHNOLOGY, INC.

Consolidated Statements of Comprehensive Income (Loss)
(in thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
Net income (loss)	$ 528,584	$ (298,665)	$ (174,683)
Other comprehensive income (loss):			
Unrealized (losses) gains on investments	(957)	(50)	149
Amortization of actuarial loss	55	23	—
Adjustment to projected benefit obligations, net of tax	1,081	(650)	(736)
Other comprehensive income (loss)	179	(677)	(587)
Comprehensive income (loss)	$ 528,763	$ (299,342)	$ (175,270)

The accompanying notes are an integral part of these consolidated financial statements.

VIR BIOTECHNOLOGY, INC.

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(in thousands, except share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)
Balance at December 31, 2018	69,910,520	$ 309,137	8,858,799	$ 1	$ 14,672	$ (14)	$ (193,836)	$ (179,177)
Issuance of Series B convertible preferred stock, net of issuance costs of $165	18,202,213	327,475	—	—	—	—	—	—
Conversion of convertible preferred stock into common stock	(88,112,733)	(636,612)	88,112,733	9	636,603	—	—	636,612
Issuance of common stock in connection with initial public offering, net of offering costs of $16,446	—	—	7,142,858	1	126,410	—	—	126,411
Reclassification of warrant liability to additional paid-in capital	—	—	—	—	3,073	—	—	3,073
Settlement of fractional shares from reverse stock split	—	—	—	—	(3)	—	—	(3)
Issuance of common stock in connection with a license agreement	—	—	38,888	—	617	—	—	617
Repayment of promissory notes, net of unvested shares	—	—	1,390,925	—	1,355	—	—	1,355
Vesting of restricted common stock	—	—	1,348,297	—	476	—	—	476
Exercise of stock options			756,425	—	1,129	—	—	1,129
Stock-based compensation	—	—	—	—	8,719	—	—	8,719
Other comprehensive loss	—	—	—	—	—	(587)	—	(587)
Net loss	—	—	—	—	—	—	(174,683)	(174,683)
Balance at December 31, 2019	—	—	107,648,925	11	793,051	(601)	(368,519)	423,942
Reclassification of derivative liability to addition paid-in-capital	—	—	—	—	29,245	—	—	29,245
Issuance of common stock in connection with the achievement of a milestone	—	—	1,111,111	—	—	—	—	—
Issuance of common stock in connection with a collaboration agreement	—	—	6,626,027	1	206,698	—	—	206,699
Issuance of common stock for cashless exercise of warrants	—	—	211,774	—	—	—	—	—
Issuance of common stock in connection with a follow-on offering, net of issuance costs of $21,786	—	—	8,214,285	1	323,213	—	—	323,214
Vesting of restricted common stock	—	—	1,986,250	—	1,435	—	—	1,435
Exercise of stock options	—	—	1,618,368	—	4,059	—	—	4,059
Stock-based compensation	—	—	—	—	27,600	—	—	27,600
Other comprehensive loss	—	—	—	—	—	(677)	—	(677)
Net loss	—	—	—	—	—	—	(298,665)	(298,665)
Balance at December 31, 2020	—	—	127,416,740	13	1,385,301	(1,278)	(667,184)	716,852
Issuance of common stock in connection with a collaboration agreement	—	—	1,924,927	—	85,213	—	—	85,213
Issuance of common stock to settle a contingent consideration	—	—	42,737	—	1,860	—	—	1,860
Vesting of restricted common stock	—	—	89,261	—	—	—	—	—
Exercise of stock options	—	—	1,622,718	—	13,077	—	—	13,077
Issuance of common stock under employee stock purchase plan			65,021	—	2,300	—	—	2,300
Stock-based compensation	—	—	—	—	83,784	—	—	83,784
Other comprehensive income	—	—	—	—	—	179	—	179
Net income	—	—	—	—	—	—	528,584	528,584
Balance at December 31, 2021	—	$ —	131,161,404	$ 13	$ 1,571,535	$ (1,099)	$ (138,600)	$ 1,431,849

The accompanying notes are an integral part of these consolidated financial statements.

VIR BIOTECHNOLOGY, INC.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2021	**2020**	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	$ 528,584	$ (298,665)	$ (174,683)
Adjustments to reconcile net income (loss) to net cash used in operating activities:			
Depreciation and amortization	5,278	4,400	3,294
Amortization of intangible assets	533	1,042	1,223
Impairment of intangible assets	—	832	—
(Accretion of discounts) amortization of premiums on investments, net	(244)	1,548	(179)
Noncash lease expense	6,172	3,371	—
Change in fair value of equity investments	(138,049)	—	—
Change in estimated fair value of contingent consideration	91,848	38,394	8,330
Payment of contingent consideration in excess of acquisition date fair value	(8,140)	(15,752)	—
Initial fair value of derivative liability	—	—	13,599
Change in estimated fair value of derivative liability	—	16,796	(1,150)
Change in estimated fair value of convertible preferred stock warrant liability	—	—	2,049
Stock-based compensation	83,784	27,600	8,719
Change in deferred income taxes	15,186	(52)	—
Gain from a sublease termination	(4,844)	—	—
Common stock issued in connection with license agreement	—	—	617
Other	697	23	345
Changes in operating assets and liabilities:			
Receivable from collaboration	(773,079)	—	—
Prepaid expenses and other current assets	(3,665)	(4,475)	(4,619)
Other assets	(1,483)	(1,100)	(1,881)
Accounts payable	(171)	(790)	964
Accrued liabilities and other long-term liabilities	58,498	46,614	10,211
Operating lease liabilities	(535)	(3,684)	—
Deferred revenue	92,041	(7,043)	3,529
Net cash used in operating activities	(47,589)	(190,941)	(129,632)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchases of property and equipment	(21,817)	(6,549)	(8,940)
Purchases of investments	(420,240)	(403,841)	(643,898)
Maturities of investments	301,243	400,348	396,680
Proceeds from disposal of an asset held for sale	—	180	—
Net cash used in investing activities	(140,814)	(9,862)	(256,158)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of common stock, net of issuance costs	—	323,214	126,411
Proceeds from issuance of common stock in connection with a collaboration agreement	85,213	206,699	—
Proceeds from issuance of convertible preferred stock, net of issuance costs	—	—	317,335
Proceeds received from financing lease obligation	—	—	1,202
Payment of contingent consideration	—	(4,248)	—
Payment of principal on financing lease obligations	(259)	(250)	(95)
Proceeds from repayment of promissory notes	—	—	3,265
Proceeds from exercise of stock options	13,077	4,059	1,129
Proceeds from issuance of common stock under the employee stock purchase plan	2,300	—	—
Cash paid in lieu of fractional shares related to reverse stock split	—	—	(3)
Net cash provided by financing activities	100,331	529,474	449,244
Net (decrease) increase in cash, cash equivalents and restricted cash and cash equivalents	(88,072)	328,671	63,454
Cash, cash equivalents and restricted cash and cash equivalents at beginning of period	451,487	122,816	59,362
Cash, cash equivalents and restricted cash and cash equivalents at end of period	$ 363,415	$ 451,487	$ 122,816
NONCASH INVESTING AND FINANCING ACTIVITIES:			
Property and equipment purchases included in accounts payable and accrued liabilities	$ 8,731	$ 382	$ 892
Common stock issued for payment of contingent consideration	$ 1,860	$ —	$ —
Conversion of preferred stock into common stock upon completion of initial public offering	$ —	$ —	$ 636,612
Operating lease liabilities obtained in exchange of right-of-use asset	$ 77,187	$ 48,495	$ —
Advanced proceeds applied to convertible preferred stock issuance	$ —	$ —	$ 10,140
Reclassification of derivative liability to additional paid-in capital	$ —	$ 29,245	$ —
Reclassification of preferred stock warrant liability to additional paid-in capital	$ —	$ —	$ 3,073
RECONCILIATION OF CASH, CASH EQUIVALENTS AND RESTRICTED CASH TO THE CONSOLIDATED BALANCE SHEETS:			
Cash and cash equivalents	$ 347,815	$ 436,575	$ 109,335
Restricted cash and cash equivalents, current	8,594	7,993	6,181
Restricted cash and cash equivalents, noncurrent	7,006	6,919	7,300
Total cash, cash equivalents and restricted cash	$ 363,415	$ 451,487	$ 122,816

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization

Vir Biotechnology, Inc. (“Vir” or the “Company”) is a commercial-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. Its current pipeline consists of sotrovimab (previously VIR-7831; and where marketing authorization has been granted, marketed under the brand name Xevudy®) and other product candidates targeting coronavirus disease 2019 (“COVID-19”), hepatitis B virus (“HBV”), influenza A virus, and human immunodeficiency virus (“HIV”). Vir has assembled four technology platforms that are designed to stimulate and enhance the immune system by exploiting critical observations of natural immune processes.

In May 2021, the U.S. Food and Drug Administration (the "FDA") granted an Emergency Use Authorization (“EUA”) for sotrovimab for the early treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and at high risk for progression to severe COVID-19, including hospitalization or death. The Company also received a positive scientific opinion from the Committee for Human Medicinal Products in the European Union (“EU”) for sotrovimab. In December 2021, the European Commission granted marketing authorization to Xevudy® (sotrovimab) in the EU for the treatment of adults and adolescents at increased risk of progressing to severe COVID-19.

Initial Public Offering

On October 10, 2019, the Company completed its initial public offering (“IPO”) of its common stock. In connection with its IPO, the Company issued and sold 7,142,858 shares of its common stock at an initial offering price of $20.00 per share. As a result of the IPO, the Company received approximately $126.4 million in net proceeds, after deducting underwriting discounts, commissions and offering expenses. At the closing of the IPO, 88,112,733 shares of outstanding convertible preferred stock were automatically converted into 88,112,733 shares of common stock and a warrant to purchase 244,444 shares of convertible preferred stock was converted into a warrant to purchase 244,444 shares of common stock.

Follow-On Offering

On July 10, 2020, the Company issued and sold 8,214,285 shares of the Company’s common stock pursuant to a registration statement on Form S-1 (File No. 333-239689) and a registration statement on Form S-1 filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the “Securities Act”) (File No. 333-239747) (collectively, the “Registration Statements”). The Registration Statements became effective on July 7, 2020. The price of the shares sold in the follow-on offering was $42.00 per share and the Company received total gross proceeds from the offering of approximately $345.0 million. After deducting underwriting discounts and commissions of approximately $20.7 million and offering expenses of approximately $1.1 million, the net proceeds were approximately $323.2 million.

Sales Agreement

In November 2020, the Company entered into a sales agreement (the “Sales Agreement”) with Cowen and Company, LLC (“Cowen”), under which the Company may from time to time offer and sell shares of its common stock for an aggregate offering price of up to $300.0 million, through or to Cowen, acting as sales agent or principal. The shares will be offered and sold under the Company’s shelf registration statement on Form S-3 (the “S-3 Registration Statement”) and a related prospectus filed with the Securities and Exchange Commission on November 10, 2020. The Company will pay Cowen a commission of up to 3.0% of the aggregate gross proceeds from each sale of shares, reimburse legal fees and disbursements and provide Cowen with customary indemnification and contribution rights. As of December 31, 2021, no shares have been issued under the Sales Agreement.

Need for Additional Capital

Although the Company recorded net income for the year ended December 31, 2021, it has otherwise incurred accumulated net losses since inception. The Company expects its earnings to be volatile and may continue to incur net losses over the next several years. As of December 31, 2021, the Company had an accumulated deficit of $138.6 million. Management expects to incur additional losses in the future to conduct research and development and recognizes the need to raise additional capital to fully implement its business plan. The Company had, excluding restricted cash, $909.5 million of cash, cash equivalents, and investments as of December 31, 2021, and after excluding the equity investment in Brii Biosciences Limited ("Brii Bio Parent"), the Company had $766.4 million. Based on the Company's current operating plan, management believes that the $766.4 million as of December 31, 2021 will be sufficient to fund its operations through at least the next 12 months from the issuance date of these consolidated financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company's consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") and include all adjustments necessary for the fair presentation of the Company's financial position for the periods presented. The consolidated financial statements include the accounts of Vir and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated upon consolidation.

Foreign Currency

The functional currency of the Company's foreign subsidiaries is the U.S. dollar. Monetary assets and liabilities of foreign subsidiaries are translated into U.S. dollars at period-end exchange rates and non-monetary assets and liabilities are translated to U.S. dollars using historical exchange rates. Revenue and expenses are translated at average rates throughout the respective periods. Transaction gains and losses are included in other income (expense), net on the consolidated statements of operations, and were immaterial for the years ended December 31, 2021, 2020 and 2019.

Use of Estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expense during the reporting periods. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from those estimates.

Segments

The Company operates as one reportable segment. The Company's chief operating decision maker, its Chief Executive Officer, manages the Company's operations on a consolidated basis for purposes of allocating resources.

Concentration of Credit Risk, Credit Loss and Other Risks and Uncertainties

The Company has implemented a number of plans and policies designed to address and mitigate the impact of the ongoing COVID-19 pandemic on its business. The Company anticipates that the COVID-19 pandemic will continue to have an impact on the clinical development timelines for some of its clinical programs. The extent to which the COVID-19 pandemic impacts the Company's business, clinical development and regulatory efforts, corporate development objectives and the value of and market for its common stock, will depend on future developments that are highly uncertain and cannot be predicted with confidence at this time, such as the ultimate duration of the pandemic, travel restrictions, quarantines, social distancing and business closure requirements in the United States, Europe and other countries, and the effectiveness of actions taken globally to contain and treat the disease.

Although the Company received EUA, temporary authorization or marketing approval for sotrovimab (under the brand name Xevudy®), it is still subject to a number of other challenges and risks similar to other biopharmaceutical companies in the early stage, including, but not limited to, the need to obtain adequate additional funding, possible failure of preclinical testing or clinical trials, the need to obtain marketing approval for its other product candidates, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of sotrovimab and other product candidates and protection of proprietary technology. If the Company does not successfully obtain regulatory approval, commercialize or partner any of its other product candidates, it will be unable to generate significant revenue from product sales or maintain profitability. In addition, to the extent the ongoing COVID-19 pandemic adversely affects the Company's business and results of operations, it may also have the effect of heightening many of the other risks and uncertainties discussed above.

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash, cash equivalents and investments. Cash and cash equivalents are deposited in checking and sweep accounts at a financial institution. Such deposits may, at times, exceed federally insured limits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

The Company's investment policy limits investments to certain types of securities issued by the U.S. government, its agencies and institutions with investment-grade credit ratings and places restrictions on maturities and concentration by type and issuer. The Company is exposed to credit risk in the event of a default by the financial institutions holding its cash, cash equivalents and investments, and issuers of the investments to the extent recorded on the consolidated balance sheets. As of December 31, 2021 and 2020, the Company has no off-balance sheet concentrations of credit risk.

The Company is exposed to credit losses primarily through receivables from customers and collaborators and through its available-for-sale debt securities. The Company's expected loss allowance methodology for the receivables is developed using historical collection experience, current and future economic market conditions, a review of the current aging status and financial condition of the entities. Specific allowance amounts are established to record the appropriate allowance for customers that have a higher probability of default. Balances are written off when determined to be uncollectible. The Company's expected loss allowance methodology for the debt securities is developed by reviewing the extent of the unrealized loss, the size, term, geographical location, and industry of the issuer, the issuers' credit ratings and any changes in those ratings, as well as reviewing current and future economic market conditions and the issuers' current status and financial condition. The Company considered the current and expected future economic and market conditions surrounding the COVID-19 pandemic and determined that the estimate of credit losses was not significantly impacted. There was no allowance for losses on available-for-sale debt securities attributable to credit risk for the years ended December 31, 2021 and 2020.

Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents, which consist of amounts invested in money market funds, are stated at fair value.

Investments

Investments include available-for-sale debt securities and equity investments, which are carried at estimated fair value.

Available-for-Sale Debt Securities

The Company's valuations of marketable securities are generally derived from independent pricing services based on quoted prices in active markets for similar securities at period end. Generally, investments with original maturities beyond three months at the date of purchase and which mature at, or less than 12 months from, the consolidated balance sheet date are considered short-term investments, with all others considered to be long-term investments. Unrealized gains and losses deemed temporary in nature are reported as a component of accumulated comprehensive income (loss). The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income on the consolidated statements of operations. The cost of securities sold is based on the specific identification method.

Equity Investments

Under Accounting Standards Update ("ASU") No. 2016-01, Financial Instruments - Overall: Recognition and Measurement of Financial Assets and Financial Liabilities, the Company measures its investment in equity securities at fair value at each reporting date based on the market price at period end if it has a readily determinable fair value. Otherwise, the investments in equity securities are measured at cost less impairment, adjusted for observable price changes for identical or similar investments of the same issuer unless the Company has significant influence or control over the investee. Changes in fair value resulting from observable price changes are presented as change in fair value of equity investments and changes in fair value resulting from foreign currency translation are included in other income (expense), net on the consolidated statements of operations.

Restricted Cash and Cash Equivalents

Restricted cash and cash equivalents represent money market funds to secure standby letters of credit and security deposits with financial institutions, both under office and laboratory space lease agreements. Additionally, funds received from certain grants are restricted as to their use and are therefore classified as restricted cash and cash equivalents.

Property and Equipment, Net

Property and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective assets, generally three to five years. Leasehold improvements are amortized over the lesser of their useful lives or the remaining life of the lease. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is reflected in operations in the period realized. Maintenance and repairs are charged to operations as incurred.

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability is measured by comparing the carrying amount to the future net undiscounted cash flows which the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the projected discounted future net cash flows arising from the asset. No material impairment losses have been incurred to date.

Acquired Intangible Assets

The Company’s intangible assets were acquired via business combinations or asset acquisitions. Indefinite-lived intangible assets represent the estimated fair value assigned to in-process research and development (“IPR&D”) acquired in a business combination. The Company reviews indefinite-lived intangible assets for impairment at least annually or more frequently if events or changes in circumstances indicate that the carrying value of the assets might not be recoverable. If the carrying value of an indefinite-lived intangible asset exceeds its fair value, then it is written down to its adjusted fair value. As of December 31, 2021, there have been no such impairments. For IPR&D, if a product candidate derived from the indefinite-lived intangible asset is developed and commercialized, the useful life will be determined, and the carrying value will be amortized prospectively over that estimated useful life. Alternatively, if a product candidate is abandoned, the carrying value of the intangible asset will be charged to research and development expenses. IPR&D assets acquired as part of an asset acquisition are recorded at cost and expensed immediately if they have no alternative future uses.

Finite-lived intangible assets acquired are initially recognized at their fair value at the acquisition date. Amortization is computed using the straight-line method over the estimated useful lives of the respective finite-lived intangible assets, generally seven to 15 years. Finite-lived intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Goodwill

Goodwill represents the excess of the purchase price over the estimated fair value of the net tangible and intangible assets acquired in a business combination. The Company tests goodwill for impairment at least annually or more frequently if events or changes in circumstances indicate that this asset may be impaired.

Revenue Recognition

Collaboration, License and Contract Revenue

Under Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"), the Company recognizes revenue when the Company's customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods and services. To determine revenue recognition for arrangements within the scope of ASC 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when or as the Company satisfies a performance obligation.

For collaborative arrangements that fall within the scope of ASC 808, Collaborative Arrangements ("ASC 808"), the Company first determines which elements of the collaboration are deemed to be a performance obligation with a customer within the scope of ASC 606. For elements of collaboration arrangements that are accounted for pursuant to ASC 808 and are not subject to the guidance in ASC 606, the Company applies the revenue recognition model under ASC 606 or other guidance, as deemed appropriate. When the Company is considered an agent in elements of collaboration arrangements within the scope of ASC 808, it records its share of collaboration revenue in the period in which such sales occur. The Company is considered an agent when the collaboration partner controls the product before transfer to the customers and has the ability to direct the use of and obtain substantially all of the remaining benefits from the product. In these instances, collaboration revenue is based upon the revenue reported by the Company's collaboration partners, net of cost of goods sold and allowable expenses (e.g. medical affairs, selling and marketing expenses) in the period. In order to record collaboration revenue, the Company utilizes certain information from its collaboration partner, including revenue from the sale of the product, and costs incurred for development and sales activities. For the periods covered in the financial statements presented, there have been no material changes to prior period estimates of revenues and expenses.

The Company has entered into a number of license and collaboration agreements that fall within the scope of ASC 606. The Company evaluates the promised goods or services in these agreements to determine which ones represent distinct performance obligations. These agreements may include the following types of promised goods or services: (i) grants of licenses, (ii) performance of research and development services, and (iii) participation on joint research and/or development committees. They also may include options to obtain licenses to the Company's intellectual property.

Prior to recognizing revenue, the Company makes estimates of the transaction price, including variable consideration that is subject to a constraint. Amounts of variable consideration are included in the transaction price to the extent that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur and when the uncertainty associated with the variable consideration is subsequently resolved. These estimates are re-assessed each reporting period as required. These agreements may include the following types of consideration: non-refundable upfront payments, reimbursement for research services, research, development or regulatory milestone payments, profit-sharing arrangements, and royalty and commercial sales milestone payments.

If there are multiple distinct performance obligations, the Company allocates the transaction price to each distinct performance obligation based on their estimated standalone selling prices ("SSP"). The Company estimates the SSP for each distinct performance obligation by considering information such as market conditions, entity-specific factors, and information about its customer that is reasonably available. The Company considers estimation approaches that allow it to maximize the use of observable inputs. These estimation approaches may include the adjusted market assessment approach, the expected cost plus a margin approach or the residual approach. The Company also considers whether to use a different estimation approach or a combination of approaches to estimate the SSP for each distinct performance obligation. Developing certain assumptions (e.g., treatable patient population, expected market share, probability of success and product profitability, discount rate based on weighted-average cost of capital) to estimate the SSP of a distinct performance obligation requires significant judgment.

For performance obligations satisfied over time, the Company estimates the efforts needed to complete the performance obligation and recognizes revenue by measuring the progress towards complete satisfaction of the performance obligation using an input measure.

For arrangements that include sales-based royalties, including commercial milestone payments based on pre-specified level of sales, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). Achievement of these royalties and commercial milestones may solely depend upon the performance of the licensee.

Grant Revenue

Grants received, including cost reimbursement agreements, are assessed to determine if the agreement should be accounted for as an exchange transaction or a contribution. An agreement is accounted for as a contribution if the resource provider does not receive commensurate value in return for the assets transferred. Contributions are recognized as grant revenue when all donor-imposed conditions have been met.

Research and Development Expenses

To date, research and development expenses have related primarily to discovery efforts and preclinical and clinical development of product candidates. Research and development expenses are recognized as incurred and payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods or services are received. Research and development expenses include expenses related to license and collaboration agreements; contingent consideration from business acquisitions; personnel-related expenses, including salaries, benefits, and stock-based compensation for personnel contributing to research and development activities; expenses incurred under agreements with third-party contract manufacturing organizations, contract research organizations, and consultants; clinical costs, including laboratory supplies and costs related to compliance with regulatory requirements; and other allocated expenses, including expenses for rent, facilities maintenance, and depreciation and amortization.

The Company has and may continue to acquire the rights to develop and commercialize new product candidates from third parties. Upfront payments and research and development milestone payments made in connection with acquired license or product rights are expensed as incurred, provided that they do not relate to a regulatory approval milestone or assets acquired in a business combination.

The Company's expense accruals for clinical trials and manufacturing are based on estimates of contracted services provided by third-party vendors not yet billed. When billing terms under these contracts do not coincide with the timing of when the work is performed, the Company is required to make estimates of its outstanding obligations to those third parties as of the period end. The accrual estimates are based on a number of factors, including the Company's knowledge of the research and development programs and clinical manufacturing activities, the status of the programs and activities, invoicing to date, and the provisions in the contracts. The Company obtains information regarding unbilled services directly from these service providers and performs procedures to support its estimates based on its internal understanding of the services provided to date. However, the Company may also be required to estimate these services based on information available to its internal clinical and manufacturing administrative staff if such information is not able to be obtained timely from its service providers.

Stock-based Compensation

The Company recognizes stock-based compensation to employees and non-employees over the requisite service period based on the grant-date fair value of the awards. The Company calculates the estimated fair value of stock options and employees' purchase rights under the Company's 2019 employee stock purchase plan ("ESPP") using the Black-Scholes valuation model, which requires the use of subjective assumptions including volatility and expected term, among others. The fair value of restricted stock awards ("RSAs") and restricted stock units ("RSUs") is based on the market value of the Company's common stock on the date of grant. Stock-based compensation is recognized using the straight-line method for awards that vest only upon the employee's or non-employee's continued service to the Company. Stock-based compensation expense of the employees' purchase rights under the ESPP is recognized over the offering period. Forfeitures are recognized as they occur.

Acquisitions

Business combinations are accounted for using the acquisition method of accounting. Under the acquisition method, assets acquired, including IPR&D projects, and liabilities assumed are recorded at their respective fair values as of the acquisition date. Any excess fair value of consideration transferred over the fair value of the net assets acquired is recorded as goodwill. Contingent consideration obligations incurred in connection with the business combination are recorded at their fair values on the acquisition date and are remeasured each subsequent reporting period until the related contingencies are resolved and are classified as contingent consideration on the consolidated balance sheets. The changes in fair values of contingent consideration related to the achievement of various milestones are recorded within research and development expenses or selling, general and administrative expenses based on the nature of the relevant underlying activities.

When the Company determines that entities acquired do not meet the definition of a business, the transaction is accounted for as an acquisition of assets. Therefore, the consideration paid to acquire IPR&D is expensed, and no goodwill is recorded. Any contingent consideration is generally recognized only when it becomes payable or is paid.

Embedded Derivatives

The Company evaluates its acquisitions, collaborative arrangements and other business development transactions to determine if embedded components of these contracts meet the definition of a derivative under ASC 815, Derivatives and Hedging. In general, embedded derivatives are required to be bifurcated from the host instrument if (i) the embedded feature is not clearly and closely related to the host contract and (ii) the embedded feature, if considered a freestanding instrument, meets the definition of a derivative. Embedded derivatives are reported on the consolidated balance sheets at their estimated fair values. Contingent consideration related to asset acquisitions that meet the definition of an embedded derivative is classified as contingent consideration on the consolidated balance sheets. Any change in estimated fair values, as determined at each measurement period, are recorded in the consolidated statements of operations based on the nature of the related contingencies. Changes in fair values of embedded derivatives related to the achievement of various milestones for product candidates are recorded within research and development expense or selling, general and administrative expenses based on the nature of the relevant underlying activities. Otherwise, changes in fair values are recorded within other income (expense), net.

Leases

In accordance with ASU No. 2016-02 (Topic 842), Leases, the Company determines if an arrangement is or contains a lease at inception by assessing whether the arrangement contains an identified asset and whether it has the right to control the identified asset. Right-of-use ("ROU") assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Lease liabilities are recognized at the lease commencement date based on the present value of future lease payments over the lease term. ROU assets are based on the measurement of the lease liability and also include any lease payments made prior to or on lease commencement and exclude lease incentives and initial direct costs incurred, as applicable. On the lease commencement date, the Company estimates and includes in its lease payments any lease incentive amounts based on future events when (1) the events are within the Company's control and (2) the event triggering the right to receive the incentive is deemed reasonably certain to occur. If the lease incentive received is greater or less than the amount recognized at lease commencement, the Company recognizes the difference as an adjustment to right-of-use asset and/or lease liability, as applicable.

As the implicit rate in the Company's leases is generally unknown, the Company uses an incremental borrowing rate estimated based on the information available at the lease commencement date in determining the present value of future lease payments. When calculating its estimated incremental borrowing rates, the Company considers its credit risk, the lease term, the total lease payments and the impact of collateral, as necessary. The lease terms may include options to extend or terminate the lease when the Company is reasonably certain it will exercise such options. ROU assets and lease liabilities are remeasured upon certain modifications to leases using the present value of remaining lease payments and estimated incremental borrowing rate upon lease modification. Rent expense for the Company's operating leases is recognized on a straight-line basis within operating expenses over the reasonably assured lease term.

The Company elected to not separate lease and non-lease components for any leases within its existing classes of assets and, as a result, accounts for the lease and non-lease components as a single lease component. The Company has also elected to not apply the recognition requirement to any leases within its existing classes of assets with a term of 12 months or less.

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Current income tax expense or benefit represents the amount of income taxes expected to be payable or refundable for the current year. Deferred income tax assets and liabilities are determined based on differences between the financial statement reporting and tax bases of assets and liabilities and net operating losses and credit carryforwards and are measured using the enacted tax rates and laws that will be in effect when such items are expected to reverse. Deferred income tax assets are reduced, as necessary, by a valuation allowance when management determines it is more likely than not that some or all of the tax benefits will not be realized.

The Company’s tax positions are subject to income tax audits. The Company recognizes the tax benefit of an uncertain tax position only if it is more likely than not that the position is sustainable upon examination by the taxing authority, based on the technical merits. The tax benefit recognized is measured as the largest amount of benefit which is more likely than not to be realized upon settlement with the taxing authority. The Company evaluates uncertain tax positions on a regular basis. The evaluations are based on several factors, including changes in facts and circumstances, changes in tax law, correspondence with tax authorities during the course of the audit, and effective settlement of audit issues. The provision for income taxes includes the effects of any accruals that the Company believes are appropriate, as well as any related net interest and penalties.

Net Income (Loss) Per Share

Basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted-average number of common shares outstanding during the period, without consideration of common stock equivalents. Diluted net income per common share is computed by dividing the net income by the sum of the weighted average number of common shares outstanding during the period plus any potential dilutive effects of common stock equivalents outstanding during the period calculated in accordance with the treasury stock method.

New Accounting Pronouncement Not Yet Adopted

In November 2021, the Financial Accounting Standards Board ("FASB") issued ASU No. 2021-10, Government Assistance (Topic 832) (“ASU 2021-10”), which adds certain disclosure requirements with respect to government assistance, including (1) the types of assistance, (2) an entity’s accounting for the assistance, and (3) the effect of the assistance on financial statements. ASU 2021-10 is effective for annual periods beginning after December 15, 2021. Early adoption is permitted. The Company is currently evaluating the impact the adoption of ASU 2021-10 may have on its consolidated financial statements and related disclosures.

3. Fair Value Measurements

The Company determines the fair value of financial and non-financial assets and liabilities using the fair value hierarchy, which establishes three levels of inputs that may be used to measure fair value, as follows:

- Level 1: Inputs which include quoted prices in active markets for identical assets and liabilities.
- Level 2: Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying amounts of the Company's financial instruments, including receivable from collaboration, accounts payable and accrued liabilities approximate fair value due to their relatively short maturities.

Cash Equivalents and Available-for-Sale Debt Securities

The following tables summarize the Company's Level 1 and Level 2 financial assets measured at fair value on a recurring basis by level within the fair value hierarchy:

		December 31, 2021			
	Valuation Hierarchy	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Aggregate Fair Value
		(in thousands)			
Assets:					
Money market funds[1]	Level 1	$ 345,098	$ —	$ —	$ 345,098
U.S. government treasuries	Level 2	419,442	—	(872)	418,570
Total financial assets		$ 764,540	$ —	$ (872)	$ 763,668

(1) Includes $15.6 million of restricted cash equivalents.

		December 31, 2020			
	Valuation Hierarchy	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Aggregate Fair Value
		(in thousands)			
Assets:					
Money market funds[1]	Level 1	$ 421,835	$ —	$ —	$ 421,835
U.S. government treasuries	Level 2	300,201	91	(6)	300,286
Total financial assets		$ 722,036	$ 91	$ (6)	$ 722,121

(1) Includes $14.9 million of restricted cash equivalents.

Accrued interest receivable excluded from both the fair value and amortized cost basis of the available-for-sale debt securities are presented within prepaid expenses and other current assets, and other assets in the consolidated balance sheets. Accrued interest receivable amounted to $1.1 million and $0.8 million as of December 31, 2021 and 2020, respectively. The Company did not write off any accrued interest receivable during the years ended December 30, 2021 and 2020.

The Company recognized total net unrealized loss of $0.9 million and net unrealized gain of $0.1 million in accumulated other comprehensive income (loss) as of December 31, 2021 and 2020, respectively. The gross unrealized losses related to U.S. government treasuries as of December 31, 2021 were due to changes in interest rates. As of December 31, 2021 and 2020, there were no investments that have been in a continuous unrealized loss position for longer than 12 months. The Company determined that the gross unrealized losses on our investments as of December 31, 2021 were temporary in nature. The Company currently does not intend, and it is highly unlikely that it will be required, to sell these securities before recovery of their amortized cost basis. As of December 31, 2021, no securities have contractual maturities of longer than two years.

Equity Investments

As of December 31, 2021, the Company's equity investment consisted solely of ordinary shares of Brii Bio Parent. The Company acquired the securities as partial consideration for entering into the collaboration, option and license agreement (the “Brii Agreement”) with Brii Bio Parent and Brii Biosciences Offshore Limited (“Brii Bio”) in May 2018. The Company concluded it does not have a controlling interest or significant influence over Brii Bio based on its ownership percentage and other factors. See further discussion in Note 7—Collaboration and License Agreements. In July 2021, Brii Bio Parent completed its initial public offering ("Brii Bio Parent IPO") on the Stock Exchange of Hong Kong Limited, prior to which the securities were accounted for as equity securities without a readily determinable fair value. Upon the completion of the Brii Bio Parent IPO, the securities were considered to be marketable equity securities and subsequently remeasured at fair value at each reporting date. The Company classifies its equity investment in Brii Bio Parent as a Level 1 asset within the fair value hierarchy, as the value is based on a quoted market price in an active market. As of December 31, 2021, the Company remeasured the equity investment at a fair value of $143.1 million. For the year ended December 31, 2021, the Company recognized an unrealized gain of $138.0 million as other income in the consolidated statement of operations, net of an unrealized loss of $0.6 million related to foreign currency translation for the period.

Contingent Consideration

Contingent consideration includes potential milestone payments in connection with the acquisitions of Humabs Biomed SA (“Humabs”) and TomegaVax, Inc. (“TomegaVax”). See further discussion in Note 4—Acquisitions. The Company classifies the contingent consideration as Level 3 financial liabilities within the fair value hierarchy as of December 31, 2021 and 2020.

The estimated fair value of the contingent consideration related to the Humabs acquisition was determined by calculating the probability-weighted clinical, regulatory, and commercial milestone payments based on the assessment of the likelihood and estimated timing that certain milestones would be achieved. In December 2021, the Company achieved the regulatory milestone of $35.0 million related to sotrovimab. As of December 31, 2021, the Company calculated the estimated fair value of the remaining clinical and regulatory milestones related to the HBV product using the following significant unobservable inputs:

Unobservable input	Range (Weighted-Average)1
Discount rates	3% - 5% (4%)
Probability of achievement	22% - 40% (31%)

(1) Unobservable inputs were weighted based on the relative fair value of the clinical and regulatory milestone payments.

For the commercial milestones, the Company used a Monte Carlo simulation because of the availability of a discrete revenue forecast. During the year ended December 31, 2021, the Company achieved the specified sales milestones totaling $60.0 million related to sotrovimab. As of December 31, 2021, the Monte Carlo simulation assumed a commercial product launch and associated discrete revenue forecast, as well as the following significant unobservable inputs for the remaining commercial milestones related to the HBV product:

Unobservable input	Value
Volatility	65%
Discount rate	11%
Probability of achievement	22%

The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due. As of December 31, 2021 and 2020, the estimated fair value of the contingent consideration related to the Humabs acquisition was $17.1 million and $29.2 million, respectively, with changes in the estimated fair value recorded in research and development expense, and selling, general and administrative expense in the consolidated statements of operations.

The estimated fair value of the contingent consideration related to the TomegaVax acquisition was determined by using a Monte Carlo simulation model which included estimates of both the probability and timing to achieve the required per share price of the Company’s common stock, and incorporates assumptions as to expected volatility and discount rate. The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due. Although the TomegaVax acquisition was accounted for as an asset acquisition, such contingent consideration met the

definition of an embedded derivative financial instrument. In February 2021, the Company achieved one of the milestones related to a specified per-share price of its common stock resulting in a $10.0 million payable to the former TomegaVax's stockholders which was paid in July 2021. As of December 31, 2021, the fair value of the remaining contingent consideration was estimated using the following significant unobservable inputs:

Unobservable input	Value
Volatility	115%
Discount rate	0.1%

As of December 31, 2021 and 2020, the estimated fair value of the contingent consideration related to the TomegaVax acquisition was $5.7 million and $6.8 million, respectively, with changes in the estimated fair value recorded in other income (expense), net in the consolidated statements of operations.

The estimated fair value of the contingent consideration related to the Humabs and TomegaVax acquisitions involves significant estimates and assumptions which give rise to measurement uncertainty.

The following table sets forth the changes in the estimated fair value of the Company's Level 3 financial liabilities (in thousands):

	Contingent Consideration
Balance at December 31, 2020	$ 35,974
Changes in fair value	91,848
Reclassification of contingent consideration to accrued liabilities upon achievement of the Humabs milestones	(95,000)
Payment of contingent consideration upon achievement of the TomegaVax milestone	(10,000)
Balance at December 31, 2021	$ 22,822

4. Acquisitions

Acquisition of TomegaVax

In September 2016, the Company entered into an agreement and plan of merger ("TomegaVax Merger Agreement") to acquire all of the equity interests of TomegaVax. The primary asset purchased in the acquisition was an in-process cytomegalovirus vector-based vaccine platform for use in HBV, HIV, and tuberculosis. The acquisition was accounted for as an asset purchase. The Company recorded the cash purchase price of $5.2 million in research and development expenses and incurred transaction costs of $0.5 million in 2016.

In connection with the entry into the TomegaVax Merger Agreement, the Company also entered into a letter agreement with TomegaVax (the "TomegaVax Letter Agreement"), which provides for certain payments to TomegaVax's former stockholders before September 2024, in each case so long as the Company is continuing to pursue the development of the TomegaVax technology. Under the terms of the TomegaVax Letter Agreement, the Company will be required to pay to the former stockholders of TomegaVax milestone payments of up to an aggregate of $30.0 million if the per-share price of the Company's publicly traded common stock, or implied price per-share of the Company's Series A-1 convertible preferred stock (or common stock upon conversion) upon a certain asset sale, merger or stock sale, is at least $45 (as adjusted in the case of any stock dividend, stock split or other similar recapitalization), with the amount of such payments determined by the share price and/or the stage of the Company's clinical development at the time of the relevant event triggering the payment. The share price of the Company's publicly traded common stock will be determined using the average of the daily volume-weighted average trading price of the Company's common stock for each trading day during a consecutive 90-day period. The foregoing payments are payable (i) during any date after the completion of an initial public offering by the Company or any successor or affiliate controlling the TomegaVax technology, provided that no payment will be due before the first anniversary of the initial public offering, (ii) upon the sale of all assets related to the TomegaVax technology or (iii) upon a merger or stock sale of the Company or any successor or affiliate controlling the TomegaVax technology, in each case subject to certain conditions with respect to the timing of the payments. The payments under the TomegaVax Letter Agreement can be made in cash or shares of the Company's common stock, at the discretion of the Company's board of directors.

In February 2021, the Company achieved one of the milestones related to the specified per-share price of its common stock, which resulted in a $10.0 million payable to TomegaVax's former stockholders. In July 2021, the Company made the milestone payment to the former TomegaVax stockholders through a combination of $8.1 million in cash and the issuance of 42,737 shares of common stock with a total fair value of $1.9 million. The remaining milestone payments of up to $20.0 million in the aggregate will be triggered if (i) the per-share price of the Company's publicly traded common stock is at least $45 (as adjusted in the case of any stock dividend, stock split or other similar recapitalization) and upon the achievement of a certain milestone related to the stage of the Company's clinical development at the time of the relevant event triggering the payment and/or (ii) the per-share price of the Company's publicly traded common stock is at least $90 (as adjusted in the case of any stock dividend, stock split or other similar recapitalization).

The Company determined that the future milestone payments contain net settlement provisions and therefore, they were required to be accounted for as embedded derivatives under the relevant accounting guidance. As of December 31, 2021, the fair value of the embedded derivative was $5.7 million and is included in the contingent consideration liability on the consolidated balance sheet.

Acquisition of Humabs

In August 2017, the Company acquired all of the outstanding equity of Humabs, a private Swiss company, which discovers and develops monoclonal antibodies ("mAbs") derived from individuals whose immune systems have successfully responded to major diseases. The Company acquired all of Humabs' rights, title and interest in and to substantially all of the assets of Humabs except for rights under certain license agreements with third parties. The Company is obligated to pass through to the former Humabs shareholders any amounts received by Humabs under such license agreements, net of any program expenses. The transaction was accounted for as an acquisition of a business. The consideration paid consisted of $30.0 million in cash and 1,666,656 shares of common stock, valued at $2.5 million as of the date of the transaction, to former Humabs shareholders. In addition to the cash payment and issuance of common stock to the former Humabs shareholders at the acquisition date, the Company also agreed to pay additional amounts in cash upon the achievement of specified milestone events: (i) up to $135.0 million upon the achievement of clinical, regulatory and commercial milestones for an HBV product; and (ii) up to $105.0 million upon the achievement of clinical, regulatory and commercial milestones for another product, which the Company elected as a severe acute respiratory syndrome coronavirus 2 ("SARS-CoV-2") product, or sotrovimab.

During the year ended December 31, 2020, the Company achieved two of the specified clinical milestones for the HBV product and sotrovimab totaling $20.0 million. During the year ended December 31, 2021, the Company achieved the specified regulatory milestone of $35.0 million and sales milestones totaling $60.0 million related to sotrovimab. The estimated fair value of the remaining contingent consideration was $17.1 million as of December 31, 2021. The Company paid the $35.0 million milestone and $60.0 million milestone in January and February 2022, respectively.

The acquired developed technologies that have associated patents issued are classified as finite-lived intangible assets and are amortized on a straight-lined basis over their estimated remaining useful lives, generally between seven to 12 years. The Company also acquired indefinite-lived intangible assets consisting of IPR&D. These assets will not be amortized until regulatory approval is obtained in a major market. At that time, the Company will determine the useful life of the asset and begin amortization. If the associated research and development effort is abandoned or otherwise impaired, the related IPR&D assets will be written-off and an impairment charge recorded. As of December 31, 2021, there have been no such impairments related to the IPR&D assets. The estimated fair value of the intangible assets was determined using the replacement cost method. The excess of the purchase price over the estimated fair value of the net assets acquired was recorded as goodwill. None of the goodwill is expected to be deductible for income tax purposes.

5. Goodwill and Intangible Assets

Goodwill

Goodwill of $16.9 million represents the excess of the purchase price over the estimated fair value of the net assets acquired from Humabs. The Company tests goodwill for impairment on an annual basis or sooner, if deemed necessary. There was no impairment for the year ended December 31, 2021.

Intangible Assets

The following table summarizes the carrying amount of the Company's finite-lived intangible assets (in thousands):

	December 31,		Weighted-Average Remaining Useful Life (Years)
	2021	2020	
Developed technology	$ 7,000	$ 7,000	6.0
Contract-based intangible asset	502	502	13.9
Finite-lived intangible assets, gross	7,502	7,502	
Less accumulated amortization	(4,114)	(3,581)	
Less impairment of intangible assets	(832)	(832)	
Finite-lived intangible assets, net	$ 2,556	$ 3,089	

Finite-lived intangible assets are carried at cost less accumulated amortization. The contract-based intangible asset resulted from the product approval of a sublicensed intellectual property right in December 2020. The intellectual property right was previously accounted for as IPR&D. Amortization expense related to finite-lived intangible assets, included in research and development expenses on the consolidated statements of operations, totaled $0.5 million, $1.0 million and $1.2 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Management reviews finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable, like that of property and equipment. During the third quarter of 2020, as a result of the availability of other research and analytics platforms, the Company abandoned certain of its acquired developed technologies and concluded that the full remaining book values of the assets were impaired. Therefore, $0.8 million was written off as an impairment charge, which was classified as research and development expenses during 2020.

Based on the finite-lived intangible assets recorded as of December 31, 2021, the estimated future amortization expense for the next five years is as follows (in thousands):

Year Ending December 31:	
2022	$ 532
2023	532
2024	260
2025	213
2026	213
Total	$ 1,750

Indefinite-Lived Intangible Assets

As of December 31, 2021 and 2020, the Company had indefinite-lived intangible assets of $30.7 million, respectively, related to the purchased IPR&D from the Humabs acquisition. In December 2020, $0.5 million was reclassed as a finite-lived intangible asset due to the product approval of a sublicensed intellectual property right. No impairment losses have been recorded for the years ended December 31, 2021 and 2020.

6. Grant Agreements

Bill & Melinda Gates Foundation Grants

Campylo/EPEC/EAEC Grant

As part of the Company's acquisition of Humabs in August 2017, the Company acquired a grant agreement with the Bill & Melinda Gates Foundation under which it was awarded a grant totaling up to $4.7 million (the "2017 Grant"). The 2017 Grant supported the Company's discovery, characterization and selection of human monoclonal antibodies with pre-clinical efficacy against three enteric pathogens responsible for life-threatening diarrhea in neonates. The 2017 Grant expired on May 31, 2019.

Payments received in advance that were related to future research activities were deferred and recognized as revenue when the donor-imposed conditions were met, which was as the research and development activities were performed. The Company recognized grant revenue of $0.9 million for the year ended December 31, 2019.

HIV Grant

On January 26, 2018, the Company entered into a grant agreement with the Bill & Melinda Gates Foundation under which it was awarded a grant totaling up to $12.2 million for its HIV program (the "HIV Grant"). In February 2020, the parties amended the HIV Grant under which the Company was awarded a supplemental grant of $8.6 million. In June 2021, the parties further amended the agreement under which the grant term was extended from December 31, 2021 to October 31, 2022, unless earlier terminated by the Bill & Melinda Gates Foundation for the Company's breach, failure to progress the funded project, in the event of the Company's change of control, change in the Company's tax status, or significant changes in the Company's leadership that the Bill & Melinda Gates Foundation reasonably believes may threaten the success of the project.

In December 2020, the Company achieved a specified milestone under the HIV Grant which triggered a $1.9 million payment from the Bill & Melinda Gates Foundation. As of December 31, 2020, the Company recorded a receivable, which is included within prepaid expenses and other current assets, and current portion of deferred revenue for the $1.9 million, which was subsequently received in January 2021.

Payments received in advance that are related to future research activities are deferred and recognized as revenue when the donor-imposed conditions are met, which is as the research and development activities are performed. The Company recognized grant revenue of $3.0 million, $6.4 million and $3.7 million for the years ended December 31, 2021, 2020 and 2019, respectively. As of December 31, 2021 and 2020, the Company has deferred revenue of $2.3 million and $3.8 million, respectively, under HIV Grant.

Tuberculosis ("TB") Grant

On March 16, 2018, the Company entered into a grant agreement with the Bill & Melinda Gates Foundation under which it was awarded a grant totaling up to $14.9 million for its TB program (the "TB Grant"). The parties amended the agreement in May 2020, in June 2021 and in December 2021 to extend the grant term. The TB Grant will remain in effect until March 31, 2022, unless earlier terminated by the Bill & Melinda Gates Foundation for the Company's breach, failure to progress the funded project, in the event of the Company's change of control, change in the Company's tax status, or significant changes in the Company's leadership that the Bill & Melinda Gates Foundation reasonably believes may threaten the success of the project. As of December 31, 2021, the Company had $1.8 million of unused funds received in advance and previously recorded as deferred revenue within accrued and other liabilities. As of December 31, 2021 and 2020, the Company has deferred revenue of $1.3 million and $2.6 million, respectively, under TB Grant.

Payments received in advance that are related to future research activities are deferred and recognized as revenue when the donor-imposed conditions are met, which is as the research and development activities are performed. The Company recognized grant revenue of $3.0 million, $2.2 million and $1.9 million for the years ended December 31, 2021, 2020 and 2019, respectively.

HCMV-Vaccine Platform Grant

On November 5, 2021, the Company entered into a grant agreement with the Bill & Melinda Gates Foundation under which it was awarded a grant totaling up to $10.0 million to support the manufacturing and clinical activities of its HIV and TB vaccine programs. This grant agreement will remain in effect until August 30, 2023, unless earlier terminated by the Bill & Melinda Gates Foundation for the Company's breach, failure to progress the funded project, in the event of the Company's change of control, change in the Company's tax status, or significant changes in the Company's leadership that the Bill & Melinda Gates Foundation reasonably believes may threaten the success of the project.

Payments received in advance that are related to future research activities are deferred and recognized as revenue when the donor-imposed conditions are met, which is as the research and development activities are performed. The Company recognized grant revenue of $2.2 million for the year ended December 31, 2021. As of December 31, 2021, the Company has deferred revenue of $3.3 million under this grant agreement.

National Institutes of Health

As part of the Company's acquisition of TomegaVax in September 2016, the Company acquired grant agreements related to TomegaVax's research effort in infectious diseases and cancer that entitled them to several awards under the Small Business Innovation Research Program from the National Institutes of Health ("NIH"). Through July 2021, the Company has acquired or been awarded grants from NIH totaling $5.1 million. These grants were cost plus fixed fee agreements in which the Company was reimbursed for its direct and indirect costs. Only costs that were allowable under certain government regulations and NIH's supplemental policy and procedure manual may be claimed for reimbursement, subject to government audit.

The Company recognized grant revenue of $0.1 million, $0.6 million and $0.9 million for the years ended December 31, 2021, 2020 and 2019, respectively.

7. Collaboration and License Agreements

Collaboration Agreements with GSK

2020 GSK Agreement

On June 9, 2020, the Company, Glaxo Wellcome UK Limited and Beecham S.A. (referred to individually and together, as "GSK") entered into a definitive collaboration agreement under the terms set forth in the preliminary collaboration agreement entered into by the Company and certain GSK entities in April 2020 (the "2020 Preliminary Agreement") (such definitive collaboration agreement, the "2020 GSK Agreement"). Concurrently with the execution of the 2020 Preliminary Agreement, the Company entered into a stock purchase agreement (the "2020 Stock Purchase Agreement") with Glaxo Group Limited ("GGL"), an affiliate of GSK, under which GGL purchased 6,626,027 shares of the Company's common stock on April 29, 2020, at a price per share of $37.73, for an aggregate purchase price of approximately $250.0 million. After receipt of antitrust clearance on April 22, 2020, the 2020 Preliminary Agreement became effective as of April 29, 2020, which was also the closing date for the associated 2020 Stock Purchase Agreement between the parties ("Effective Date"). Under the terms of the 2020 GSK Agreement, the Company and GSK agreed to collaborate to research, develop and commercialize products for the prevention, treatment and prophylaxis of diseases caused by SARS-CoV-2, the virus that causes COVID-19, and potentially other coronaviruses. The collaboration is focused on the development and commercialization of three types of collaboration products under three programs: (1) antibodies targeting SARS-CoV-2, and potentially other coronaviruses (the "Antibody Program"); (2) vaccines targeting SARS-CoV-2, and potentially other coronaviruses (the "Vaccine Program"), and (3) products based on genome-wide CRISPR screening of host targets expressed in connection with exposure to SARS-CoV-2, and potentially other coronaviruses (the "Functional Genomics Program").

For four years following the Effective Date, the parties agreed to conduct certain research and development activities under mutually agreed development plans and associated budgets for each of the three programs, and under the oversight of a joint steering committee ("JSC"). The Company is primarily responsible for the development and clinical manufacturing activities for the Antibody Program, and for conducting the initial development activities directed to a vaccine in the Vaccine Program. GSK is primarily responsible for the commercialization activities for the Antibody Program (except in connection with sales of antibody products licensed to WuXi Biologics (Hong Kong) Limited in greater China), the later-stage development, manufacturing and commercialization activities for the Vaccine Program and the development, manufacturing and commercialization activities for the Functional Genomics Program. Subject to an opt-out mechanism, the parties share all development costs, manufacturing costs and costs and expenses for the commercialization of the collaboration products, with the Company bearing 72.5% of such costs for the antibody products, 27.5% of such costs for the vaccine products, and equal sharing of such costs for the functional genomics products.

On a collaboration product-by-collaboration product basis, each party has the one-time right, at specified points in development, to opt-out of its co-funding obligations, and the other party may, at its election, either pursue such program unilaterally, or also cease research and development activities and funding of such collaboration product. If the opt-out provisions are not exercised by either party subject to the terms of the 2020 GSK Agreement, the parties share all profits and losses arising from any collaboration product in the same ratios in which the parties bore development costs for such collaboration program. For each collaboration product as to which a party exercises its opt-out right, the commercializing party pays to the opt-out party royalties on net sales of the applicable collaboration product at rates based on factors such as the stage of development of such collaboration product at the time the opt-out party exercises such right, and whether the opt-out party is the lead party, or a portion of the sublicense revenue if the commercializing party chooses to sublicense or otherwise divest rights to such collaboration product. On an antibody product-by-antibody product basis, the Company has a

co-promotion right for such antibody product in the United States, under which the Company has the right to perform up to 20% of details in connection with such antibody product.

The 2020 GSK Agreement will remain in effect with respect to each collaboration program for as long as there is a collaboration product being developed or commercialized by the lead party, or the non-opt-out party, in such program. Either party has the right to terminate the 2020 GSK Agreement in the case of the insolvency of the other party, an uncured material breach of the other party with respect to a collaboration program or collaboration product, or as mutually agreed by the parties. The 2020 GSK Agreement superseded and replaced the 2020 Preliminary Agreement between the parties. In December 2021, Beecham S.A. assigned and transferred all its rights, title, interest, and benefit in the 2020 GSK Agreement to GlaxoSmithKline Biologicals S.A., including all its rights to bring claims under such agreement.

The Company considered the ASC 606 criteria for combining contracts and determined that the 2020 GSK Agreement and 2020 Stock Purchase Agreement should be combined into a single contract because they were negotiated and entered into in contemplation of one another. The fair market value of the common stock issued to GGL was $206.7 million, based on the closing stock price of $36.70 on the date of execution of the 2020 Preliminary Agreement and 2020 Stock Purchase Agreement and taking into account a discount for the lack of marketability due to the restrictions in place on the underlying shares, resulting in a $43.3 million premium received by the Company. The Company accounted for the common stock issued to GGL based on its fair market value on the transaction date and determined that the premium paid by GSK should be attributed to the transaction price of the 2020 GSK Agreement.

The Company concluded that the 2020 GSK Agreement contained four units of account: (i) the license granted to GSK under the Antibody Program (the “Antibody License”); (ii) the research and development activities (including clinical manufacturing) under the Antibody Program; (iii) the research and development activities under the Vaccine Program; and (iv) the research and development activities under the Functional Genomics Program. The Company considered the guidance in ASC 606 to determine which of these elements of the 2020 GSK Agreement are performance obligations with a customer. The Company determined that the Antibody License is within the scope of ASC 606 and accordingly, accounted for the Antibody License as a distinct performance obligation under ASC 606. The Antibody License is a functional intellectual property and is distinct from the associated research and development activities to be performed under the program due to its significant standalone functionality. All other elements of the 2020 GSK Agreement including the research and development activities, and participation in the JSC and subcommittees for each collaboration program were not determined to be distinct performance obligations with a customer.

The transaction price for the Antibody License at inception was determined to be $43.3 million, representing the premium on the sale of common stock to GSK. The Company determined that GSK can benefit from the Antibody License at the time of grant and therefore, the related performance obligation is satisfied at a point in time. As such, the Company recognized the $43.3 million as contract revenue during the second quarter of 2020. Additionally, the Company is entitled to consideration from GSK related to profit and loss sharing arrangements (including royalties) contingent upon future sales of collaboration products under the Antibody Program.

The remaining units of account of the 2020 GSK Agreement were determined to be within the scope of ASC 808 as the Company and GSK are both active participants in the development, manufacturing and commercialization activities and are exposed to significant risks and rewards that are dependent on the commercial success of the activities of the arrangement. Furthermore, the Company and GSK participate in the commercial profit and loss sharing arrangement for each program commensurate with each party’s cost-sharing responsibilities during research and development. Because ASC 808 does not provide recognition and measurement guidance, the Company determined that the guidance in ASC 730, Research and Development, was appropriate to analogize to, based on the nature of the cost-sharing provisions of the agreement. The Company has concluded that payments to or reimbursements from GSK related to these services will be accounted for as an increase to or reduction of research and development expenses, respectively. The Company also concluded that any payments from GSK related to the profit and loss sharing arrangement (including royalties) contingent upon the commercialization of the products under the Vaccine and Functional Genomics Programs will be analogized to ASC 606 and therefore, will be recognized when the related sales occur.

In May 2021, the FDA granted an EUA in the United States for sotrovimab, the first collaboration product under the Antibody Program. As the lead party for all commercialization activities, GSK incurs all of the sales and marketing expenses and is the principal on sales transactions with third parties. As the Company is the agent under the 2020 GSK Agreement, the Company recognizes its contractual share of the profit-sharing amounts or royalties (in case of an opt-out) as revenue, net of

any cost of sales and allowable expenses (including distribution, selling, and marketing expenses) in the period the sale occurs. During the year ended December 31, 2021, the Company recorded its share of net profit of $917.2 million as collaboration revenue in the consolidated statement of operations.

Costs associated with co-development activities performed under the agreement are included in research and development expenses on the consolidated statements of operations, with any reimbursement of costs by GSK reflected as a reduction of such expenses. Under the 2020 GSK Agreement, the Company recognized additional net research and development expenses of $77.3 million and $25.4 million during the years ended December 31, 2021 and 2020, respectively.

2021 Expanded GSK Collaboration

On February 14, 2021, the Company and GSK entered into a binding preliminary collaboration agreement (the "2021 Preliminary Agreement"), under which the parties agreed to expand the 2020 GSK Agreement to collaborate on three separate programs: (1) a program to research, develop and commercialize mAbs for the prevention, treatment or prophylaxis of the influenza virus (the "Influenza Program"), excluding VIR-2482 unless GSK exercises its option as described below; (2) an expansion of the parties' current Functional Genomics Program to focus on functional genomics screens directed to targets associated with respiratory viruses (the "Expanded Functional Genomics Program"); and (3) additional programs to develop neutralizing mAbs directed to up to three non-influenza target pathogens selected by GSK (the "Selected Pathogens" and such programs, the "Additional Programs").

Concurrently with the execution of the 2021 Preliminary Agreement, the Company entered into a stock purchase agreement (the "2021 Stock Purchase Agreement") with GGL under which GGL agreed to purchase shares of the Company's common stock for an aggregate purchase price of approximately $120.0 million. The consummation of the transactions under each of the 2021 Preliminary Agreement and the 2021 Stock Purchase Agreement were subject to the satisfaction of customary closing conditions, including the expiration or termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, which expiration was effective on March 24, 2021. The 2021 Preliminary Agreement and 2021 Stock Purchase Agreement consummated on March 25, 2021, which the Company used as the measurement date for accounting purposes. On March 31, 2021, the Company closed the sale of 1,924,927 shares of its common stock to GGL.

The 2021 Preliminary Agreement was superseded on May 18, 2021 upon execution of the definitive collaboration agreement (the "2021 GSK Agreement", or collectively with the 2021 Preliminary Agreement, the "2021 GSK Collaboration"). The material terms of the 2021 GSK Agreement, including the promised goods and services, are discussed below and is consistent with those of the 2021 Preliminary Agreement.

Under the 2021 GSK Collaboration, the parties will conduct certain research and development activities under mutually agreed development plans and associated budgets for the programs within the expanded collaboration for a period of three years following the effective date. Under the Influenza Program, the parties will collaborate to research, develop and commercialize mAbs for the prevention, treatment or prophylaxis of influenza, including the Company's influenza mAbs (with respect to VIR-2482, only if GSK exercises its option). The Company may conduct the development and clinical manufacturing activities for VIR-2482 up to the completion of a Phase 2 clinical trial. Provided that the Company conducts and completes a Phase 2 clinical trial for VIR-2482, GSK will have the exclusive option to obtain exclusive rights to co-develop and commercialize VIR-2482 under the Influenza Program (the "VIR-2482 Option"). GSK will be the lead party for development, clinical and commercial manufacturing and commercialization activities for products under the Influenza Program (other than VIR-2482 unless and until GSK exercises the VIR-2482 Option, if applicable). The parties will mutually agree upon the allocation of responsibility for the development of products under the Expanded Functional Genomics Program, and for the development and early-stage manufacturing of products under the Additional Programs if and when GSK decides which Selected Pathogens to pursue. GSK will be primarily responsible for commercial manufacturing and commercialization activities for products under the Expanded Functional Genomics Program and Additional Programs, if and when selected by GSK. For each collaboration program, upon execution of the definitive agreement, the Company will grant GSK certain license rights related to the development, manufacturing and commercialization of products arising from the program.

The parties will share 50% of all development costs in accordance with the budget for each of the collaboration programs (other than for the Selected Pathogens and VIR-2482, unless GSK exercises the VIR-2482 Option), with each party having the right to opt-out of its co-funding obligations at specified points in development. In such case, the party continuing

with the program will pay to the opt-out party a royalty on net sales of products arising from such program at specified rates based on the stage of development at which the opt-out is exercised. Following the exercise of an opt-out right by a party, the other party may, at its election, either pursue development and commercialization of such product or program unilaterally, or also cease the conduct and funding of such collaboration product or program. In the absence of any opt-out, the parties will also share 50% of all profits and losses arising from any collaboration product.

GSK was obligated to make an upfront payment to the Company of $225.0 million, 50% of which became payable at the effective date of the 2021 Preliminary Agreement and 50% of which became payable following the execution of the 2021 GSK Agreement. If GSK exercises the VIR-2482 Option, GSK will pay the Company an option exercise fee of $300.0 million unless certain agreed product criteria for VIR-2482 are not met, in which case the parties will negotiate an alternative option exercise fee. Upon achievement of a pre-defined regulatory milestone for the first product in the Influenza Program, which may be (i) VIR-2482 (if GSK exercised the VIR-2482 Option), (ii) a next-generation mAb, or (iii) any other influenza mAb approved by the JSC to be included in the collaboration, arising from the Influenza Program, GSK will make a milestone payment to the Company of up to $200.0 million.

The Company concluded that the 2021 GSK Agreement is a collaboration arrangement as defined in ASC 808, Collaborative Agreements, under which certain elements are required to be accounted for under ASC 606 where the counterparty is a customer for a good or service that is a distinct unit of account. In addition, the 2021 GSK Agreement is considered a contract modification to the 2021 Preliminary Agreement and will be accounted for prospectively, as a termination of the 2021 Preliminary Agreement and commencement of a new contract. There was no impact to the accounting assessment of the original contract as no goods or services had been delivered to GSK, no performance obligations were satisfied, and accordingly, no contract revenue was recognized under ASC 606 prior to the execution of the 2021 GSK Agreement.

The Company considered the ASC 606 criteria for combining contracts and determined that the 2021 GSK Collaboration and 2021 Stock Purchase Agreement should be combined into a single contract because they were negotiated and entered into in contemplation of one another. The fair market value of the common stock issued to GGL was $85.2 million, based on the closing stock price of $52.70 on March 25, 2021 and taking into account a discount for the lack of marketability due to the restrictions in place on the underlying shares, resulting in a $34.8 million premium received by the Company. The Company accounted for the common stock issued to GGL based on its fair market value on the transaction date and determined that the premium paid by GSK should be attributed to the transaction price of the 2021 GSK Agreement.

The Company concluded that the 2021 GSK Agreement contained the following units of account: (i) the VIR-2482 Option; (ii) three distinct rights granted to GSK related to the Selected Pathogens (each, a “Selected Pathogens Right”); (iii) the license and know-how to the next-generation mAbs under the Influenza Program (the “Next Gen License”); (iv) the research and development activities for next-generation mAbs under the Influenza Program; and (v) the research and development activities, including license rights and know-how, under the Expanded Functional Genomics Program. The Company considered the guidance in ASC 606 to determine which of these elements of the 2021 GSK Agreement are performance obligations with a customer. The Company determined that the distinct performance obligations under ASC 606 consisted of (i) the Next Gen License and (ii) the three Selected Pathogens Rights, each representing a material right. All other elements of the 2021 GSK Agreement including the VIR-2482 Option, research and development activities, and participation in the JSC and subcommittees for each collaboration program were not determined to be distinct performance obligations with a customer. As of December 31, 2021, GSK had not exercised the VIR-2482 Option.

The transaction price for the 2021 GSK Agreement included fixed consideration consisting of the $225.0 million upfront fee paid by GSK and $34.8 million, representing the premium on the sale of common stock to GSK for a total of $259.8 million. All potential future milestones and other payments under the 2021 GSK Agreement are constrained since the Company could not conclude it was probable that a significant reversal in the amount recognized would not occur.

The respective estimated SSP for each of the performance obligations was determined to allocate the transaction price. The estimated SSP of each performance obligation was determined using methods that considered relevant market conditions, entity-specific factors and information about GSK, while maximizing the use of available observable inputs and using certain management assumptions (e.g., treatable patient population, expected market share, probability of success and product profitability, discount rate based on weighted-average cost of capital). For the Next Gen License, the Company determined that GSK can benefit from the license at the time the license is granted, and therefore, the related performance obligation is satisfied at a point in time. If any of the Selected Pathogens Rights are exercised, the Company will evaluate the

related promises to identify the performance obligations to be transferred and the timing of revenue recognition. If any of the Selected Pathogens Rights expire prior to being exercised, the Company will recognize any deferred revenue allocated to that right as revenue at the time of expiration.

The research and development activities for the next generation mAbs under the Influenza Program and the Expanded Functional Genomics Program were determined to be within the scope of ASC 808 as the Company and GSK are both active participants in the development, manufacturing and commercialization activities and are exposed to significant risks and rewards that are dependent on the commercial success of the activities of the arrangement. Furthermore, the Company and GSK participate in the commercial profit and loss sharing arrangement for each program commensurate with each party's cost-sharing responsibilities during research and development. Because ASC 808 does not provide recognition and measurement guidance, the Company determined that the guidance in ASC 730, Research and Development, was appropriate to analogize to based on the nature of the cost-sharing provisions of the agreement. The Company has concluded that payments to or reimbursements from GSK related to these services will be accounted for as an increase to or reduction of research and development expenses, respectively. The Company also concluded that any payments from GSK related to the profit and loss sharing arrangement (including royalties) contingent upon the commercialization of the related products will be analogized to ASC 606 and therefore, will be recognized when the related sales occur.

Upon execution of the 2021 GSK Agreement, the Company granted the Next Gen License to GSK and therefore, recognized $168.3 million as contract revenue in the second quarter of 2021. As of December 31, 2021, the total unrecognized transaction price of $91.5 million is classified as current deferred revenue on the Company's consolidated balance sheet related to the remaining performance obligations, being the material rights resulting from the Selected Pathogens Rights, none of which have been exercised by GSK as of December 31, 2021. The Company expects the rights will be exercised, and thus, the corresponding deferred revenue will be recognized within the next 12 months from the balance sheet date.

Costs associated with co-development activities performed under the agreement are included in research and development expenses in the consolidated statements of operations, with any reimbursement of costs by GSK reflected as a reduction of such expenses. During the year ended December 31, 2021, the Company recognized additional net research and development expense of $0.5 million under the 2021 GSK Agreement.

Under both the 2020 GSK Agreement and the 2021 GSK Agreement, the Company has a receivable from collaboration of $773.1 million as of December 31, 2021.

Brii Biosciences

In May 2018, the Company entered into the Brii Agreement with Brii Bio Parent and Brii Bio pursuant to which the Company granted to Brii Bio, with respect to up to four of the Company's programs, an exclusive option to obtain exclusive rights to develop and commercialize compounds and products arising from such programs in China, Taiwan, Hong Kong and Macau (collectively, the "China Territory") for the treatment, palliation, diagnosis, prevention or cure of acute and chronic diseases of infectious pathogen origin or hosted by pathogen infection (the "Field of Use"). The Company's HBV small interfering ribonucleic acid ("siRNA") program being developed under the Amended Alnylam Agreement (described below) is included within the Brii Agreement as a program for which Brii Bio may exercise one of its options. In partial consideration for the options granted by the Company to Brii Bio, Brii Bio Parent and Brii Bio granted the Company, with respect to up to four of Brii Bio Parent's or Brii Bio's programs, an exclusive option to be granted exclusive rights to develop and commercialize compounds and products arising from such Brii Bio programs in the United States for the Field of Use. The number of options that the Company may exercise for a Brii Bio program is limited to the corresponding number of options that Brii Bio exercises for a Vir program.

As partial consideration for the Company's entry into the Brii Agreement, upon closing of Brii Bio Parent's Series A preferred stock financing, the Company received ordinary shares equal to 9.9% of the outstanding shares in Brii Bio Parent. As a result of Brii Bio's right to exercise one of its options for the Company's HBV siRNA program, under the terms of the Amended Alnylam Agreement, the Company transferred to Alnylam Pharmaceuticals, Inc. ("Alnylam") a specified percentage of such equity consideration allocable to such program under a share transfer agreement in February 2020.

With respect to programs for which Brii Bio exercises its options, Brii Bio will be required to pay the Company an option exercise fee for each such Vir program ranging from the mid-single-digit millions up to $20.0 million, determined

based on the commercial potential of the licensed program. Brii Bio will also be required to pay regulatory milestone payments on a licensed product-by-licensed product basis ranging from the mid-single-digit millions up to $30.0 million, also determined based on the commercial potential of such program. Following commercialization, Brii Bio will be required to make sales milestone payments based on certain specified levels of aggregate annual net sales of products arising from each licensed program in the China Territory, up to an aggregate of $175.0 million per licensed program. Brii Bio also will pay royalties to the Company that range from the mid-teens to the high-twenties, as described below.

Upon exercise of each option for a Brii Bio program, the Company will be required to pay to Brii Bio an option exercise fee ranging from the low tens of millions to up to $50.0 million, determined based on the commercial potential of the licensed program. The Company will be required to make regulatory milestone payments to Brii Bio on a licensed product-by-licensed product basis ranging from the low tens of millions up to $100.0 million, also determined based on the commercial potential of such program. The Company will also be required to make sales milestone payments based on certain specified levels of aggregate annual net sales of products in the United States arising from each licensed program, up to an aggregate of $175.0 million per licensed program.

In addition, the Company is obligated under the Brii Agreement to pay Brii Bio tiered royalties based on net sales of products arising from the licensed programs in the United States, and Brii Bio is obligated to pay the Company tiered royalties based on net sales of products arising from the licensed programs in the China Territory. The rates of royalties payable by the Company to Brii Bio, and by Brii Bio to the Company, on net sales range from mid-teens to high-twenties. Each party’s obligations to pay royalties expires, on a product-by-product and territory-by-territory basis, on the latest of 10 years after the first commercial sale of such licensed product in the United States or China Territory, as applicable; the expiration or abandonment of licensed patent rights that cover such product in the United States or China Territory, as applicable; and the expiration of regulatory exclusivity in the United States or the China Territory, as applicable. Royalty rates are subject to specified reductions and offsets.

The Brii Agreement will remain in force until the expiration of all options or, if any option is exercised, expiration of all royalty payment obligations for all licensed products within such licensed program, unless terminated in its entirety or on a program-by-program basis by either party. Each party may terminate for convenience all rights and obligations with respect to any program for which it has an option, with 30 days’ written notice (if the terminating party has not exercised an option for such program) or 180 days’ notice (following the exercise of an option for such program). The Brii Agreement may also be terminated by either party for insolvency of the other party, and either party may terminate the Brii Agreement in its entirety or on a program-by-program basis for the other party’s uncured material breach on 60 days’ written notice (or 30 days’ notice following failure to make payment).

From May 2018 until July 2021, the Brii Bio Parent IPO closing date, Brii Bio Parent and its wholly-owned subsidiary Brii Bio were determined to be variable interest entities ("VIE") due to their reliance on future financing and having insufficient equity at risk. However, the Company did not have the power to direct activities that most significantly impact the economic success of these entities and was not considered the primary beneficiary of these entities. Therefore, the Company did not consolidate Brii Bio Parent or Brii Bio. Subsequent to the Brii Bio Parent IPO, the Company determined that these entities are no longer VIEs. In addition, as Brii Bio Parent is a publicly-traded company, the Company's investment in its ordinary shares became a marketable equity investment with readily determinable fair value and is then subsequently remeasured to fair value at each reporting date (see Note 3—Fair Value Measurements). Prior to the Brii Bio Parent IPO, the Company accounted for its investment in Brii Bio Parent, which had a carrying value of $5.7 million, at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment from the same issuer.

Under the Brii Agreement, the Company also has a contract liability of $3.8 million within noncurrent deferred revenue which represents deferred consideration for the remaining three options that the Company granted to Brii Bio. The deferred consideration will be recognized when Brii Bio exercises its options or the options expire.

Option Exercise by Brii Bio

In June 2020, Brii Bio exercised its option to obtain exclusive rights to develop and commercialize compounds and products arising from VIR-2218 in the China Territory. In consideration of the Company’s grant to Brii Bio of an exclusive license related to VIR-2218 in the China Territory, the Company received a $20.0 million option exercise fee in connection with the option exercise. Also, the Company is eligible to receive the following payments related to VIR-2218 in the China

Territory: a $30.0 million regulatory milestone payment, up to $175.0 million in sales-based milestone payments, and royalties on net sales ranging from high-teens to high-twenties.

The Company evaluated the transaction under ASC 606 and identified one performance obligation consisting of the license granted to Brii Bio. Under the Brii Agreement, Brii Bio is responsible for performing all research and development activities and the Company does not have any other performance obligations within the context of ASC 606 under the arrangement after the option exercise. The transaction price is determined to be $22.7 million which consists of the $20.0 million option exercise fee and $2.7 million of the deferred revenue allocated to the VIR-2218 option at the inception of the Brii Agreement. The Company determined that the license is considered a functional intellectual property that is a distinct performance obligation under ASC 606. Specifically, the Company believes the license is capable of being distinct, as Brii Bio has the capabilities to develop the license either on its own or by contracting other third parties. Brii Bio can benefit from the license at the time of grant and therefore, the related performance obligation is satisfied at a point in time. Additionally, all potential future milestones and other payments are constrained because the Company cannot conclude it is probable that a significant reversal in the amount recognized would not occur. The Company will re-evaluate the transaction price in each reporting period.

During the years ended December 31, 2021 and 2020, the Company recognized $0.4 million and zero, respectively, as contract revenue from the supply of biological materials to Brii Bio. During the years ended December 31, 2021 and 2020, the Company recognized zero and $22.7 million as license revenue from a related party. The Company separately paid $10.0 million, half of the option exercise proceeds, to Alnylam in connection with the Amended Alnylam Agreement that was recognized as research and development expense during the second quarter of 2020.

Alnylam

October 2017 Agreement

In October 2017, the Company entered into the collaboration and license agreement with Alnylam (the “Alnylam Agreement”) for the development of siRNA products for the treatment of HBV and following the exercise of certain program options, the development and commercialization of siRNA products directed to up to four other infectious disease targets selected by the Company. The technology licensed under the Alnylam Agreement forms the basis of the Company’s siRNA technology platform.

Under the Alnylam Agreement, the Company obtained a worldwide, exclusive license to develop, manufacture and commercialize the HBV siRNA product candidates, including VIR-2218, for all uses and purposes other than agricultural, horticultural, forestry, aquaculture and other residential applications, such excluded fields, the Excluded Fields. In addition, Alnylam granted the Company an exclusive option, for each of the infectious disease siRNA programs directed to the Company’s selected targets, to obtain a worldwide, exclusive license to develop, manufacture and commercialize siRNA products directed to the target of each such program for all uses and purposes other than the Excluded Fields. On a product-by-product basis for each product arising from the HBV and, following the Company’s option exercise, the infectious disease programs, Alnylam has an exclusive option, exercisable during a specified period prior to the initiation of a Phase 3 clinical trial for each such product, to negotiate and enter into a profit-sharing agreement for such product.

The Company and Alnylam are jointly responsible for funding the initial research and development activities for VIR-2218 through the completion of proof of concept trials. Prior to the exercise of the Company’s option for each siRNA program directed to one of the Company’s selected infectious disease targets, Alnylam is responsible for conducting all development activities, at the Company’s expense, in accordance with an agreed-upon development plan. Following the Company’s exercise of an option for a program and payment of the program option exercise fee and any outstanding program costs due to Alnylam, the Company is solely responsible, at the Company’s expense (subject to Alnylam’s exercise of a profit-sharing option), for conducting all development, manufacture and commercialization activities for products arising from each such program. If Alnylam exercises a profit-sharing option for a product, the Company will negotiate the terms of such profit-sharing agreement, which will include sharing equally with Alnylam all subsequent costs associated with the development of such product, as well as the profits and losses in connection with such product, subject to reimbursement by Alnylam of a portion of specified development costs in certain circumstances.

Under the Alnylam Agreement, the Company paid Alnylam an upfront fee of $10.0 million and issued to Alnylam 1,111,111 shares of the Company's common stock. Additionally, the receipt of consideration from Brii Bio as discussed above triggered a requirement under the Alnylam Agreement to transfer a portion of the consideration, consisting of equity in Brii Bio Parent valued at $0.8 million, to Alnylam.

Upon the achievement of a certain development milestone, as further discussed below, the Company was obligated to issue shares of the Company's common stock equal to the lesser of (i) 1,111,111 shares or (ii) a certain number of shares based on the Company's stock price at the time such milestone is achieved (the "Milestone Shares"). The Company will be required to pay Alnylam up to $190.0 million in the aggregate for the achievement of specified development and regulatory milestones by the first siRNA product directed to HBV, and up to $115.0 million for the achievement of specified development and regulatory milestones by the first product directed to the target of each infectious disease siRNA program for which the Company exercised its option. Following commercialization, the Company will be required to pay to Alnylam up to $250.0 million in the aggregate for the achievement of specified levels of net sales by siRNA products directed to HBV and up to $100.0 million for the achievement of specified levels of net sales by products directed to the target of each infectious disease siRNA program for which the Company exercised its option. The Company may also be required to pay Alnylam tiered royalties at percentages ranging from the low double-digits to mid-teens on annual net sales of HBV products, and tiered royalties at percentages ranging from the high single-digits to the sub-teen double-digits on annual net sales of licensed infectious disease products, in each case subject to specified reductions and offsets. The royalties are payable on a product-by-product and country-by-country basis until the later of the expiration of all valid claims of specified patents covering such product in such country and 10 years after the first commercial sale of such product in such country.

The term of the Alnylam Agreement will continue, on a product-by-product and country-by-country basis, until the expiration of all royalty payment obligations under the Alnylam Agreement. If the Company does not exercise its option for an infectious disease program directed to one of its selected targets, the Alnylam Agreement will expire upon the expiration of the applicable option period with respect to such program. However, if Alnylam exercises its profit-sharing option for any product, the term of the Alnylam Agreement will continue until the expiration of the profit-sharing arrangement for such product. The Company may terminate the Alnylam Agreement on a program-by-program basis or in its entirety for any reason on 90 days' written notice. Either party may terminate the agreement for cause for the other party's uncured material breach on 60 days' written notice (or 30 days' notice for payment breach), or if the other party challenges the validity or enforceability of any patent licensed to it under the Alnylam Agreement on 30 days' notice.

In March 2020, the Company achieved the specified development milestone relating to the Milestone Shares, which was accounted for as an embedded derivative. Consequently, the Company remeasured and reclassified the derivative liability to additional paid-in capital based on the estimated fair value of $29.2 million. The Company issued Alnylam 1,111,111 shares of its common stock and paid Alnylam $15.0 million in the second quarter of 2020.

Second and Third Amendments

In March and April 2020, the Company and Alnylam entered into the second and third amendments to the Alnylam Agreement (as amended, the "Amended Alnylam Agreement") to expand the parties' existing collaboration to include the development and commercialization of siRNA products targeting SARS-CoV-2, and potentially other related coronaviruses, and up to three targeting human host factors for SARS-CoV-2 (collectively, the "COVID Collaboration Targets").

In December 2020, the Company and Alnylam entered into a letter amendment (the "Letter Agreement"), further amending the Amended Alnylam Agreement, to modify certain funding and governance provisions in connection with the siRNA products directed to the COVID Collaboration Targets, including VIR-2703 (the "COV Target"), and to modify certain rights of each party with respect to products arising from such programs. Pursuant to the Letter Agreement, Alnylam was responsible for conducting pre-clinical research activities set forth in the existing workplan for the COV Target (the "COV Workplan") at its discretion and sole expense, and the Company was no longer obligated to reimburse Alnylam for any share of costs incurred by Alnylam in conducting activities under the COV Workplan after July 1, 2020. In July 2021, Alnylam elected to discontinue the development of the COV Target, and all other related research and development activities in accordance with their rights under the Letter Agreement. As a result, the COV Target and the siRNA program related thereto are no longer included within the Amended Alnylam Agreement and all rights to the siRNA program directed to the COV Target reverted to Alnylam.

Research and Development Expenses Recognized for the Period

The Company incurred expenses under the Amended Alnylam Agreement of $11.2 million and $18.1 million during the years ended December 31, 2021 and 2019, respectively. For the year ended December 31, 2020, in addition to the Milestone Shares, $15.0 million milestone payment to Alnylam, and the $10.0 million payment resulting from Brii Bio's option exercise in the first half of 2020, the Company incurred expenses of $11.5 million under the Amended Alnylam Agreement.

WuXi Biologics

In February 2020, the Company entered into a development and manufacturing collaboration agreement with WuXi Biologics (Hong Kong) Limited ("WuXi Biologics") (the "WuXi Biologics Collaboration Agreement"), for the clinical development, manufacturing, and commercialization of the Company's proprietary antibodies developed for SARS-CoV-2. Under the WuXi Biologics Collaboration Agreement, WuXi Biologics will conduct cell-line development, process and formulation development, and initial manufacturing for clinical development. WuXi Biologics will have the right to commercialize products incorporating such SARS-CoV-2 antibodies in greater China under an exclusive license granted for the selected SARS-CoV-2 antibodies that have been developed. The Company will have the right to commercialize such products in all other markets worldwide.

WuXi Biologics will perform mutually agreed process and clinical development and manufacturing activities, under individual statements of work. In addition, the parties agreed that WuXi Biologics will pay the Company tiered royalties at percentages ranging from the high single-digits to mid-teens on annual net sales of all products sold by WuXi Biologics in greater China. The royalties are payable for a specified, standard royalty term. In addition, if WuXi Biologics sublicenses its commercialization rights to a third party, WuXi Biologics will pay the Company a percentage of the sublicense revenue received from such third party. The WuXi Biologics Collaboration Agreement will continue until the expiration of WuXi Biologics' payment obligations to the Company, unless terminated earlier. If terminated earlier, the WuXi Biologics Collaboration Agreement may be terminated by (i) the written agreement of both parties, (ii) WuXi Biologics following the one year anniversary of the WuXi Biologics Collaboration Agreement effective date with respect to the entire agreement or on a product by product basis with 90 days' prior written notice or (iii) by either party if the other party materially breaches the WuXi Biologics Collaboration Agreement and fails to cure such breach within 60 days.

Rockefeller University

In July 2018, the Company entered into an exclusive license agreement with The Rockefeller University ("Rockefeller"), which was amended in May 2019, in September 2020, and in March 2021 (the "Rockefeller Agreement"). Under the Rockefeller Agreement, Rockefeller granted the Company a worldwide exclusive license under certain patent rights, and a worldwide non-exclusive license under certain materials and know-how covering certain antibody variants relating to a specified mutation leading to enhanced antibody function and utility, to develop, manufacture and commercialize infectious disease products covered by the licensed patents, or that involve the use or incorporation of the licensed materials and know-how, in each case for all uses and purposes for infectious diseases. The Company uses technology licensed under the Rockefeller Agreement in the Company's antibody platform and in the Company's product candidates VIR-3434 and VIR-7832.

The Company paid Rockefeller an upfront fee of $0.3 million for entry into the Rockefeller Agreement, and is required to pay annual license maintenance fees of $1.0 million, which will be creditable against royalties following commercialization. In addition, for the achievement of specified development, regulatory and commercial success milestone events, the Company will be required to pay up to $80.3 million, in the aggregate, for up to six infectious disease products. Any follow-on products beyond six products may result in additional milestone event payments. The Company will also be required to pay to Rockefeller a royalty at a low single-digit percentage rate on net sales of licensed products, subject to certain adjustments. The Company's obligation to pay royalties to Rockefeller will terminate, on a product-by-product and jurisdiction-by-jurisdiction basis, upon the latest of the expiration of the last valid claim of a licensed patent in such jurisdiction, the expiration of all regulatory exclusivity in such jurisdiction or 12 years following the first commercial sale of the applicable licensed product in such jurisdiction.

Under the Rockefeller Agreement, the Company recognized a total of $4.7 million, $1.3 million and $1.0 million during the years ended December 31, 2021, 2020 and 2019, respectively, as research and development expenses related to certain development milestone payments, annual license maintenance fees, and estimated sublicense fees.

The Rockefeller Agreement will remain in force, absent earlier termination, until the expiration of all of the Company's obligations to pay royalties to Rockefeller in all jurisdictions. The Company has the right to terminate the Rockefeller Agreement in its entirety, or in part, for any reason on 60 days' written notice to Rockefeller. Rockefeller may terminate the Rockefeller Agreement on 90 days' written notice for the Company's uncured material breach, or if the Company challenges the validity or enforceability of any of the licensed patents, or immediately in the event of the Company's insolvency. Rockefeller may also terminate the Rockefeller Agreement if the Company ceases to carry on business with respect to the rights granted to the Company under the agreement.

MedImmune

In September 2018, the Company entered into a license agreement, which was amended in September 2020 (the "MedImmune Agreement"), with MedImmune, LLC ("MedImmune"), under which the Company obtained a worldwide, exclusive license to develop and commercialize half-life extended versions of two specified antibodies under development by MedImmune that target influenza A and influenza B, respectively, for all uses in humans and animals. The Company is developing VIR-2482 using technology licensed under the MedImmune Agreement.

In consideration for the grant of the licenses under the MedImmune Agreement, the Company made an upfront payment to MedImmune of $10.0 million.

The Company will be obligated to make development, regulatory, and commercial milestone payments of up to $331.5 million in the aggregate relating to influenza A and influenza B products. MedImmune will also be entitled to receive tiered royalties based on net sales of products containing half-life extended versions of antibodies directed to influenza A and/or influenza B at percentages ranging from the mid-single-digits to sub-teen double-digits.

The MedImmune Agreement will remain in force until the expiration on a country-by-country and product-by-product basis of all of the Company's obligations to pay royalties to MedImmune. The Company may terminate the MedImmune Agreement in its entirety or on a product-by-product basis, for convenience, upon 120 days' notice. Either party may terminate the MedImmune Agreement for cause for the other party's uncured material breach on 60 days' notice or immediately in the event of bankruptcy of the other party. Additionally, MedImmune may terminate the MedImmune Agreement for cause on 30 days' written notice if the Company challenges the validity or enforceability of the patents to which the Company has obtained a license under the MedImmune Agreement.

In the third quarter of 2019, the Company achieved and paid one of the specified development milestones relating to influenza A under the MedImmune Agreement. The milestone payment was expensed to research and development in 2019.

Xencor

August 2019 License Agreement

In August 2019, the Company entered into a patent license agreement, which was amended in February 2021 (the "2019 Xencor Agreement") with Xencor, Inc. ("Xencor"). Under the 2019 Xencor Agreement, as amended, the Company obtained a non-exclusive, sublicensable (only to its affiliates and subcontractors) license to incorporate Xencor's licensed technologies into, and to evaluate, antibodies that target influenza A and HBV, and a worldwide, non-exclusive, sublicensable license to develop and commercialize products containing such antibodies incorporating such technologies for all uses, including the treatment, palliation, diagnosis and prevention of human or animal diseases, disorders or conditions. The Company is obligated to use commercially reasonable efforts to develop and commercialize an antibody product that incorporates Xencor's licensed technologies, for each of the influenza A and HBV research programs. These technologies are used in the Company's VIR-2482, incorporating Xencor's Xtend technology, and VIR-3434, incorporating Xencor's Xtend and other Fc technologies.

In consideration for the grant of the license, the Company paid Xencor an upfront fee. For each of the influenza A and HBV research programs, the Company will be required to pay Xencor development and regulatory milestone payments of up to $17.8 million in the aggregate, and commercial sales milestone payments of up to $60.0 million in the aggregate, for a total of up to $77.8 million in aggregate milestones for each program and $155.5 million in aggregate milestones for both programs. On a product-by-product basis, the Company will also be obligated to pay tiered royalties based on net sales of licensed products ranging from low- to mid-single-digits. The royalties are payable, on a product-by-product and country-by-country basis, until the expiration of the last to expire valid claim in the licensed patents covering such product in such country.

Under the 2019 Xencor Agreement, the Company recognized $0.5 million, $0.3 million and $0.8 million during the years ended December 31, 2021, 2020 and 2019, respectively, as research and development expenses related to certain development milestone payments.

March 2020 License Agreement

In March 2020, the Company entered into a patent license agreement, which was amended in February 2021 (the "2020 Xencor Agreement") with Xencor under which the Company obtained a non-exclusive, sublicensable (only to the Company's affiliates and subcontractors) license to incorporate Xencor's licensed technologies into, and to evaluate, antibodies that target any component of a coronavirus, including SARS-CoV-2, SARS-CoV and MERS-CoV, and a worldwide, non-exclusive, sublicensable license to develop and commercialize products containing such antibodies incorporating such technologies for all uses, including the treatment, palliation, diagnosis and prevention of human or animal diseases, disorders or conditions. The Company is obligated to use commercially reasonable efforts to develop and commercialize an antibody product that incorporates Xencor's licensed technologies, for each of the coronavirus research programs. These technologies are used in the Company's sotrovimab, incorporating Xencor's Xtend technology, and VIR-7832, incorporating Xencor's Xtend and other Fc technologies.

In consideration for the grant of the license, the Company is obligated to pay royalties based on net sales of licensed products at the mid-single-digits. The royalties are payable, on a product-by-product and country-by-country basis, until the later of the expiration of the last to expire valid claim in the licensed patents covering such product in such country or 12 years. During the year ended December 31, 2021, the Company recognized $52.7 million, as cost of revenue for royalties due to Xencor from the sale of sotrovimab.

The amended 2020 Xencor Agreement and 2019 Xencor Agreement will remain in force, on a product-by-product and country-by-country basis, until the expiration of all royalty payment obligations under each of the respective agreements. The Company may terminate each agreement in its entirety, or on a target-by-target basis, for convenience upon 60 days' written notice. Either party may terminate each agreement for the other party's uncured material breach upon 60 days' written notice (or 30 days in the case of non-payment) or in the event of bankruptcy of the other party immediately upon written notice. Xencor may terminate each agreement immediately upon written notice if the Company challenges, or upon 30 days' written notice if any of the Company's sublicensees challenge, the validity or enforceability of any patent licensed to the Company under each respective agreement.

8. Balance Sheet Components

Property and Equipment, net

Property and equipment, net consists of the following:

	December 31,	
	2021	2020
	(in thousands)	
Laboratory equipment	$ 20,012	$ 16,769
Computer equipment	1,112	556
Furniture and fixtures	1,443	1,444
Leasehold improvements	7,834	7,274
Construction in progress	26,925	1,135
Property and equipment, gross	57,326	27,178
Less accumulated depreciation and amortization	(14,492)	(9,232)
Total property and equipment, net	$ 42,834	$ 17,946

Depreciation and amortization expenses were $5.3 million, $4.4 million and $3.3 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Accrued and Other Liabilities

Accrued and other liabilities consist of the following:

	December 31,	
	2021	2020
	(in thousands)	
Milestone payable	$ 95,000	$ —
Accrued royalties	58,672	—
Research and development expenses	28,073	49,384
Payroll and related expenses	29,753	17,060
Accrued income taxes	6,217	—
Excess funds payable under grant agreements	1,825	3,467
Operating lease liabilities, current	3,927	3,625
Other professional and consulting expenses	2,791	2,595
Other accrued expenses	10,254	805
Total accrued and other liabilities	$ 236,512	$ 76,936

9. Commitments and Contingencies

Lease Agreements

The Company has various operating lease arrangements for office and laboratory spaces located in California, Oregon, Missouri, and Switzerland with contractual lease periods expiring between 2022 and 2033. These leases require monthly lease payments that may be subject to annual increases throughout the lease term. Certain lease agreements also provide the Company with the option to renew for additional periods ranging from one to five years. These renewal options are not considered in the remaining lease term unless it is reasonably certain that the Company will exercise such options.

In October 2021, the Company entered into a new sublease agreement for office and laboratory spaces in Missouri that will expire in December 2028, with no option to renew. Under this sublease arrangement, the Company is entitled to tenant improvement allowance of up to $14.7 million related to the design and construction of certain Company improvements.

In December 2021, the Company entered into a lease agreement with the new owner of the building at 1800 Owens Street in San Francisco for the lease of approximately 133,896 rentable square feet of office and laboratory space of such building. The Company previously occupied the same premises under a sublease agreement with a sublessor, which sublease was terminated concurrently with the execution of the new lease agreement. Accordingly, the related ROU asset and lease liability under the sublease arrangement were extinguished and the Company recognized a gain of $4.8 million in the consolidated statement of operations for the year ended December 31, 2021. The new lease will expire in December 2033, with no option to renew. Under this lease arrangement, the Company is entitled to tenant improvement allowance of up to $37.5 million related to the design and construction of certain Company improvements.

Under two of the operating lease arrangements in California and Missouri discussed above, the Company expects to fully utilize the tenant improvement allowance, and therefore, such amount is treated as a lease incentive that is payable to the Company at the lease commencement date.

Throughout the term of the lease agreements, the Company is responsible for paying certain operating costs, in addition to rent, such as common area maintenance, taxes, utilities and insurance. These additional charges are considered variable lease costs and are recognized in the period in which the costs are incurred.

The following table contains a summary of the lease costs recognized under ASC 842 and additional information related to operating leases (in thousands, except weighted average amounts):

	Year Ended December 31,	
	2021	2020
Operating lease cost	$ 11,921	$ 4,591
Short-term lease cost	261	459
Variable lease cost	4,256	2,299
Total least cost	$ 16,438	$ 7,349
Other Information		
Weighted average remaining lease term (in years)	10.4	10.6
Weighted average incremental borrowing rate	5.2%	7.7%
Cash paid for amounts included in the measurement of operating lease liabilities	$ 6,250	$ 5,081
ROU assets obtained in exchange for new operating lease liabilities	$ 77,187	$ 48,495

The discount rate used to determine the present value of the lease payments is our estimated collateralized incremental borrowing rate, based on the yield curve for the respective lease terms, as we generally cannot determine the interest rate implicit in the leases.

The maturity of the Company’s operating lease liabilities as of December 31, 2021 was as follows (in thousands):

	Amounts
2022	$ 12,432
2023	19,082
2024	18,233
2025	15,917
2026	16,353
Thereafter	103,413
Total lease payments	185,430
Less: imputed interest	(45,261)
Less: net tenant improvement allowance yet to be received	(52,217)
Present value of operating lease liabilities	$ 87,952

The following amounts were recorded in the consolidated balance sheets as of December 31, 2021 and 2020 (in thousands):

	December 31,	
	2021	2020
Operating Leases		
Prepaid expenses and other current assets [(1)]	$ 49,536	$ 7,913
Operating ROU assets	87,220	61,947
Accrued and other liabilities	$ 3,927	$ 3,625
Operating lease liabilities, noncurrent	133,561	66,556
Total operating lease liabilities	$ 137,488	$ 70,181

(1) For certain operating leases, lease incentives expected to be received exceeds the minimum lease payments expected to be paid over the next 12 months, therefore the net amount is recorded in prepaid expenses and other current assets.

Rent expense under the prior lease accounting standard was $4.4 million for the year ended December 31, 2019.

Manufacturing and Supply Letter Agreements

Letter Agreement, Assignment and Master Services Agreement with Samsung

On April 9, 2020, the Company and Samsung Biologics Co., Ltd. (“Samsung”) entered into a binding letter agreement (the “Samsung Letter Agreement”), under which Samsung will perform process development and manufacturing services for the Company’s SARS-CoV-2 antibody program. Under the terms of the Samsung Letter Agreement, the Company had committed to purchase a firm and binding capacity reservation for a specified number of manufacturing slots in 2021 and 2022. The Company was obligated to pay a total of approximately $362 million for such capacity reservation on a take-or-pay basis regardless of whether such manufacturing slots are utilized by the Company, subject to annual adjustment based on the Korean Consumer Price Index, which also includes certain fees relating to project management and technology transfer. The amounts were to be payable during 2021 and 2022 and invoiced on a per-batch basis, with shortfalls invoiced at the end of the year in which such shortfall occurs.

On August 4, 2020, the Company, GlaxoSmithKline Trading Services Limited (“GSKTSL”) and Samsung entered into an Assignment and Novation Agreement effective as of July 31, 2020 under which the Company assigned and transferred to GSKTSL all of the Company’s right, title, and interest in, to and under the Samsung Letter Agreement, and GSKTSL became the Company’s successor in interest in and to all of the Company’s rights, duties, and obligations in, to and under the Samsung Letter Agreement. On August 4, 2020, GSKTSL entered into a Master Services Agreement with Samsung effective as of July 31, 2020 (the “Samsung MSA”), thereby superseding the Samsung Letter Agreement, and under which, among other things, Samsung will perform technology transfer, development and manufacturing services for clinical and commercial supply of antibody products under the Company’s SARS-CoV-2 antibody program.

Letter Agreement, Assignment and Master Services Agreement with WuXi Biologics

On June 15, 2020, the Company and WuXi Biologics entered into a binding letter of intent (the “WuXi Biologics Letter Agreement”), under which WuXi Biologics will perform certain development and manufacturing services for the Company’s SARS-CoV-2 antibody program. Under the terms of the WuXi Biologics Letter Agreement, the Company had committed to purchase a firm and binding capacity reservation for the manufacture of a specified number of batches of drug substance of the Company’s SARS-CoV-2 antibody in 2020 and 2021. In addition, the Company had the right to order an additional specified number of batches of drug substance, provided it makes such election by a specified date in the fourth calendar quarter in 2020. WuXi Biologics is obligated to reserve such manufacturing slots on a non-cancellable basis and will manufacture the agreed number of batches of drug substance per an agreed manufacturing schedule. The Company was obligated to pay a total of approximately $130.0 million for such capacity reservation, if all batches are manufactured, inclusive of estimated raw material costs, with between 70% and 80% of the batch production fees owed to WuXi Biologics on a take-or-pay basis regardless of whether such manufacturing slots are utilized by the Company. The amounts were to be payable during 2020 and 2021 and invoiced on a per-batch basis. The SARS-CoV-2 antibody drug substance contemplated to

be manufactured per the terms of the WuXi Biologics Letter Agreement will be utilized in connection with progressing the development and commercialization of the SARS-CoV-2 antibody product under the Company's collaboration with GSK.

On August 4, 2020, the Company, GSKTSL and WuXi Biologics entered into an Assignment and Novation Agreement effective as of July 29, 2020 under which the Company assigned and transferred to GSKTSL all of the Company's right, title, and interest in, to and under the WuXi Biologics Letter Agreement, and GSKTSL became the Company's successor in interest in and to all of the Company's rights, duties, and obligations in, to and under the WuXi Biologics Letter Agreement. On August 4, 2020, GSKTSL entered into a non-exclusive Master Services Agreement for Commercial Manufacture of Drug Substance with WuXi Biologics effective as of July 29, 2020 (the "WuXi Biologics MSA"), thereby superseding the WuXi Biologics Letter Agreement, and pursuant to which, among other things, WuXi Biologics will perform development and manufacturing services for clinical and commercial supply of antibody products under the Company's SARS-CoV-2 antibody program.

GSKTSL entered into the WuXi Biologics MSA and Samsung MSA in connection with the performance of the obligations of the Company and GSK, under the 2020 GSK Agreement. Per the terms of the 2020 GSK Agreement, the Company will continue to be responsible for 72.5% of the costs under each of the WuXi Biologics MSA and Samsung MSA, and GSK will bear 27.5% of such costs under each of the Samsung MSA and the WuXi Biologics MSA, subject to certain conditions and exceptions.

Indemnification

In the ordinary course of business, the Company enters into agreements that may include indemnification provisions. Under such agreements, the Company may indemnify, hold harmless and defend an indemnified party for losses suffered or incurred by the indemnified party. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. In addition, the Company has entered into indemnification agreements with its directors and certain officers that may require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. To date, no demands have been made upon the Company to provide indemnification under these agreements, and thus, there are no indemnification claims that the Company is aware of that could have a material effect on the Company's consolidated balance sheets, consolidated statements of operations, or consolidated statements of cash flows.

10. Related Party Transactions

As a result of the Brii Agreement in May 2018, the Company holds a minority equity interest in Brii Bio through its parent company, Brii Bio Parent. At the time when the Company entered into the Brii Agreement, the Company's Chief Executive Officer, or CEO, and another member of the Company's board of directors served on Brii Bio Parent's board of directors. The Company's CEO, who is also a member of the Company's board of directors, resigned from Brii Bio Parent's board of directors in June 2021. As of December 31, 2021, one member of the Company's board of directors still serves on Brii Bio Parent's board of directors.

In January 2019, the Company issued 18,202,213 shares of Series B convertible preferred stock to existing Series A-1 preferred stockholders. See further discussion in Note 11—Convertible Preferred Stock.

11. Convertible Preferred Stock

Prior to the IPO, under the Company's amended and restated certificate of incorporation, the Company was authorized to issue two classes of shares: preferred stock and common stock. The preferred stock was issued in series.

In January 2019, under the Amended A&R Series A-1 and B Purchase Agreement, the Company sold an aggregate of 18,202,213 shares of Series B convertible preferred stock at $18.00 per share for net proceeds of $327.5 million in two closings. The Company was authorized to sell up to 4,020,009 additional shares of Series B convertible preferred stock in one or more additional closings.

Upon closing of the IPO, all of the outstanding convertible preferred stock automatically converted into 88,112,733 shares of common stock. After the closing of the IPO, there were no shares of convertible preferred stock outstanding.

12. Convertible Preferred Stock Warrant Liability

In September 2016, the Company issued a warrant to purchase an aggregate of 244,444 shares of the Company's Series A-1 convertible preferred stock with an exercise price of $4.50 per share in connection with the termination of a sponsor research agreement. The warrant was fully vested upon the issuance date and had an expiration date of September 11, 2026. The warrant was initially accounted for as a liability and was subject to remeasurement at each reporting period, with changes in estimated fair value recognized as a component of other income (expense), net. Upon the completion of the IPO in October 2019, the warrant automatically converted into a warrant to purchase 244,444 shares of common stock. Therefore, the convertible preferred stock warrant liability was reclassified to additional paid-in capital. In May 2020, the holder exercised its warrant in a cashless exercise for which the Company issued an aggregate of 211,774 shares of common stock.

13. Stock-Based Awards

2019 Equity Incentive Plan

In September 2019, the Company's board of directors adopted, with the approval of its stockholders, the 2019 Equity Incentive Plan (the "2019 Plan") for the issuance of incentive stock options ("ISO"), non-qualified stock options ("NSO"), stock appreciation rights ("SARs"), restricted stock, other stock awards and performance cash awards, to employees, non-employee directors, and consultants. The 2019 Plan became effective concurrent with the IPO.

Awards granted under the 2019 Plan expire no later than 10 years from the date of grant. For ISO and NSO, the option price shall not be less than 100% of the estimated fair value on the date of grant. Options granted typically vest over a four-year period but may be granted with different vesting terms. As of December 31, 2021, there are 9,092,936 shares available for the Company to grant under the 2019 Plan.

2016 Equity Incentive Plan

In September 2016, the Company adopted the 2016 Equity Incentive Plan (the "2016 Plan") for the issuance of ISO, NSO, SARs, restricted stock and other stock awards, to employees, non-employee directors, and consultants under terms and provisions established by the Company's board of directors and approved by the stockholders.

Awards granted under the 2016 Plan expire no later than 10 years from the date of grant. For ISO and NSO, the option price shall not be less than 100% of the estimated fair value on the date of grant. Options granted typically vest over a four-year period but may be granted with different vesting terms.

In conjunction with adopting the 2019 Plan, the Company discontinued the 2016 Plan with respect to the new equity awards.

2019 Employee Stock Purchase Plan

In September 2019, the Company's board of directors adopted, with the approval of its stockholders, the ESPP. The ESPP became effective on the completion of the Company's IPO.

The ESPP initially authorized the issuance of 1,280,000 shares of the Company's common stock under purchase rights granted to its employees or employees of any of the Company's designated affiliates. The number of shares of the Company's common stock reserved for issuance is subject to an automatic increase at each calendar year. Under the ESPP, the Company may specify offerings with durations of not more than 27 months and may specify shorter purchase periods within each offering. The ESPP allows eligible employees to purchase shares of the Company's common stock at a discount through payroll deductions of up to 15% of their earnings, subject to any plan limitations. Unless otherwise determined by the Company's board of directors, employees can purchase shares at 85% of the lower of the fair market value of the Company's common stock on the first date of an offering or the purchase date. During the year ended December 31, 2021, 65,021 shares were issued under the ESPP.

Stock Option Activity

Activity under the Company's stock option plans is set forth below:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2020	9,798,282	$ 19.10	8.6	
Granted	3,294,000	$ 58.68		
Exercised	(1,622,718)	$ 8.06		
Forfeited	(1,160,636)	$ 34.55		
Outstanding at December 31, 2021	10,308,928	$ 31.75	8.2	$ 160,378
Vested and expected to vest at December 31, 2021	10,308,928	$ 31.75	8.2	$ 160,378
Vested and exercisable at December 31, 2021	4,238,107	$ 17.29	7.5	$ 105,698

The aggregate intrinsic value of options exercised during the years ended December 31, 2021, 2020 and 2019 was $65.1 million $53.1 million and $5.5 million, respectively.

During the years ended December 31, 2021, 2020, and 2019, the estimated weighted-average grant date fair value of the options granted was $47.62, $25.49, and $7.83 per share, respectively.

As of December 31, 2021, the Company expects to recognize the remaining unamortized stock-based compensation expense of $176.4 million related to stock options, over an estimated weighted average period of 2.5 years.

Stock Options Granted to Employees

The fair value of stock options granted to employees was estimated on the date of grant using the Black-Scholes option- pricing model with the following assumptions:

	Year Ended December 31,		
	2021	2020	2019
Expected term of options (in years)	5.3 – 6.1	5.0 – 6.1	5.9 – 6.1
Expected stock price volatility	103.1% – 112.1%	88.8% – 108.6%	86.5% – 89.4%
Risk-free interest rate	0.6% – 1.3%	0.3% – 1.2%	1.5% – 2.5%
Expected dividend yield	—	—	—

The valuation assumptions for stock options was determined as follows:

Expected Term—The expected term represents the period that the options granted are expected to be outstanding and is determined using the simplified method (based on the mid-point between the vesting date and the end of the contractual term) as the Company has concluded that its stock option exercise history does not provide a reasonable basis upon which to estimate expected term.

Expected Volatility—The expected volatility was determined by examining the historical volatilities for industry peers and using an average of historical volatilities of the Company's industry peers as the Company does not have a sufficient historical trading history for its stock. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its stock price becomes available.

Risk-Free Interest Rate—The Company based the risk-free interest rate over the expected term of the options based on the constant maturity rate of U.S. Treasury securities with similar maturities as of the date of the grant.

Expected Dividend Rate—The expected dividend is zero as the Company has not paid nor does it anticipate paying any dividends on its profit interest units in the foreseeable future.

Employees Stock Purchase Plan

In June 2021, the Company initiated its first offering period under the ESPP. Each offering period is six months, which commences on the grant date on or after June 1 and December 1 of each year and ends on the purchase date on or before November 30 and May 31 of each year.

The fair value of employees' purchase rights under the ESPP was estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions for the year ended December 31, 2021:

Expected term of ESPP (in years)	0.5
Expected stock price volatility	76.1% - 144.1%
Risk-free interest rate	0.04% - 0.1%
Expected dividend yield	—

The expected term of employees' purchase rights is equal to the purchase period. The expected volatility was determined based on the Company's historical volatility. The risk-free interest rate is based on the constant maturity rate of U.S. Treasury securities with similar maturities as of the date of the grant over the expected term of the employees' purchase rights. The expected dividend is zero as the Company has not paid nor does it anticipate paying any dividends on its profit interest units in the foreseeable future. Based on the Black-Scholes option-pricing model, the estimated weighted-average grant date fair value of the employees' purchase rights granted for the year ended December 31, 2021 was $19.85 per share.

Restricted Stock Activity

The Company's RSAs and RSUs were summarized as follows:

	Shares		Weighted Average Grant Date Fair Value Per Share	
	RSU	RSA	RSU	RSA
Unvested as of December 31, 2020	—	89,261	$ —	$ 1.48
Granted	1,366,189	—	$ 60.35	$ —
Vested	—	(89,261)	$ —	$ 1.48
Forfeited	(94,855)	—	$ 66.05	$ —
Unvested as of December 31, 2021	1,271,334	—	$ 59.93	$ —

The unvested shares of RSUs have not been included in the shares issued and outstanding.

In January 2017, the Company entered into a restricted stock purchase agreement with an executive officer and a restricted stock purchase agreement with a director whereby the executive officer and the director purchased an aggregate of 3,624,355 shares of restricted stock. The consideration for the restricted stock was the issuance of promissory notes which were non-recourse in nature and were accounted for as in-substance stock options. In August 2019, per the terms of the notes, the Company received $3.3 million as repayment of the outstanding promissory notes and accrued interest. The Company reduced the restricted stock liability as the common stock vests, which was fully vested as of December 31, 2020.

As of December 31, 2021, there was $61.3 million of total unrecognized compensation cost related to unvested restricted stock units, all of which is expected to be recognized over a remaining weighted-average period of 3.2 years.

Stock-Based Compensation Expense

The following table sets forth the total stock-based compensation expense for all awards granted to employees and non-employees, including shares sold through the issuance of non-recourse promissory notes of which all the shares are considered to be options for accounting purposes, and the ESPP in the consolidated statements of operations:

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Research and development	$ 42,554	$ 13,663	$ 3,034
Selling, general and administrative	$ 41,230	13,937	5,685
Total stock-based compensation	$ 83,784	$ 27,600	$ 8,719

14. Net Income (Loss) Per Share

The following is a calculation of the basic and diluted net income (loss) per share (in thousands, except share and per share data):

	Year ended December 31,		
	2021	2020	2019
Net income (loss), basic and diluted	$ 528,584	$ (298,665)	$ (174,683)
Weighted-average shares outstanding, basic	129,884,967	119,159,424	30,349,920
Weighted-average effect of dilutive securities:			
Options to purchase common stock	3,513,438	—	—
Restricted shares subject to future vesting	35,488	—	—
Contingently issuable shares	3,233	—	—
Weighted-average shares outstanding, diluted	133,437,126	119,159,424	30,349,920
Net income (loss) per share, basic	$ 4.07	$ (2.51)	$ (5.76)
Net income (loss) per share, diluted	$ 3.96	$ (2.51)	$ (5.76)

Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	As of December 31,		
	2021	2020	2019
Options issued and outstanding	5,764,308	9,798,282	7,186,298
Restricted shares subject to future vesting	1,088,304	89,261	2,075,511
Warrants to purchase common stock	—	—	244,444
Total	6,852,612	9,887,543	9,506,253

As of December 31, 2021, the Company estimated shares issuable under the ESPP would be 65,967 based on expected total contributions from the plan participants and 85% of the stock price at the beginning of the offering period.

15. Defined Contribution Plan

In October 2017, the Company began to sponsor a 401(k) retirement savings plan for the benefit of its employees. Eligible employees may contribute a percentage of their compensation to this plan, subject to statutory limitations. The Company made contributions to the plan for eligible participants, and recorded contribution expenses of $2.7 million, $1.8 million, and $1.2 million for the years ended December 31, 2021, 2020 and 2019, respectively.

16. Income Taxes

Income (loss) before provision for income taxes consists of the following (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Domestic	$ 535,989	$ (309,697)	$ (138,724)
Foreign	13,813	11,086	(35,805)
Total income (loss) before provision for income taxes	$ 549,802	$ (298,611)	$ (174,529)

The components of income tax expense consist of the following (in thousands):

	Year Ended December 31,		
	2021	2020	2019
Current:			
Federal	$ 3,526	$ —	$ —
State	105	—	—
Foreign	2,401	106	154
	6,032	106	154
Deferred:			
Federal	15,186	(21)	—
State	—	(31)	—
	15,186	(52)	—
Provision for income taxes	$ 21,218	$ 54	$ 154

A reconciliation between the expected income tax provision at the federal statutory rate and the reported income tax expense is as follows:

	Year Ended December 31,		
	2021	2020	2019
U.S. federal statutory income tax rate	21.0%	21.0%	21.0%
Foreign tax at less than federal statutory rate	(0.2)	0.9	(0.3)
Prior year tax rate adjustment	—	(1.9)	—
State taxes, net of federal benefit	0.7	2.7	2.4
Research and development tax credit	(1.6)	1.8	2.0
Permanent items	1.8	1.3	(0.8)
Changes in valuation allowance	(17.9)	(25.3)	(24.3)
Other	0.1	(0.5)	(0.1)
Effective income tax rate	3.9%	0.0%	(0.1)%

The tax effects of temporary differences that give rise to significant portions of the Company's deferred tax assets and liabilities as of December 31, 2021 and 2020, are related to the following:

	December 31,	
	2021	2020
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 15,030	$ 117,433
Research and development tax credit carryforward	11,375	12,246
Equity compensations	15,065	4,193
Reserves and accruals	7,115	10,804
Lease liabilities	28,612	16,184
Intangible assets	19,657	23,006
Deferred tax assets	96,854	183,866
Deferred tax liabilities:		
Unrealized gain on investments	(30,170)	—
ROU assets	(28,483)	(16,147)
Property and equipment	(2,422)	(2,570)
IPR&D	(8,511)	(8,511)
Deferred tax liabilities	(69,586)	(27,228)
Valuation allowance	(45,707)	(159,891)
Net deferred tax liabilities	$ (18,439)	$ (3,253)

Although the Company has taxable income for the year ended December 31, 2021, it has otherwise incurred accumulated tax losses since inception. Based on the available objective evidence, the Company cannot conclude it is more likely than not that the net deferred tax assets will be fully realizable. Accordingly, the Company has provided a valuation allowance against its net deferred tax assets. For the year ended December 31, 2021, the Company recorded a valuation allowance release of $114.2 million, based on the estimated 2021 taxable income. For the years ended December 31, 2020 and 2019, the valuation allowance increased by $74.1 million and $42.3 million, respectively. As of December 31, 2021, the Company has net operating loss carryforwards of $24.2 million for federal purposes and $126.6 million for state tax purposes. If not utilized, these carryforwards will begin expiring in 2035 for federal and in 2031 for state tax purposes. The federal net operating losses generated after December 31, 2017, have an infinite carryforward period and subject to 80% deduction limitation based upon pre-NOL deduction taxable income. As of December 31, 2021, the Company also has net operating loss carryforwards of $5.4 million for Australian tax purposes, which has an infinite carryforward period, and no net operating loss carryforward for Swiss tax purposes.

Under the Tax Reform Act of 1986, the amounts of and benefits from net operating loss carryforwards may be impaired or limited in certain circumstances. Events which cause limitations in the amount of net operating losses that the Company may utilize in any one year include, but are not limited to, a cumulative ownership change of more than 50% over a three-year period. The Company completed its Section 382 analysis as of December 31, 2021 and based on this analysis, it does not expect that the annual limitations will significantly impact its ability to utilize its net operating loss or tax credit carryforwards prior to expiration.

As of December 31, 2021, the Company has research tax credit carryforwards of $6.0 million and $11.0 million for federal and state tax purposes, respectively. If not utilized, the federal carryforward will expire in various amounts beginning in 2036. The California credits can be carried forward indefinitely. To the extent they were not utilized, Oregon carryforward began expiring in 2022.

The Tax Cuts and Jobs Act of 2017 subjects a U.S. shareholder to current tax on global intangible low-taxed income ("GILTI") earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740 No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election to either recognize deferred taxes for temporary differences expected to reverse as GILTI in future years or provide for the tax expense related to GILTI in the year the tax is incurred. The Company has elected to recognize the tax on GILTI as a period expense in the period the tax is incurred.

Uncertain Tax Positions

As of December 31, 2021 and 2020, the Company had an unrecognized tax benefit of $7.4 million and $4.9 million, respectively, related to transfer pricing and research and development tax credits. No amount of unrecognized tax benefits as of December 31, 2021, if recognized, would reduce the Company's effective tax rate because the benefits would be in the form of net operating loss and tax credit carryforwards, which would attract a full valuation allowance. There are no provisions for which it is reasonably possible that the total amounts of unrecognized tax benefits will significantly increase or decrease within 12 months of the reporting date. Because the statute of limitations does not expire until after the net operating loss and credit carryforwards are actually used, the statutes are still open on calendar years ending December 31, 2017 forward for federal and state purposes.

The Company did not recognize any expense for interest and penalties related to uncertain tax positions during 2021, 2020 and 2019, and the Company does not have any amounts related to interest and penalties accrued at December 31, 2021. The Company files U.S. federal, state, Switzerland and Australia tax returns. The Company's tax years remain open for all years. As of December 31, 2021, the Company was not under examination by the Internal Revenue Service or any state or foreign tax jurisdiction.

A reconciliation of the beginning and ending amounts of the liability for uncertain tax positions is as follows:

	Year Ended December 31,		
	2021	2020	2019
		(in thousands)	
Gross unrecognized tax benefits at January 1	$ 4,877	$ 2,725	$ 2,404
Addition for tax positions taken in the prior years	—	—	133
Reduction for tax positions taken in the prior years	(62)	(588)	(1,596)
Addition for tax positions taken in current year	2,607	2,740	1,784
Gross unrecognized tax benefits at December 31	$ 7,422	$ 4,877	$ 2,725

17. Subsequent Event

Amended and Restated Letter Agreement with the Bill & Melinda Gates Foundation

In January 2022, the Company entered into an amended and restated letter agreement with the Bill & Melinda Gates Foundation, which amended and restated the letter agreement with the Bill & Melinda Gates Foundation that was entered into in December 2016 (the "Gates Agreement"), to include the advancement of innovative platform technologies in the development of broadly neutralizing antibodies designed to provide a "vaccinal effect" for the treatment of HIV and prevention of malaria. Under the Gates Agreement, in January 2022, the Bill & Melinda Gates Foundation purchased 881,365 shares of the Company's common stock with total value of $40.0 million and made a $10.0 million grant to the Company.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures.

Our management, with the participation and supervision of our Chief Executive Officer and our Chief Financial Officer, have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e)) under the Exchange Act as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that, as of the end of the period covered by this Annual Report on Form 10-K, our disclosure controls and procedures were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act). Our internal control over financial reporting is designed under the supervision of our Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of our internal control over financial reporting based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013 Framework). Based on our assessment, we concluded that our internal control over financial reporting was effective as of December 31, 2021.

The effectiveness of our internal control over financial reporting has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their attestation report herein, which expresses an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2021.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our fourth fiscal quarter ended December 31, 2021 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
of Vir Biotechnology, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Vir Biotechnology, Inc.'s internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Vir Biotechnology, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and our report dated February 28, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Redwood City, California
February 28, 2022

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated by reference to the information set forth in the sections titled “Proposal 1—Election of Directors,” “Information Regarding the Board of Directors and Corporate Governance,” “Information Regarding the Board of Directors and Corporate Governance—Code of Business Conduct and Ethics,” “Delinquent Section 16(a) Reports,” “Information Regarding the Board of Directors and Corporate Governance—Nominating and Corporate Governance Committee” and “Information Regarding the Board of Directors and Corporate Governance—Audit Committee” in our definitive proxy statement for our 2022 Annual Meeting of Stockholders, or the Proxy Statement.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference to the information set forth in the sections titled “Executive Compensation” in our Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item is incorporated by reference to the information set forth in the sections titled “Security Ownership of Certain Beneficial Owners and Management” and “Executive Compensation—Equity Compensation Plan Information” in our Proxy Statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated by reference to the information set forth in the sections titled “Information Regarding the Board of Directors and Corporate Governance—Independence of The Board of Directors” and “Transactions with Related Persons” in our Proxy Statement.

Item 14. Principal Accounting Fees and Services.

The information required by this item is incorporated by reference to the information set forth in the sections titled “Proposal 3—Ratification of Selection of Independent Registered Public Accounting Firm” in our Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

The financial statements, financial statement schedules and exhibits filed as part of this Annual Report on Form 10-K are as follows:

(a)(1) Financial Statements

Reference is made to the financial statements included in Item 8 of Part II hereof.

(a)(2) Financial Statement Schedules

All financial statements schedules are omitted because the required information is included in the consolidated financial statements or the notes thereto included in Item 8 of Part II hereof.

(a)(3) Exhibits

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (File No. 001-39083), filed with the SEC on October 16, 2019).
3.2	Amended and Restated Bylaws of the Company (incorporated herein by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (File No. 001-39083), filed with the SEC on October 16, 2019).
4.1	Form of Common Stock Certificate of the Company (incorporated herein by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 30, 2019).
4.2	Amended and Restated Investors' Rights Agreement, by and among the Company and certain of its stockholders, dated November 29, 2017 (incorporated herein by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
4.3	Description of Capital Stock (incorporated herein by reference to Exhibit 4.4 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).
10.1+	Vir Biotechnology, Inc. 2019 Equity Incentive Plan, (incorporated herein by reference to Exhibit 4.8 to the Company's Form S-8 (File No. 333-234212), filed with the SEC on October 15, 2019).
10.2+	2019 Employee Stock Purchase Plan (incorporated herein by reference to Exhibit 4.11 to the Company's Form S-8 (File No. 33-234212), filed with the SEC on October 15, 2019).
10.3+	Form of Indemnity Agreement by and between the Company and its directors and executive officers (incorporated herein by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.4+	Forms of Option Grant Notice and Option Agreement under Vir Biotechnology, Inc. 2019 Equity Incentive Plan, (incorporated herein by reference to Exhibit 10.3 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.5+	Form of Restricted Stock Unit Grant Notice and Unit Award Agreement under Vir Biotechnology, Inc. 2019 Equity Incentive Plan (incorporated herein by reference to Exhibit 10.5 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.6+	Vir Biotechnology, Inc. 2016 Equity Incentive Plan, as amended (incorporated herein by reference to Exhibit 10.5 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).

10.7+	Forms of Incentive Stock Option Notice and Agreement, Non-Qualified Stock Option Notice and Agreement, Restricted Stock Agreement, Restricted Stock Agreement and Restricted Stock Purchase Agreement under the Vir Biotechnology, Inc. 2016 Equity Incentive Plan, as amended (incorporated herein by reference to Exhibit 10.6 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.8+	Non-Employee Director Compensation Policy (incorporated herein by reference to Exhibit 10.8 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.9+	Amended and Restated Employment Letter Agreement between the Company and George Scangos, dated August 27, 2019 (incorporated herein by reference to Exhibit 10.9 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.10+	Amended and Restated Employment Letter Agreement between the Company and Howard Horn, dated August 27, 2019 (incorporated herein by reference to Exhibit 10.10 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.11+	Amended and Restated Employment Letter Agreement between the Company and Phil Pang, dated August 27, 2019 (incorporated herein by reference to Exhibit 10.12 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.12+	Amended and Restated Employment Letter Agreement between the Company and Herbert Virgin, dated September 3, 2019 (incorporated herein by reference to Exhibit 10.14 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.13+	Employment Letter Agreement between the Company and Steven Rice, dated August 22, 2019 (incorporated herein by reference to Exhibit 10.3 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on November 10, 2020).
10.14+	Promotion Letter Agreement between the Company and Steven Rice, dated July 30, 2020 (incorporated herein by reference to Exhibit 10.4 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on November 10, 2020).
10.15+	Amended and Restated Employment Letter Agreement between the Company and Ann (Aine) M. Hanly, dated May 4, 2021 (incorporated herein by reference to Exhibit 10.6 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on May 6, 2021).
10.16+	Vir Biotechnology, Inc. Change in Control and Severance Benefit Plan (incorporated herein by reference to Exhibit 10.15 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.17†	Collaboration, Option, and License Agreement between the Company and Brii Biosciences Limited (previously named BiiG Therapeutics Limited), dated May 23, 2018 (incorporated herein by reference to Exhibit 10.16 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.18†	Collaboration and License Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated October 16, 2017 (incorporated herein by reference to Exhibit 10.17 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.19†	Amendment No.1 to the Collaboration and License Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated December 17, 2019 (incorporated herein by reference to Exhibit 10.19 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).
10.20†	Amendment No.2 to the Collaboration and License Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated March 3, 2020 (incorporated herein by reference to Exhibit 10.20 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).

10.21†	Amendment No.3 to the Collaboration and License Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated April 1, 2020 (incorporated herein by reference to Exhibit 10.21 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.22†	Letter Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated December 23, 2020 (incorporated herein by reference to Exhibit 10.24 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.23†	Common Stock Issuance Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated October 16, 2017 (incorporated herein by reference to Exhibit 10.18 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.24†	Amendment No. 1 to the Common Stock Issuance Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated December 17, 2019 (incorporated herein by reference to Exhibit 10.22 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March, 26, 2020).
10.25†	Letter Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated November 13, 2018 (incorporated herein by reference to Exhibit 10.19 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.26†	License Agreement between the Company and MedImmune, LLC, dated September 7, 2018 (incorporated herein by reference to Exhibit 10.20 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.27†	Amendment No. 1 to License Agreement between the Company and MedImmune, LLC, dated September 1, 2020 (incorporated herein by reference to Exhibit 10.29 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.28†	Second Revised and Restated Master License Agreement between the Company and Oregon Health & Science University, dated August 27, 2019 (incorporated herein by reference to Exhibit 10.21 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.29†	Letter Agreement between the Company and the stockholders of TomegaVax, Inc. set forth therein, dated September 12, 2016 (incorporated herein by reference to Exhibit 10.22 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.30†	Agreement and Plan of Merger between the Company, Vir Merger Sub, Inc., Agenovir Corporation, and Dr. Stephen R. Quake, dated January 2, 2018 (incorporated herein by reference to Exhibit 10.23 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.31†	Securities Purchase Agreement between the Company, Humabs BioMed SA, the shareholders of Humabs set forth therein, the option-holders of Humabs set forth therein and Fortis Advisors LLC and certain Securityholders, dated August 22, 2017 (incorporated herein by reference to Exhibit 10.24 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.32†	Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated January 26, 2018 (incorporated herein by reference to Exhibit 10.26 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.33†	Amendment No. 1 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated April 18, 2019 (incorporated herein by reference to Exhibit 10.31 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).
10.34†	Amendment No. 2 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated February 24, 2020 (incorporated herein by reference to Exhibit 10.32 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).

10.35†	Amendment No. 3 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated May 22, 2020 (incorporated herein by reference to Exhibit 10.38 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.36†	Amendment No. 4 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated December 8, 2020 (incorporated herein by reference to Exhibit 10.39 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.37†	Amendment No. 5 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated June 2, 2021 (incorporated herein by reference to Exhibit 10.3 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on August 5, 2021).
10.38†	Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated March 16, 2018 (incorporated herein by reference to Exhibit 10.27 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.39†	Amendment No. 1 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated April 22, 2019 (incorporated herein by reference to Exhibit 10.34 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).
10.40†	Amendment No. 2 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated October 28, 2019 (incorporated herein by reference to Exhibit 10.35 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).
10.41†	Amendment No. 3 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated May 29, 2020 (incorporated herein by reference to Exhibit 10.12 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on August 11, 2020).
10.42†	Amendment No. 4 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated June 16, 2021 (incorporated herein by reference to Exhibit 10.4 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on August 5, 2021).
10.43†	Amendment No. 5 to Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated December 8, 2021.
10.44†	Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated November 5, 2021.
10.45†	Amended and Restated Letter Agreement between the Company and the Bill & Melinda Gates Foundation, dated January 12, 2022.
10.46	Stock Purchase Agreement between the Company and the Bill & Melinda Gates Foundation, dated January 12, 2022.
10.47†	Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated January 12, 2022.
10.48†	Amended and Restated Exclusive License Agreement between the Company (as successor in interest to Humabs BioMed SA (f/k/a Humabs Holding GmbH)) and the Institute for Research in Biomedicine, dated December 16, 2011 (incorporated herein by reference to Exhibit 10.28 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.49†	Amendment to Amended and Restated Exclusive License Agreement between the Company (as successor in interest to Humabs BioMed SA (f/k/a Humabs Holding GmbH)) and the Institute for Research in Biomedicine, dated February 10, 2012 (incorporated herein by reference to Exhibit 10.29 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.50†	Exclusive License Agreement between the Company (as successor in interest to Humabs BioMed SA) and the Institute for Research in Biomedicine, dated December 16, 2011 (incorporated herein by reference to Exhibit 10.30 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).

10.51	Amendment to License Agreement between the Company (as successor in interest to Humabs BioMed SA) and the Institute for Research in Biomedicine, dated February 10, 2012 (incorporated herein by reference to Exhibit 10.31 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.52†	Amendment Agreement between the Company (as successor in interest to Humabs BioMed SA) and the Institute for Research in Biomedicine, dated January 29, 2018 (incorporated herein by reference to Exhibit 10.32 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.53†	Exclusive License Agreement between the Company and The Rockefeller University, dated July 31, 2018 (incorporated herein by reference to Exhibit 10.33 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.54†	Amendment to Exclusive License Agreement between the Company and The Rockefeller University, dated May 17, 2019 (incorporated herein by reference to Exhibit 10.34 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.55†	Second Amendment to Exclusive License Agreement between the Company and The Rockefeller University, dated September 28, 2020 (incorporated herein by reference to Exhibit 10.51 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on February 25, 2021).
10.56†	Third Amendment to Exclusive License Agreement between the Company and The Rockefeller University, dated March 1, 2021 (incorporated herein by reference to Exhibit 10.5 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on May 6, 2021).
10.57†	Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.35 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.58†	Amendment 1 to Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated April 19, 2013 (incorporated herein by reference to Exhibit 10.36 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.59†	Amendment 2 to Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated April 27, 2015 (incorporated herein by reference to Exhibit 10.37 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.60†	Amendment 3 to Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated December 31, 2015 (incorporated herein by reference to Exhibit 10.38 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.61†	Amendment 4 to Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated August 29, 2016 (incorporated herein by reference to Exhibit 10.39 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.62†	Amendment 5 to Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated July 15, 2017 (incorporated herein by reference to Exhibit 10.40 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.63†	Amendment 6 to Sub-License and Collaboration Agreement between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated September 7, 2018 (incorporated herein by reference to Exhibit 10.41 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).

10.64	Lease Agreement between the Company and ARE-SAN FRANCISCO NO. 43, LLC, dated March 30, 2017 (incorporated herein by reference to Exhibit 10.42 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.65	First Amendment to Lease Agreement between the Company and ARE-SAN FRANCISCO NO. 43, LLC, dated April 10, 2019 (incorporated herein by reference to Exhibit 10.43 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.66†	Lease Agreement between the Company and KRE Exchange Owner LLC, dated December 16, 2021.
10.67†	Patent License Agreement between the Company and Xencor, Inc., dated August 15, 2019 (incorporated herein by reference to Exhibit 10.44 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.68†	Amendment 1 to Patent License Agreement between the Company and Xencor, Inc., dated February 23, 2021 (incorporated herein by reference to Exhibit 10.3 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on May 6, 2021).
10.69†	Patent License Agreement between the Company and Xencor, Inc., dated March 25, 2020 (incorporated herein by reference to Exhibit 99.1 to the Company's Form 8-K (File No. 001-39083), filed with the SEC on June 19, 2020).
10.70†	Amendment 1 to Patent License Agreement between the Company and Xencor, Inc., dated February 23, 2021 (incorporated herein by reference to Exhibit 10.4 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on May 6, 2021).
10.71†	Definitive Collaboration Agreement between the Company, Glaxo Wellcome UK Limited and Beecham S.A., dated June 9, 2020 (incorporated herein by reference to Exhibit 10.54 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.72	Stock Purchase Agreement between the Company and Glaxo Group Limited, dated April 5, 2020 (incorporated herein by reference to Exhibit 10.55 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.73†	Preliminary Collaboration Agreement between the Company and Glaxo Wellcome UK Limited, dated February 14, 2021 (incorporated herein by reference to Exhibit 10.1 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on May 6, 2021).
10.74†	Definitive Collaboration Agreement between the Company and Glaxo Wellcome UK Limited, dated May 18, 2021 (incorporated herein by reference to Exhibit 10.2 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on August 5, 2021).
10.75†	Stock Purchase Agreement between the Company and Glaxo Group Limited, dated February 14, 2021 (incorporated herein by reference to Exhibit 10.2 to the Company's Form 10-Q (File No. 001-39083), filed with the SEC on May 6, 2021).
10.76†	Binding Letter Agreement between the Company and Samsung Biologics Co., Ltd., dated April 9, 2020 (incorporated herein by reference to Exhibit 10.57 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.77	Assignment and Novation Agreement among the Company, GlaxoSmithKline Trading Services Limited and Samsung Biologics Co., Ltd., dated July 31, 2020 (incorporated herein by reference to Exhibit 99.2 to the Company's Form 8-K (File No. 001-39083), filed with the SEC on August 7, 2020).
10.78†	Development and Manufacturing Collaboration Agreement between the Company and Wuxi Biologics (Hong Kong) Limited, dated February 25, 2020 (incorporated herein by reference to Exhibit 10.58 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).

10.79†	Letter of Intent between the Company and WuXi Biologics (Hong Kong) Limited, dated June 15, 2020 (incorporated herein by reference to Exhibit 10.59 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.80	Assignment and Novation Agreement among the Company, GlaxoSmithKline Trading Services Limited and WuXi Biologics (Hong Kong) Limited, dated July 29, 2020 (incorporated herein by reference to Exhibit 99.1 to the Company's Form 8-K (File No. 001-39083), filed with the SEC on August 7, 2020).
10.81	Sales Agreement, dated as of November 10, 2020, by and between the Company and Cowen and Company, LLC. (incorporated by reference to Exhibit 1.2 to the Company's registration statement on Form S-3 (Filed No. 333-250013), filed with the SEC on November 10, 2020).
21.1	List of subsidiaries of the Company (incorporated herein by reference to Exhibit 21.1 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
23.1	Consent of Independent Registered Public Accounting Firm.
24.1	Power of Attorney (included on the signature page to this report).
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

+ Indicates a management contract or compensatory plan or arrangement.
† Certain portions of this exhibit (indicated by "[***]") have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.
* The certification attached as Exhibit 32.1 that accompany this Annual Report on Form 10-K is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized**.**

VIR BIOTECHNOLOGY, INC.

Date: February 28, 2022

By: /s/ **George Scangos**

George Scangos, Ph.D.
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: February 28, 2022

By: /s/ **Howard Horn**

Howard Horn
Chief Financial Officer and Secretary
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints George Scangos, Ph.D., and Howard Horn, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution for him or her and in his or her name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ George Scangos George Scangos, Ph.D.	President, Chief Executive Officer and Director *(Principal Executive Officer)*	February 28, 2022
/s/ Howard Horn Howard Horn	Chief Financial Officer and Secretary *(Principal Financial and Accounting Officer)*	February 28, 2022
/s/ Vicki Sato Vicki Sato, Ph.D.	Chairman of the Board of Directors	February 28, 2022
/s/ Jeffrey S. Hatfield Jeffrey S. Hatfield	Director	February 28, 2022
/s/ Robert More Robert More	Director	February 28, 2022
/s/ Janet Napolitano Janet Napolitano	Director	February 28, 2022
/s/ Robert Nelsen Robert Nelsen	Director	February 28, 2022
/s/ Dipchand Nishar Dipchand Nishar	Director	February 28, 2022
/s/ Robert Perez Robert Perez	Director	February 28, 2022
/s/ Saira Ramasastry Saira Ramasastry	Director	February 28, 2022
/s/ Phillip Sharp Phillip Sharp, Ph.D.	Director	February 28, 2022
/s/ Elliott Sigal Elliott Sigal, M.D., Ph.D.	Director	February 28, 2022

Exhibit 10.43

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT VIR BIOTECHNOLOGY, INC. TREATS AS PRIVATE OR CONFIDENTIAL.

AMENDMENT INFORMATION	
Agreement to be Amended:	Grant agreement between the Bill & Melinda Gates Foundation and Vir Biotechnology Inc effective March 16, 2018, as amended, and bearing Investment ID INV-009475/OPP1182112
Amendment Purpose:	No Cost Extension
Amendment Date:	Date of this email
Amended “End Date”:	The term of the Agreement is extended by changing the End Date to March 31, 2022

THIS AMENDMENT amends, and is made part of, the above-referenced Agreement and is effective as of the date of this email. Capitalized terms not defined in this Amendment will have the meaning provided in the Agreement. Except as modified by this Amendment, all other terms and conditions of the Agreement remain in full force and effect. In the event of a conflict between the Agreement and this Amendment, the terms of this Amendment will prevail.

UPDATED REPORTING & PAYMENT SCHEDULE

This Amendment notifies You that the reporting and/or payment schedule for Your grant has changed. Your updated Reporting & Payment Schedule is deleted and replaced with the following:

REPORTING & PAYMENT SCHEDULE				
Investment Period	Target, Milestone, or Reporting Deliverable	Due By	Payment Date	Payment Amount (U.S.$)
	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
[***]	[***]	[***]		
[***]	[***]	[***]		
[***]	[***]	[***]		
	[***]		[***]	[***]
[***]	[***]	[***]		
			Total Grant Amount	Up to $14,882,418.08

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT VIR BIOTECHNOLOGY, INC. TREATS AS PRIVATE OR CONFIDENTIAL.

GRANT AGREEMENT

Investment ID INV-016898

AGREEMENT SUMMARY & SIGNATURE PAGE

GRANTEE INFORMATION	
Name:	Vir Biotechnology Inc
Tax Status:	Not exempt from federal income tax under U.S. IRC § 501(c)(3) You confirm that the above information is correct and agree to notify the Foundation immediately of any change.
Expenditure Responsibility:	This Agreement is subject to "expenditure responsibility" requirements under the U.S. Internal Revenue Code.
Mailing Address:	499 Illinois Street, Suite 500, San Francisco, California 94158, USA
Primary Contact:	[***]

FOUNDATION INFORMATION	
Mailing Address:	P. O. Box 23350, Seattle, Washington 98102, USA
Primary Contact:	[***]

AGREEMENT INFORMATION	
Title:	Development of a TB and HIV vaccine using the HCMV vector platform
"Charitable Purpose":	To develop a prophylactic HIV vaccine using the Human Cytomegalovirus (HCMV) vector platform
"Start Date":	Date of last signature
"End Date":	August 30, 2023
This Agreement includes and incorporates by this reference:	This Agreement Summary & Signature Page and: • Grant Amount and Reporting & Payment Schedule (Attachment A) • Terms and Conditions (Attachment B) • Investment Document (date submitted October 13, 2021) • Budget (date submitted October 13, 2021)

THIS AGREEMENT is between Vir Biotechnology Inc ("*You*" or "*Grantee*") and the Bill & Melinda Gates Foundation ("*Foundation*"), and is effective as of date of last signature. Each party to this Agreement may be referred to individually as a "Party" and together as the "*Parties*." As a condition of this grant, the Parties enter into this Agreement by having their authorized representatives sign below.

BILL & MELINDA GATES FOUNDATION

/s/ Pervin Anklesaria
By: Pervin Anklesaria

Title: Deputy Director

October 29, 2021
Date

VIR BIOTECHNOLOGY INC

/s/ George Scangos
By: George Scangos

Title: CEO

November 5, 2021
Date

ATTACHMENT A
GRANT AMOUNT AND REPORTING & PAYMENT SCHEDULE

GRANT AMOUNT
The Foundation will pay You up to the total grant amount specified in the Reporting & Payment Schedule below. The Foundation's Primary Contact must approve in writing any Budget cost category change of more than [***].

REPORTING & PAYMENT SCHEDULE
Payments are subject to Your compliance with this Agreement, including Your achievement, and the Foundation's approval, of any applicable targets, milestones, and reporting deliverables required under this Agreement. The Foundation may, in its reasonable discretion, modify payment dates or amounts and will notify You of any such changes in writing.

REPORTING
You will submit reports according to the Reporting & Payment Schedule using the Foundation's templates or forms, which the Foundation will make available to You and which may be modified from time to time. For a progress or final report to be considered satisfactory, it must demonstrate meaningful progress against the targets or milestones for that investment period. If meaningful progress has not been made, the report should explain why not and what adjustments You are making to get back on track. Please notify the Foundation's Primary Contact if You need to add or modify any targets or milestones. The Foundation must approve any such changes in writing. You agree to submit other reports the Foundation may reasonably request.

ACCOUNTING FOR PERSONNEL TIME
You will track the time of all employees, contingent workers, and any other individuals whose compensation will be paid in whole or in part by Grant Funds. Such individuals will keep records (e.g., timesheets) of actual time worked on the Project in increments of sixty minutes or less and brief descriptions of tasks performed. You will report actual time worked consistent with those records in Your progress and final budget reports. You will submit copies of such records to the Foundation upon request.

REPORTING & PAYMENT SCHEDULE

Investment Period	*Target, Milestone, or Reporting Deliverable*	*Due By*	*Payment Date*	*Payment Amount (U.S.$)*
	[***]		[***]	[***]
	[***]	[***]	[***]	[***]
	[***].			
[***]	[***]	[***]	[***]	[***]
	[***]	[***]		
[***]	[***]	[***]		
[***]	[***]	[***]		
			Total Grant Amount	**Up to $10,034,896.00**

ATTACHMENT B
TERMS & CONDITIONS

This Agreement is subject to the following terms and conditions.

PROJECT SUPPORT

PROJECT DESCRIPTION AND CHARITABLE PURPOSE
The Foundation is awarding You this grant to carry out the project described in the Investment Document ("*Project*") in order to further the Charitable Purpose. The Foundation, in its discretion, may approve in writing any request by You to make non-material changes to the Investment Document.

MANAGEMENT OF FUNDS

USE OF FUNDS
You may not use funds provided under this Agreement ("*Grant Funds*") for any purpose other than the Project. You may not use Grant Funds to reimburse any expenses You incurred prior to the Start Date. At the Foundation's request, You will repay any portion of Grant Funds and/or Income used or committed in material breach of this Agreement, as determined by the Foundation in its discretion.

INVESTMENT OF FUNDS
You must invest Grant Funds in highly liquid investments with the primary objective of preservation of principal (e.g., interest-bearing bank accounts or a registered money market mutual fund) so that the Grant Funds are available for the Project. Together with any progress or final reports required under this Agreement, You must report the amount of any currency conversion gains (or losses) and the amount of any interest or other income generated by the Grant Funds (collectively, "*Income*"). Any Income must be used for the Project.

SEGREGATION OF FUNDS
You must maintain Grant Funds in a physically separate bank account or a separate bookkeeping account maintained as part of Your financial records and dedicated to the Project.

GLOBAL ACCESS

GLOBAL ACCESS COMMITMENT
You will conduct and manage the Project and the Funded Developments in a manner that ensures Global Access. Your Global Access commitments will survive the term of this Agreement. "*Funded Developments*" means the products, services, processes, technologies, materials, software, data, other innovations, and intellectual property resulting from the Project (including modifications, improvements, and further developments to Background Technology). "*Background Technology*" means any and all products, services, processes, technologies, materials, software, data, or other innovations, and intellectual property created by You or a third party prior to or outside of the Project used as part of the Project. "*Global Access*" means: (a) the knowledge and information gained from the Project will be promptly and broadly disseminated; and (b) the Funded Developments will be made available and accessible at an affordable price (i) to people most in need within developing countries, or (ii) in support of the U.S. educational system and public libraries, as applicable to the Project.

CAVD MEETINGS
You agree to participate in the relevant CAVD sponsored meetings or working groups to which Your attendance is requested. You agree to present the Project's most current progress and data, consistent with any restrictions that are necessary to maintain appropriate rights to intellectual property.

COLLABORATION
Consistent with the programmatic goals and the charitable intent of the CAVD, there is the expectation and requirement that CAVD grantees will communicate and collaborate on a periodic basis with other CAVD grantees pursuing similar overarching objectives. The Foundation will continue to provide information regarding other entities with whom collaborations should be considered. These collaborations will include but will not be limited to the following elements:

- Agreeing to meet (with funds either provided in the grant or directly from the Foundation) both individually and as a group with fellow grantees at the call of the Foundation.

- Agreeing at all other times to be amenable to communication and prompt sharing of data and other fruits of the research on topics of mutual interest (consistent with potential intellectual property issues subject to the implementation of any necessary nondisclosure agreements).

- Considering complementary collaborative research and development efforts with other investigators that will facilitate removal of roadblocks to the solution either jointly or for the collaborating party.

Each future year of funding will be contingent upon Your continuing success in meeting these commitments, as judged solely by the Foundation. You may confer with Your Foundation Primary Contact any time if you have questions or concerns about the nature of any potential communication or collaboration request.

TIMELY COMMUNICATION
Sharing of new resources, tools and technologies with the general research community should coincide with publication of the discovery. However, since You will be working as a part of a larger overarching multi-grant program, it is expected that You will expeditiously disclose, disseminate, and share new resources with other participants working on common HIV vaccine problems.

PUBLICATION
Consistent with Your Global Access commitments, if the Project description specifies Publication or Publication is otherwise requested by the Foundation, You will seek prompt Publication of any Funded Developments consisting of data and results. “Publication” means publication in a peer-reviewed journal or other method of public dissemination specified in the Project description or otherwise approved by the Foundation in writing. Publication may be delayed for a reasonable period for the sole purpose of seeking patent protection, provided the patent application is drafted, filed, and managed in a manner that best furthers Global Access. If You seek Publication in a peer-reviewed journal, You agree to adhere to the Foundation’s Open Access Policy available at: www.gatesfoundation.org/How-We-Work/General-Information/Open-Access-Policy, which may be modified from time to time. Nothing in this section shall be construed as requiring Publication in contravention of any applicable ethical, legal, or regulatory requirements. You will mark any Funded Development subject to this clause with the appropriate notice or attribution, including author, date and copyright (e.g., © 20<> <Name>).

INTELLECTUAL PROPERTY REPORTING
During the term of this Agreement and for 5 years after, You will submit upon request annual intellectual property reports relating to the Funded Developments, Background Technology, and any related agreements using the Foundation’s templates or forms, which the Foundation may modify from time to time.

SUBGRANTS AND SUBCONTRACTS

SUBGRANTS AND SUBCONTRACTS
You may not make subgrants under this Agreement. You have the exclusive right to select subcontractors to assist with the Project.

RESPONSIBILITY FOR OTHERS
You are responsible for (a) all acts and omissions of any of Your trustees, directors, officers, employees, subgrantees, subcontractors, contingent workers, agents, and affiliates assisting with the Project, and (b) ensuring their compliance with the terms of this Agreement.

PROHIBITED ACTIVITIES

ANTI-TERRORISM
You will not use funds provided under this Agreement, directly or indirectly, in support of activities (a) prohibited by U.S. laws relating to combating terrorism; (b) with persons on the List of Specially Designated Nationals (www.treasury.gov/sdn) or entities owned or controlled by such persons; or (c) in or with countries or territories against which the U.S. maintains comprehensive sanctions (currently, Cuba, Iran, Syria, North Korea, and the Crimea Region of Ukraine), including paying or reimbursing the expenses of persons from such countries or territories, unless such activities are fully authorized by the U.S. government under applicable law and specifically approved by the Foundation in its sole discretion.

ANTI-CORRUPTION; ANTI-BRIBERY
You will not offer or provide money, gifts, or any other things of value directly or indirectly to anyone in order to improperly influence any act or decision relating to the Foundation or the Project, including by assisting any party to secure an improper advantage. Training and information on compliance with these requirements are available at www.learnfoundationlaw.org.

POLITICAL ACTIVITY AND ADVOCACY
You may not use Grant Funds to influence the outcome of any election for public office or to carry on any voter registration drive. You may not use Grant Funds to support lobbying activity or to otherwise support attempts to influence local, state, federal, or foreign legislation. Your strategies and activities, and any materials produced with Grant Funds, must comply with applicable local, state, federal, or foreign lobbying law. You agree to comply with lobbying, gift, and ethics rules applicable to the Project.

OTHER

PUBLICITY
A Party may publicly disclose information about the award of this grant, including the other Party's name, the total amount awarded, and a description of the Project, provided that a Party obtains prior written approval before using the other Party's name for promotional purposes or logo for any purpose. Any public disclosure by You or Your subgrantees, subcontractors, contingent workers, agents, or affiliates must be made in accordance with the Foundation's then-current brand guidelines, which are available at: www.gatesfoundation.org/brandguidelines.

LEGAL ENTITY AND AUTHORITY
You confirm that: (a) You are an entity duly organized or formed, qualified to do business, and in good standing under the laws of the jurisdiction in which You are organized or formed; (b) You are not an individual (i.e., a natural person) or a disregarded entity (e.g., a sole proprietor or sole-owner entity) under U.S. law; (c) You have the right to enter into and fully perform this Agreement; and (d) Your performance will not violate any agreement or obligation between You and any third party. You will notify the Foundation immediately if any of this changes during the term of this Agreement.

COMPLIANCE WITH LAWS
In carrying out the Project, You will comply with all applicable laws, regulations, and rules and will not infringe, misappropriate, or violate the intellectual property, privacy, or publicity rights of any third party.

COMPLIANCE WITH REQUIREMENTS
You will conduct, control, manage, and monitor the Project in compliance with all applicable ethical, legal, regulatory, and safety requirements, including applicable international, national, local, and institutional standards ("*Requirements*"). You will obtain and maintain all necessary approvals, consents, and reviews

before conducting the applicable activity. As a part of Your annual progress report to the Foundation, You must report whether the Project activities were conducted in compliance with all Requirements.

If the Project involves:
a. any protected information (including personally identifiable, protected health, or third-party confidential), You will not disclose this information to the Foundation without obtaining the Foundation's prior written approval and all necessary consents to disclose such information;
b. children or vulnerable subjects, You will obtain any necessary consents and approvals unique to these subjects; and/or
c. any trial involving human subjects, You will adhere to current Good Clinical Practice as defined by the International Council on Harmonisation (ICH) E-6 Standards (or local regulations if more stringent) and will obtain applicable trial insurance.

Any activities by the Foundation in reviewing documents and providing input or funding does not modify Your responsibility for determining and complying with all Requirements for the Project.

RELIANCE
You acknowledge that the Foundation is relying on the information You provide in reports and during the course of any due diligence conducted prior to the Start Date and during the term of this Agreement. You represent that the Foundation may continue to rely on this information and on any additional information You provide regarding activities, progress, and Funded Developments.

INDEMNIFICATION
If the Project involves clinical trials, trials involving human subjects, post-approval studies, field trials involving genetically modified organisms, experimental medicine, or the provision of medical/health services ("*Indemnified Activities*"), You will indemnify, defend, and hold harmless the Foundation and its trustees, employees, and agents ("*Indemnified Parties*") from and against any and all demands, claims, actions, suits, losses, damages (including property damage, bodily injury, and wrongful death), arbitration and legal proceedings, judgments, settlements, or costs or expenses (including reasonable attorneys' fees and expenses) (collectively, "*Claims*") arising out of or relating to the acts or omissions, actual or alleged, of You or Your employees, subgrantees, subcontractors, contingent workers, agents, and affiliates with respect to the Indemnified Activities. You agree that any activities by the Foundation in connection with the Project, such as its review or proposal of suggested modifications to the Project, will not modify or waive the Foundation's rights under this paragraph. An Indemnified Party may, at its own expense, employ separate counsel to monitor and participate in the defense of any Claim. Your indemnification obligations are limited to the extent permitted or precluded under applicable federal, state or local laws, including federal or state tort claims acts, the Federal Anti-Deficiency Act, state governmental immunity acts, or state constitutions. Nothing in this Agreement will constitute an express or implied waiver of Your governmental and sovereign immunities, if any.

INSURANCE
You will maintain insurance coverage sufficient to cover the activities, risks, and potential omissions of the Project in accordance with generally-accepted industry standards and as required by law. You will ensure Your subgrantees and subcontractors maintain insurance coverage consistent with this section.

TERM AND TERMINATION

TERM
This Agreement commences on the Start Date and continues until the End Date, unless terminated earlier as provided in this Agreement. The Foundation, in its discretion, may approve in writing any request by You for a no-cost extension, including amending the End Date and adjusting any affected reporting requirements.

TERMINATION
The Foundation may modify, suspend, or discontinue any payment of Grant Funds or terminate this Agreement if: (a) the Foundation is not reasonably satisfied with Your progress on the Project; (b) there

are significant changes to Your leadership or other factors that the Foundation reasonably believes may threaten the Project's success; (c) there is a change in Your control; (d) there is a change in Your tax status; or (e) You fail to comply with this Agreement.

RETURN OF FUNDS
Any Grant Funds, plus any Income, that have not been used for, or committed to, the Project upon expiration or termination of this Agreement, must be returned promptly to the Foundation.

RECORD KEEPING
You will maintain complete and accurate accounting records and copies of any reports submitted to the Foundation relating to the Project. You will retain such records and reports for 4 years after Grant Funds have been fully spent. At the Foundation's request, You will make such records and reports available to enable the Foundation to monitor and evaluate how Grant Funds have been used or committed.

SURVIVAL
A Party's obligations under this Agreement will be continuous and survive expiration or termination of this Agreement as expressly provided in this Agreement or otherwise required by law or intended by their nature.

GENERAL

ENTIRE AGREEMENT, CONFLICTS, AND AMENDMENTS
This Agreement along with the VIR/BMGF Series A/B Financing side letter ("*Vir/BMGF Side Letter*"), dated 23 December 2016 and any subsequent amendments contain the entire agreement of the Parties and supersedes all prior and contemporaneous agreements concerning its subject matter. If there is a conflict between this Agreement and the Investment Document this Agreement will prevail. Except as specifically permitted in this Agreement, no modification, amendment, or waiver of any provision of this Agreement will be effective unless in writing and signed by authorized representatives of both Parties.

NOTICES AND APPROVALS
Written notices, requests, and approvals under this Agreement must be delivered by mail or email to the other Party's primary contact specified on the Agreement Summary & Signature Page, or as otherwise directed by the other Party.

SEVERABILITY
Each provision of this Agreement must be interpreted in a way that is enforceable under applicable law. If any provision is held unenforceable, the rest of the Agreement will remain in effect.

ASSIGNMENT
You may not assign, or transfer by operation of law or court order, any of Your rights or obligations under this Agreement without the Foundation's prior written approval. This Agreement will bind and benefit any permitted successors and assigns.

COUNTERPARTS AND ELECTRONIC SIGNATURES
Except as may be prohibited by applicable law or regulation, this Agreement and any amendment may be signed in counterparts, by facsimile, PDF, or other electronic means, each of which will be deemed an original and all of which when taken together will constitute one agreement. Facsimile and electronic signatures will be binding for all purposes.

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT VIR BIOTECHNOLOGY, INC. TREATS AS PRIVATE OR CONFIDENTIAL.

January 12, 2022

Vir Biotechnology, Inc.
499 Illinois Street, Suite 500
San Francisco, CA 94158

Re: Strategic Relationship between the Bill & Melinda Gates Foundation and Vir Biotechnology, Inc.

Ladies and Gentlemen:

This amended and restated letter agreement (including all appendices hereto, this "**Letter Agreement**") is entered into as of January 12, 2022 by and between the Bill & Melinda Gates Foundation (the "**Foundation**"), a Washington charitable trust that is a tax-exempt private foundation, and Vir Biotechnology, Inc., a Delaware corporation (the "**Company**") and is effective on the Amendment Effective Date (as defined below). This Letter Agreement amends and restates in its entirety the letter agreement entered into as of December 23, 2016 ("**Effective Date**") by and between the Foundation and the Company (the "**Prior Agreement**"), in connection with the investment by the Foundation of twenty million dollars ($20,000,000.00) in the Company through the purchase of (i) ten million dollars ($10,000,000.00) of shares of Series A-1 Preferred Stock, par value $0.0001, of the Company (the "**Series A-1 Shares**") at a purchase price of [***] per share and (ii) ten million dollars ($10,000,000.00) of shares of Series B Preferred Stock, par value $0.0001, of the Company (the "**Series B Shares**") at a purchase price of [***] per share ((i) and (ii) are collectively, the "**HIV/TB Investment**"). The Series A-1 Shares and Series B Shares were converted into shares of the Company's common stock in connection with the Company's initial public offering (the "**Conversion Shares**"). This Letter Agreement is amended and restated in connection with the investment by the Foundation of approximately forty million dollars ($40,000,000.00) in the Company (the "**Antibody Development Investment**" and together with the HIV/TB Investment, the "**Foundation Investment**") through the purchase of the New Shares (as defined below, and together with the Conversion Shares, the "**Shares**"). The Foundation purchased the Conversion Shares pursuant to and in accordance with the provisions of the investment documents executed in connection with the Company's offering of Series A-1 Preferred Stock and Series B Preferred Stock, including, without limitation, the Series A-1 and Series B Preferred Stock Purchase Agreement, dated December 23, 2016, the Investors' Rights Agreement, dated December 23, 2016, the Right of First Refusal and Co-Sale Agreement, dated December 23, 2016, and the Voting Agreement, dated December 23, 2016 (together with the Prior Agreement, in each case as amended from time to time in accordance with their terms, collectively, the "**HIV/TB Investment Documents**") and is purchasing the New Shares pursuant to and in accordance with the Common Stock Purchase Agreement dated January [ ], 2022, between the Company and the Foundation, the "**SPA**", this Letter Agreement and the Grant Agreement INV-033423 (collectively, the "**Antibody Development Investment Documents**" and together with the HIV/TB Investment Documents, the "**Investment Documents**"). Capitalized terms not defined herein shall have the same meanings given to them in the applicable Investment Document, depending on the context in which such defined term is used herein.

In consideration of the sale and issuance of the Shares by the Company, and the purchase of the Shares by the Foundation, in each case on the terms and conditions stated herein and in the other Investment Documents, and for other good and valuable consideration, the parties hereby agree as follows:

1. Definitions. For the purposes of this Letter Agreement the following terms have the meanings indicated.

"**Affiliate**" of an entity means any person or entity that, directly or indirectly, controls, is controlled by or is under common control with such entity for so long as that control exists, where "control" (for purposes of this definition of "Affiliate" only) means having the decision-making authority as to the entity and, further, where that control shall be presumed to exist only where a person or entity owns more than 50% of the equity (or that lesser percentage that is the maximum allowed to be owned by a foreign corporation in a particular jurisdiction) entitled to vote regarding composition of the board of directors or other body entitled to direct the affairs of the entity.

"**Amendment Effective Date**" means the date of the closing of the Antibody Development Investment pursuant to the SPA.

"**Antibody Development Investment**" has the meaning given in the introductory paragraph.

"**Antibody Development Investment Documents**" has the meaning given in the introductory paragraph.

"**Antitrust Laws**" means the Sherman Antitrust Act, the Clayton Antitrust Act, the HSR Act, the Federal Trade Commission Act, as amended, and all other federal, state and foreign laws, that are designed or intended to prohibit, restrict or regulate actions having the purpose or effect of monopolization or restraint of trade or significant impediments or lessening of competition or the creation or strengthening of a dominant position through merger or acquisition that are applicable to this Letter Agreement.

"**Binding Agreement**" has the meaning given in Section 6(e).

"**Charitability Default**" has the meaning given in Section 6(b).

"**Charitability Requirements**" has the meaning given in Section 2(a).

"**Claim**" has the meaning given in Section 14.

"**CMV Vaccine**" means the Company's broadly enabling human CMV (hCMV)-based vaccine platform applicable to the prevention and/or treatment of HIV and TB using a human attenuated hCMV as the base vector to deliver specific vaccine antigens.

"**Code**" means the U.S. Internal Revenue Code of 1986, as amended.

"**COGS**" means, with respect to a product, [***]. In no event shall COGS include [***].

"**Confidential Information**" means all processes, formulae, data, know-how, improvements, inventions, chemical or biological materials, chemical structures, techniques, marketing plans, strategies, customer lists, or other information that has been created, discovered or developed by a party, or has otherwise become known to a party, or to which rights have been assigned to a party, as well as any other information and materials that are deemed confidential or proprietary to or by a party (including all information and materials of a party's customers and any other third-party and their consultants), in each case, that are disclosed by such party or its representatives to the other party or its representatives, and that is marked or

identified as confidential at the time of disclosure or that should reasonably be understood to be confidential based on the nature of the information and the manner of disclosure.

"**Conversion Shares**" has the meaning given in the introductory paragraph.

"**Developing Countries**" means [***]. If at the Developing Country Determination Date there is [***], the attached Appendix 1 will be used as the list of Developing Countries. Following the determination of the list of Developing Countries at the Developing Country Determination Date, such list may be modified from time to time by mutual agreement of the Foundation and the Company, provided that if at any time during the term of this Letter Agreement any of the countries listed on the attached Appendix 1 other than [***], such country shall be removed from the list of Developing Countries on the [***] of the date on which it [***] and shall no longer be deemed to be a "Developing Country" as defined in this Letter Agreement. For the avoidance of doubt, in no event shall any country or other political jurisdiction be added to Appendix 1 as a Permanently Eligible Country without the express written consent of the Foundation and the Company.

"**Developing Country Determination Date**" means the date on which the Company first commercializes a product relating to or arising out of the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody Development Program, or any other Global Health Project.

"**Disclosing Party**" has the meaning given in Section 18(a).

"**Existing Agreements**" means the existing collaboration or license agreements of the Company set forth on Appendix 2.

"**Existing** [***] **Grant Agreements**" has the meaning given in Section 3(c).

"**Fair Market Value**" means (i) if the Company's common stock, par value $0.0001 per share (the "**Common Stock**"), is not listed for trading on a national securities exchange, the fair market value of the Foundation Stock as determined by a mutually agreed upon (such agreement not to be unreasonably withheld, conditioned or delayed) independent third-party appraiser or (ii) if the Common Stock is listed on a national securities exchange, the average of the closing bid prices of a share of Common Stock as reported on the applicable securities exchange for the period of thirty consecutive trading days ending on the trading day immediately prior to the closing date of the redemption or purchase (provided that, if there is more than one such securities exchange, the Company shall designate the appropriate securities exchange for purposes of determining the Fair Market Value).

"**Foundation-supported Entity**" means an entity that receives funding, directly or indirectly, from the Foundation, collaborates with the Foundation, or both, for the purpose of accomplishing the Foundation's charitable objectives.

"**Foundation Indemnities**" has the meaning given in Section 14.

"**Foundation Investment**" has the meaning given in the introductory paragraph.

"**Foundation Stock**" has the meaning given in Section 6(c).

"**Funded Developments**" means the products and product candidates (including the HIV Vaccine Product, TB Vaccine Product, HIV Vaccinal Antibody Product, and Malaria Vaccinal Antibody Product), services, processes, technologies, materials, software, data, other innovations, and intellectual property developed by or on behalf of the Company or its subsidiaries in connection with the HIV Vaccine Program, the TB

Vaccine Program, the Vaccinal Antibody Development Program, or any other Global Health Project (including modifications, improvements, and further developments to Platform Technology). For clarity, product candidates will include candidates developed as part of a Global Health Project, which have been discontinued by the Company. Funded Developments includes the CMV Vaccine (and any and all data, documentation, methods, processes, test results, or other know how that is owned or controlled by the Company or any of its Affiliates (including through a license) and that are reasonably necessary or useful for the research, development, or operation of the CMV Vaccine, including materials, know-how and intellectual property owned or controlled by the Company or any of its Affiliates, whether existing at closing or later developed, owned or controlled by the Company or any of its Affiliates) to the extent funded by the Foundation or a Foundation-supported Entity with funds provided by the Foundation.

"**Global Access**" means (a) the knowledge and information gained from the Global Health Projects will be promptly and broadly disseminated, and (b) the Funded Developments will be made available and accessible at an affordable price to people most in need within Developing Countries.

"**Global Access Commitments**" has the meaning given in Section 3.

"**Global Health Projects**" means the HIV Vaccine Program, the TB Vaccine Program, the Vaccinal Antibody Development Program, and any other mutually agreed project conducted by the Company under the terms of this Letter Agreement that is funded by the Foundation or a Foundation-supported Entity with funds provided by the Foundation for the project, including through a grant, contract, or program-related investment as contemplated by Section 3(a)(iv).

"**Good Reason**" has the meaning given in Section 3(a)(iv).

"**HIV Vaccinal Antibody Product**" means the product applicable to the treatment and/or amelioration of HIV disease developed pursuant to the Vaccinal Antibody Development Program.

"**HIV Vaccine Product**" means the product applicable to the treatment, prevention, and/or amelioration of HIV disease developed pursuant to the HIV Vaccine Program.

"**HIV Vaccine Program**" means the Company's research, development, and product launch of a safe and effective product applicable to the treatment, prevention, and/or amelioration of HIV disease [***].

"**HIV Vaccine Program Report**" has the meaning given in Section 3(a)(vii).

"**HIV/TB Investment**" has the meaning given in the introductory paragraph.

"**HIV/TB Investment Documents**" has the meaning given in the introductory paragraph.

"**IAVI**" means the International AIDS Vaccine Initiative.

"**Investment Documents**" has the meaning given in the introductory paragraph.

"**License Trigger**" has the meaning given in Section 3(f)(ii).

"**Malaria Vaccinal Antibody Product**" means the product applicable to the prevention and/or amelioration of malaria developed pursuant to the Vaccinal Antibody Development Program.

"**Minimum Purchase Price**" has the meaning given in Section 6(d).

"**New Shares**" means shares of the Common Stock issued pursuant to the SPA.

"[***]" means [***].

"[***] **Grant Agreements**" has the meaning given in Section 3(c).

"**Platform Technology**" means the CMV Vaccine and any other intellectual property (in each case including any and [***]. For clarity, the Platform Technology shall include materials, know-how and intellectual property owned or controlled by the Company or its Affiliates, whether existing at closing or later developed, owned or controlled by the Company or its Affiliates.

"**Prior Agreement**" has the meaning given in the introductory paragraph.

"**Public Sector**" means purchases of a product developed in connection with TB Vaccine Project for use in [***].

"**Reasonable Efforts**" means the Company will use [***]. To the extent that any provision in this Letter Agreement identifies specific actions to be taken by the Company as an example, or in connection with the use, of Reasonable Efforts, then the foregoing definition of Reasonable Efforts shall include the requirement of such specific actions in such specific instance; provided, that in no event shall such specific actions be deemed to be required in connection with the use of Reasonable Efforts in any other instance in which such specific actions are not otherwise expressly stated.

"**Receiving Party**" has the meaning given in Section 18(a).

"**Remaining Funds**" has the meaning given in Section 3(a)(v).

"**Sale Transaction**" means a sale or transfer of a controlling number of, or of all or substantially all of the shares of the Company, or an assignment, sale, transfer, or exclusive license of all or substantially all of its material assets to which the subject matter of this Letter Agreement relates, whether by merger, stock transfer or otherwise; provided, that in no event shall any sale, issuance, or transfer of securities for the primary purpose of providing equity financing to the Company or equity compensation to service providers to the Company constitute a Sale Transaction, unless following such sale, issuance or transfer the Company's stockholders of record immediately prior to such transaction or series of related transactions hold, immediately after such transaction or series of related transactions, less than 50% of the voting power of the Company or other surviving entity.

"**Securities Act**" means the Securities Act of 1933, as amended.

"**SPA**" has the meaning given in the introductory paragraph.

"**Target Diseases and Conditions**" means [***].

From time to time, if the Foundation identifies more areas of global health as underinvested or disproportionately impacting poor and vulnerable populations, it may so notify the Company and the definition of Target Diseases and Conditions will be so amended with the Company's written consent, such consent not to be unreasonably withheld, conditioned, or delayed.

"**TB**" means tuberculosis.

"**TB Product**" means the product applicable to the treatment, prevention and/or amelioration of TB developed pursuant to the TB Program.

"**TB Vaccine Program**" means the Company's research, development, and product launch of a safe and effective product applicable to the treatment, prevention, and/or amelioration of TB that [***].

"**TB Program Report**" has the meaning given in Section 3(a)(vii).

"**Vaccinal Antibody Product**" means collectively (a) the HIV Vaccinal Antibody Product and (b) the Malaria Vaccinal Antibody Product.

"**Vaccinal Antibody Development Program**" means the vaccinal antibody development program set forth in Appendix 3 and any further development to develop an HIV Vaccinal Antibody Product and/or a Malaria Vaccinal Antibody Product.

"**Vaccinal Antibody Development Program Report**" has the meaning given in Section 3(a)(vii).

"**Withdrawal Right**" has the meaning given in Section 6(c).

2. Charitable Purposes and Use of Funds; Foundation Technology Access

(a) The Foundation is making the Foundation Investment as a "program-related investment" within the meaning of Section 4944(c) of the Code. The Foundation's primary purpose in making the Foundation Investment is to further significantly the accomplishment of the Foundation's charitable purposes, including the relief of the poor, distressed, and underprivileged, the advancement of science, and the promotion of health by seeking to (i) address global health challenges that disproportionately impact developing countries, and (ii) increase the access of poor and distressed individuals and families in developing countries to life-saving and other important vaccines, drugs, and technologies that may assist in the prevention, treatment, and detection of the Target Diseases and Conditions (collectively, the "**Charitability Requirements**").

(b) The Foundation is making the Foundation Investment to secure Global Access rights to new, low-cost vaccines and drugs developed (in whole or in part) through the use of the Company's Platform Technology for the Target Diseases and Conditions. The Foundation believes the Platform Technology has potential application in the Target Diseases and Conditions and, therefore, the Platform Technology (and any improvements and developments thereto), in conjunction with the Global Access Commitments described below, will achieve the Charitability Requirements.

(c) **Use of Funds**. The Company used the proceeds from the HIV/TB Investment solely (1) to further develop and leverage the Company's Platform Technology to create Funded Developments that are reasonably expected to comprise or result in affordable drugs, therapeutics, diagnostics, prophylactics, or other health products, services, and interventions for the treatment, prevention, and/or amelioration of Target Diseases and Conditions for people in Developing Countries in accordance with Global Access and (2) to conduct the HIV Vaccine Program and the TB Vaccine Program. At least fifty percent (50%) of the HIV/TB Investment was used to conduct the HIV Vaccine Program and the TB Vaccine Program. Specific deliverables and objectives with respect to development of the Platform Technology and the performance of the HIV Vaccine Program and TB Vaccine Program are set forth below. The Company will use the proceeds from the Antibody Development Investment solely to conduct the Vaccinal Antibody Development Program. For the avoidance of doubt, (i) use by the Company of the proceeds from the Foundation Investment for [***] the HIV Vaccine Program, the TB Vaccine Program, and the Vaccinal Antibody Development Program or the development of Funded Developments (including allocation of reasonable overhead expenses) shall be deemed to be funds used to conduct the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody Development Program, and/or such Funded Development, as applicable, in compliance with this Section 2(c); and (ii) the Company is [***]. The Company shall not use

any proceeds of the Foundation Investment for the following matters without the Foundation's approval: (i) a payment of dividends or (ii) any redemption of shares.

3. Global Access Commitments

In furtherance of the Charitability Requirements and Global Access, the Company agrees to the following (collectively "**Global Access Commitments**"):

(a) **Development of Platform Technology; Additional Global Health Projects; Reports**.

(i) The Company will use Reasonable Efforts to complete the Platform Technology objectives set forth on Appendix 4 and to utilize the Platform Technology in accordance with the terms of this Agreement, including to advance the HIV Vaccine Program through the completion of Phase 1 clinical trials on the HIV Vaccine Product and to advance the TB Vaccine Program through the completion of IND-enabling studies on the TB Product in furtherance of the Foundation's Charitable Purpose.

(ii) The Company will use Reasonable Efforts to advance the Vaccinal Antibody Program including by completing the activities outlined in Appendix 3 (unless amended pursuant to Section 3(a)(v) below) to achieve the following objectives: [***].

(A) [***].

(B) [***].

(C) [***].

(D) [***].

(iii) The Company agrees that after completion of the requirements in the preceding Sections 3(a)(i) and 3(a)(ii) (or at such earlier time as the Foundation may elect), the Foundation may request that the Company continue further development of the HIV Vaccine Product, TB Product, and/or any Vaccinal Antibody Product, including through product launch of a final product as further described in Section 3(a)(vi) below.

(iv) In addition to the HIV Vaccine Program, the TB Vaccine Program, and the Vaccinal Antibody Development Program, the Company may work together with the Foundation on additional Global Health Projects based on the Platform Technology for Target Diseases and Conditions in accordance with Section 3(a)(v) below, if applicable, and/ or if mutually agreed between the Company and the Foundation.

(v) If at any time the Foundation and the Company [***] the Antibody Development Investment to achieve the Charitability Requirements to continue some or all of the Vaccinal Antibody Development Program, the parties will [***] on one or more additional Global Health Projects with respect to one or more Target Diseases and Conditions on which to redeploy any remaining funds from the Antibody Development Investment that will not be spent on the Vaccinal Antibody Development Program (the "**Remaining Funds**"). The parties [***] the Vaccinal Antibody Development Program in part and redeploy a portion of the Remaining Funds to other Global Health Projects. For the avoidance of doubt, the Company will continue the Vaccinal Antibody Development Program [***] and a failure of the work relating to one of malaria or HIV in the Vaccinal Antibody Development Program will not constitute a failure of such program provided that the work on the other indication has not failed.

(A) Any scope of work relating to a Global Health Project to be funded using Remaining Funds will be designed to be completed within [***] after commencement of such scope of work; provided that the Company will continue to perform the activities under such scope of work for a reasonable period if the actual time taken extends beyond such [***] period and provided that there are still Remaining Funds available, for up to a maximum of an additional [***] (or such longer period as the Parties may agree in writing).

(B) If there are Remaining Funds, the Foundation will have until [***] to propose additional scopes of work (whether in connection with a new Global Health Project or further development on an existing Global Health Project) to be funded using such Remaining Funds; provided that if the Foundation has proposed scopes of work to be funded using Remaining Funds but the Company has not agreed to such scopes of work by [***], then such date will be extended until such time as the parties have mutually agreed on the scopes of work (which scopes of work will be designed to be completed within [***] after commencement). The Company will use (or allocate to agreed scopes of work, as applicable) any Remaining Funds that the Foundation has not requested to be redeployed by [***] (or the extended date pursuant to the preceding sentence, if applicable) solely in accordance with Section 2(c)(1). Any dispute pursuant to this Letter Agreement regarding whether it is scientifically or technically feasible to continue a Global Health Project or whether there has been a scientific or technical failure will be resolved in accordance with the dispute resolution procedure described in Section 17 herein.

(vi) If the Foundation requests that the Company continue further development of the HIV Vaccine Product, TB Vaccine Product, and/or any Vaccinal Antibody Product, or the Foundation and the Company proceed with one or more additional Global Health Projects pursuant to Sections 3(a)(iv) or 3(a)(v), any such further development or Global Health Project will be documented in a definitive agreement mutually agreed in good faith between the Foundation (or a Foundation-supported Entity) and the Company and project plan, which may include [***]. The Foundation and the Company will [***]. The specific level of funding responsibilities for the additional work will be decided as mutually agreed in good faith in writing by the parties. The Foundation shall be [***]. Any additional work may be divided into milestones or phases. The Foundation will have the right, at its sole discretion, to continue providing funding (directly or through a Foundation-supported Entity) to advance the HIV Vaccine Product, TB Vaccine Product, any Vaccinal Antibody Product, and/or any product developed in connection with any other Global Health Project through to product launch of a final product for the purpose of enabling Global Access. In the event the parties [***].

In addition, if the HIV Vaccine Product, TB Vaccine Product, any Vaccinal Antibody Product, and/or any products developed under the additional Global Health Project proceeds to [***], the Company will work in good faith with the Foundation to develop and execute [***] that will enable the Company to [***]. The [***] will be determined by the Foundation and the Company based upon [***]. The price of such products in Developing Countries will be such that the products are affordable to the Foundation's target beneficiaries in the Developing Countries, but in no case will the price exceed COGS plus [***]. The [***]. The specific level of funding responsibilities for such plan will be decided as mutually agreed in good faith in writing by the parties. The Foundation shall be [***]. The Foundation will have the right to inspect the Company's records pursuant to Section 7 herein, in order [***] for so long as is necessary to ensure compliance with this Section 3(a)(vi).

(vii) **Global Health Project Governance and Oversight.** The Parties will cooperate together in good faith to oversee the progress of the Global Health Projects towards meeting the Charitable Objectives according to the following framework.

(A) **Project Level Meetings.** On a [***] basis, and in addition on an ad hoc basis as needed, [***] for each of the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody

Development Program, and any other Global Health Project then in process to discuss the progress for each respective project. Should these meetings identify issues that cannot be resolved by the project team, senior leadership may be engaged in alignment with Section 3(a)(vii)(B) below.

(B) **Escalation.** For issues escalated by the Project Level Meetings or that arise independently that require real time senior-level communication, there will be ad hoc discussions between a designated senior representative of the Company (e.g., VP level or above member of the Company's research leadership team) and one senior representative of the Foundation (e.g., Director or Senior Advisor level).

(C) [***] **Evaluation Meetings.** On a [***], the Company and the Foundation will meet to discuss each of the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody Development Program, and any other Global Health Project then in process. Subject to applicable laws including Antitrust Laws, the Company agrees to provide written materials to the Foundation representatives at least **[***]** days in advance of such meetings to inform the Foundation representatives of the progress of the Global Health Project and form the basis for a discussion of the Global Health Project. Such meetings will include applicable representatives of the R&D, program leadership, global health, alliance management and other relevant functional team membership from the Company, and the relevant program strategy team and the strategic investment fund from the Foundation.

(D) **Significant Milestone Meetings.** The Company and the Foundation representatives outlined in Section 3(a)(vii)(C) above will also meet at to be agreed upon milestones in the development plan for any Global Health Project (such as upon the results of a clinical trial or when making candidate selection decisions).

(E) All such meetings will be in person if so requested by the Company or the Foundation, and otherwise may be held by videoconference or teleconference. For clarity, the parties may mutually agree to combine meetings for any Global Health Projects as may be appropriate. From time to time, as may be agreed upon by the parties, the discussions may include representatives from other entities, such as **[***]** subject to applicable laws including applicable Antitrust Laws.

(viii) The Company will ensure that any Funded Developments that are applicable for the treatment, prevention, or amelioration of any Target Diseases and Conditions, and all products (at any stage of development, e.g., from discovery through commercialization) relating to or arising out of any Global Health Project, will be made available and accessible at an affordable price to people most in need within Developing Countries, which price will not exceed COGS plus [***]. The Foundation will have the right to inspect the Company's records pursuant to Section 7 in order to [***] for so long as is necessary to ensure compliance with this Section 3(a)(viii).

(b) **Coordination with Foundation-supported Entities**. The Company acknowledges that the Foundation is currently funding research and development projects at various Foundation-supported Entities that are relevant to the development of the HIV Vaccine Product and the TB Vaccine Product, including [***], and their respective Affiliates. Subject in all respects to applicable law, including applicable Antitrust Laws, in connection with the work to be performed on the Platform Technology, HIV Vaccine Program, and TB Vaccine Program pursuant to this Letter Agreement, the Company shall cooperate with these entities in good faith to coordinate its development efforts on the HIV Vaccine Program and TB Vaccine Program with these entities. This process may include **[***]**. While the coordination, acquisition of rights, and completion of [***] referred to in this paragraph are the responsibility of the Company to effect, the Foundation will assist in these efforts, in particular those that relate to work funded by the Foundation. Nothing in this Letter Agreement constitutes a commitment by the Foundation to make any grants to the Company or a Foundation-supported Entity and the decision to

proceed with a grant will be made solely at the Foundation's discretion. For clarity, no provision of this Letter Agreement will limit or restrict the Foundation's rights pursuant to any grant agreement or other contract with any third-party. Notwithstanding anything to the contrary, nothing in this Letter Agreement shall require the Company to cooperate or otherwise coordinate with Foundation-supported Entities if doing so would be reasonably likely to violate or give rise to risk of liability under any applicable law, including applicable Antitrust Laws.

(c) **[***]**.

(d) **Compliance with Intellectual Property Rights:** The Company represents and warrants that, as of the Amendment Effective Date, to the actual knowledge of the Company, the Company has all necessary rights to the Platform Technology in existence at the Amendment Effective Date, the HIV Vaccine Product, the TB Vaccine Product, and the Vaccinal Antibody Product (including all rights in any patents, copyrights, trademarks, trade secrets, data, confidential information, know-how, or other intellectual property or proprietary right) required to fulfill the Company's obligations under this Letter Agreement and to grant the licenses expressly granted by the Company hereunder. The Company covenants that in the performance of the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody Development Program, and any other Global Health Project, the Company will **[***]** the Platform Technology, the HIV Vaccine Product, the TB Vaccine Product, the Vaccinal Antibody Product, and any product developed in connection with any other Global Health Project (including all rights in any patents, copyrights, trademarks, trade secrets, data, confidential information, know-how, or other intellectual property or proprietary right) required to fulfill the Company's obligations under this Letter Agreement and any other agreement between the Foundation and the Company related to the development of such products and to grant the licenses expressly granted by the Company hereunder. In connection with the Funded Developments the Company shall comply with all applicable laws and regulations and shall not knowingly violate third-party intellectual property.

The Company will [***] with respect to any Platform Technology acquired or licensed in the future (whether through acquisition of any business, company, or assets, by contract, or otherwise) required to fulfill the Company's obligations under this Letter Agreement and any other agreement between the Foundation and the Company related to the development of any products in connection with a Global Health Project and to grant the licenses expressly granted by the Company hereunder. Without limiting the foregoing, the Company shall [***], including sufficient use rights for Global Health Projects, sublicense rights encompassing the grant of rights to the Foundation hereunder, and payment provisions that are consistent with those herein and minimize or eliminate any fees, royalties, milestones, or other payments on account of any use for Global Access and the grant and exercise of the sublicense to the Foundation hereunder.

Without limiting the foregoing, the Company agrees that it will [***]. In addition, the Company [***]. In the event any milestones or royalties are payable to [***] on sales of a product developed in connection with any Global Health Project intended for use in the Developing Countries, such amounts would be included in the definition of COGS with respect to such product.

(e) **Publication.** The Company will use [***] to:

(i) Publish the scientific results and information developed in connection with each Global Health Project within a reasonable period of time after the information or results are obtained, with due regard to reasonable delays or limitations on content of these publications that are necessary to protect intellectual property.

(ii) [***].

(iii) [***].

(iv) If the Company seeks publication of Funded Developments in a peer reviewed journal, such publication must be under "open access" terms and conditions consistent with the Foundation's Open Access Policy attached hereto as Appendix 7.

(f) **Non-Exclusive License**.

(i) Solely upon the occurrence, if any, of a License Trigger, and only in such event, the Company hereby grants the Foundation a [***]; provided that, in each case, the license to the Funded Developments and the Platform Technology is limited [***]. The Foundation and the Company agree and acknowledge that, in order to achieve Global Access and make the Funded Developments available and accessible in Developing Countries, certain activities may be required to occur in one or more developed countries, like manufacture, distribution, or sale (such as to an entity procuring a product for use in Developing Countries). Accordingly, the license to the Foundation shall [***]. The definitive agreements with respect to any additional Global Health Project will include, to the extent applicable, license provisions with respect to the Global Health Project consistent with the license provisions set forth in this Letter Agreement. For the avoidance of doubt, to the extent any additional fees, royalties, milestones or other payments are payable to any third-party solely as a result of the Company's grant of, or the Foundation's exercise of, the license granted pursuant to this paragraph, the Foundation shall be responsible for all such payments to the extent such fees, royalties, milestones or other payments are for the benefit of the Foundation or a Foundation-supported Entity and the payment of such fees, royalties, milestones or other payments would not constitute a taxable expenditure under Treasury Regulation 53.4945-6(a)-(b); provided, that the Company may renounce any non-incidental benefit received by the Company related thereto and, in such event, the Foundation shall pay the full amount of such additional fees, royalties, milestones or other payments.

(ii) **License Triggers**. Notwithstanding the forgoing license grants, the Foundation shall only exercise its rights under the license (including its sublicensing rights) during the pendency of the occurrence of at least one of the following, and, in any event, not prior to the end of the [***] period set forth in the last paragraph of this Section 3(f)(ii) (each a "**License Trigger**"):

(A) a Charitability Default;

(B) the Company either: (i) indicates in writing that it is unwilling or unable to commence, proceed, or continue with development of the HIV Vaccine Product, TB Vaccine Product, Vaccinal Antibody Product, or any other Global Health Project previously agreed to by the Company, or (ii) fails to commence, proceed, or continue with development of the HIV Vaccine Product, TB Vaccine Product, Vaccinal Antibody Product, or such other Global Health Project within [***] of receipt of a written notice from the Foundation [***]. For the avoidance of doubt, a License Trigger shall not be deemed to have occurred pursuant to this Section 3(f)(ii)(B) if the HIV Vaccine Program, the TB Vaccine Program, the Vaccinal Antibody Development Program, or any other Global Health Project is [***]; or

(C) the Company institutes any bankruptcy, insolvency, reorganization for the benefit of creditors, dissolution, liquidation, or similar proceeding relating to it under the laws of any jurisdiction or any such proceeding is instituted against the Company.

If either the Foundation or the Company becomes aware of a License Trigger, it will promptly notify the other party in writing of the occurrence of a License Trigger, setting forth in reasonable detail the reasons therefor. If the Company disputes the Foundation's belief that a License Trigger has occurred, the Company and the Foundation will [***], after which time, such dispute will be decided in accordance with the dispute resolution procedure described in Section 17 herein. If the parties have not resolved such dispute prior to

the end of the License Negotiation Period, then during the pendency of the dispute resolution procedure described in Section 17 herein, the Foundation may exercise the license pursuant to Section 3(f)(i) and the Company will enable the Foundation to do so pursuant to Section 3(h) (and the dispute resolution procedure shall continue notwithstanding the exercise of such license grant), provided that: [***]; (y) until such time as the dispute is finally decided against the Company pursuant to the dispute resolution procedure described in Section 17: [***]; and (z) if the dispute is finally decided in favor of the Company pursuant to the dispute resolution procedure described in Section 17: [***].

(g) **Modifications**. The principal purpose of the license granted to the Foundation is to ensure that Global Access is achieved as rapidly as reasonably practicable. The parties acknowledge that product launch and/or distribution of Company products and processes for the benefit of end users in Developing Countries may require worldwide commercialization and /or distribution rights to be maintained by a single party. During the implementation of the Global Health Projects, the Company may demonstrate, on a case-by-case basis, to the satisfaction of the Foundation that Global Access can best be achieved in a particular case without such a license. In such a case, the Foundation and the Company may modify or terminate in whole or in part the foregoing license as mutually agreed as reflected in a signed writing.

(h) **Cooperation; Technology Transfer**. The Company agrees to use Reasonable Efforts to enable the Foundation or its sublicensees to exercise their rights hereunder, which efforts shall include, as reasonably required, [***]. For the avoidance of doubt in the event of an exercise of the license pursuant to Section 3(f), the obligations under this paragraph shall not require the Company to incur additional expenses or to make additional payments to [***], unless the Foundation or a Foundation-supported Entity is willing to pay such additional expenses or payments.

In connection with the exercise of the foregoing licenses under Section 3(f), the Company's use of Reasonable Efforts shall include, as reasonably required: [***]. The Foundation will pay all reasonable third-party costs and expenses incurred by the Company as a result of complying with the preceding sentence, if any.

(i) **Duration**. The Global Access Commitments commenced on December 23, 2016, and are ongoing and will continue for as long as the Foundation continues to be a charitable entity (including following the exercise of the Withdrawal Right). For clarity, the Global Access Commitments will continue as to any Funded Developments that are assigned, sold, transferred, or exclusively licensed to a third-party.

4. Third-Party Costs.

Except as otherwise provided in this Letter Agreement, the Company shall be responsible for all costs associated with its technology and intellectual property owned, controlled or licensed-in. Without limiting the foregoing, the Company shall use Reasonable Efforts to [***].

5. Obligations in the Event of a Sale of the Platform Technology or Company; Preservation of Global Access Commitments.

In the event that all or substantially all of the Company's assets, the Platform Technology owned or controlled by the Company, or the Funded Developments are transferred to, exclusively licensed to, sold or acquired by a third-party, the Company will require the purchaser, transferee, licensee, or acquirer to assume the Global Access Commitments in a written agreement that is reasonably acceptable to the Foundation. The Company will not grant to a third-party any rights or enter into any arrangements or agreements (including any amendment or modification to the Existing Agreements) that would limit or restrict the Foundation's rights pursuant to the Global Access Commitments, including the Foundation's

right to enter into Global Health Projects with the Company, unless such third-party expressly assumes such Global Access Commitments to the reasonable satisfaction of the Foundation. Consistent with the preceding sentence, the Company covenants that if the Company decides to no longer pursue the TomegaVax technology and is required to negotiate in good faith with the individuals who are parties to the Existing Agreements (collectively, the "**Consultants**") to find an alternative manner in which the Consultants can continue to develop the TomegaVax technology, the Company will not enter into any exclusive arrangement with the Consultants or grant to the Consultants any rights or enter into any arrangements or agreements that would limit or restrict the Foundation's rights pursuant to the Global Access Commitments. For clarity, notwithstanding anything to the contrary in this Letter Agreement, (a) the Foundation's rights hereunder which exist on the date of the transfer, sale, or acquisition of the Company's Platform Technology, Funded Developments, or other assets to or by a third-party shall not be terminated by such transfer, sale, or acquisition and (b) if a third-party acquires the Company, any capabilities, technology, and intellectual property rights which the third-party acquirer owned prior to the closing of any such acquisition transaction or develops or acquires after the closing of any such transaction without any use of the Funded Developments will not be considered Platform Technology.

6. Withdrawal Right.

(a) The Withdrawal Right described and defined in this Section 6 will be triggered only as a result of a Charitability Default. For the avoidance of doubt, the Withdrawal Right and the Charitability Default will not be triggered by [***], so long as the Company has not breached its obligations under this Letter Agreement.

(b) A "**Charitability Default**" will occur if the Company either (i) fails to comply, in any material respect, with the restrictions in Sections 2(c) and 9 of this Letter Agreement on the use of funds from the Foundation Investment or the other related U.S. legal obligations set forth in this Letter Agreement, including without limitation the requirements set forth in Sections 7, 11, and 12 below, or (ii) is in material breach of the Global Access Commitments. Each party agrees to promptly notify the other party in writing if it has knowledge of any Charitability Default and the Company shall thereafter provide to the Foundation a proposed strategy to remedy the Charitability Default.

(c) If the Company fails to cure the Charitability Default within [***] of receipt of the above described notice (provided that solely for purposes of this Section 6 in the event the Company disputes that a Charitability Default has occurred, such [***] period will commence upon a decision that a Charitability Default has occurred pursuant to the dispute resolution process described in Section 17); and the Foundation holds any securities of the Company issued in connection with the Foundation Investment, including securities issued in respect of or upon conversion or exercise of such securities (collectively, the "**Foundation Stock**"), the Company shall have the obligation, if requested by the Foundation, to redeem or arrange for a third-party to purchase all (but not less than all) of the Foundation Stock (the "**Withdrawal Right**"), provided that any such redemption or repurchase shall be made only to the extent permitted by applicable law concerning distributions to holders of equity interests. Without limiting the foregoing, if the Company is unable to redeem all of the Foundation Stock, and no third-party purchases the Foundation Stock, then the Company shall use commercially reasonable efforts to effect the Withdrawal Right, consistent with the Code and applicable law, as soon as practicable thereafter, provided that to the extent any redemption of the Foundation Stock pursuant to this Section 6(c) would have [***]. For the avoidance of doubt, the Foundation shall cease to be a stockholder for all purposes effective as of the date such Foundation Stock is redeemed and, thereafter, the sole right of the Foundation with respect to its ownership of Foundation Stock shall be to receive such redemption payment. During the period when the Company is unable to exercise its obligation to redeem or find a purchaser of the Foundation Stock, the Company shall [***] until such time as the Company has fulfilled the Withdrawal Right with respect to all of the Foundation Stock).

(d) For redemption or purchase by a third-party pursuant to Section 6(c), Foundation Stock shall be valued at the greater of (i) the original purchase price attributable to such shares (the "**Minimum Purchase Price**") or, at the option of the Foundation, (ii) the then current Fair Market Value.

(e) If the Foundation Stock is sold or redeemed in connection with a Withdrawal Right, the Foundation will have a look back right by which, in the event that (i) the Company consummates a Sale Transaction or (ii) the Company signed a binding letter of intent or binding term sheet or entered into any definitive agreement (each, a "**Binding Agreement**") with respect to such Sale Transaction at any time prior to the [***] anniversary of the first date that any of the Foundation Stock was redeemed or sold, then the Foundation will receive compensation equal to the excess of what it would have received in such transaction if it still held the Foundation Stock at the time of such Sale Transaction over what it actually received in the sale or redemption of the Foundation Stock; provided that such Sale Transaction actually closes prior to the first anniversary of the first date that any of the Foundation Stock was redeemed or sold. For clarity, if the Company does not enter into any Binding Agreement until after the [***] anniversary of the initial sale or redemption date of the Foundation Stock, then the Foundation's look-back right set forth in this Section 6(e) will terminate and be of no further force and effect.

(f) If at the time that the Foundation has requested to exercise its Withdrawal Right, the Foundation Stock consists of a class of securities of the Company that (i) is registered under section 12 (or any successor provision) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), (ii) is not subject to restrictions from trading under the Securities Act or state securities laws and (iii) is listed on a U.S. national securities exchange and the Company is current in filing its financial reports and other required filings with the Securities and Exchange Commission (the "**SEC**"), then the Company will not be required to redeem or find a purchaser for the Foundation Stock if the Foundation elects to and is able to sell the Foundation Stock on a securities exchange for at least the Minimum Purchase Price. If the Foundation elects to sell the Foundation Stock to the public pursuant to this Section 6(f) and the Foundation receives less than the Minimum Purchase Price, then the Company will pay the Foundation as soon as practicable the difference between the amount received by the Foundation as a result of the sale of the Foundation Stock on the securities exchange and the amount of the Minimum Purchase Price.

(g) For the avoidance of doubt, notwithstanding any exercise of the Withdrawal Right, the Foundation will continue to be entitled to enforce its rights under the Global Access Commitments.

7. <u>Required Reporting; Audit Rights</u>

In addition to any reports required to be delivered to the Foundation pursuant to the Investment Documents, the Company shall furnish, or cause to be furnished, to the Foundation the following reports and certifications:

(a) Within [***] after the end of each of the Company's fiscal years during which the Foundation owns any Foundation Stock or any loans from the Foundation to the Company are outstanding, a certificate from the Company signed by an officer or director of the Company and substantially in the form attached to this Letter Agreement as Appendix 7, certifying that the requirements of the Foundation Investment set forth in this Letter Agreement were met during the immediately preceding fiscal year, describing the use of the proceeds of the Foundation Investment and summarizing the Company's progress toward achieving the Global Access Commitments;

(b) Within [***] after the end of the Company's fiscal year during which the Foundation ceases to own any Foundation Stock or all loans from the Foundation to the Company cease to be outstanding, a certificate from the Company signed by an officer or director of the Company and substantially in the form attached to this Letter Agreement as Appendix 8, certifying that the requirements of the Foundation

Investment set forth in this Letter Agreement were met during the term of the Foundation Investment, describing the use of the proceeds of the Foundation Investment and summarizing the Company's progress toward achieving the Global Access Commitments;

(c) Any other information respecting the operations, activities, and financial condition of the Company as the Foundation may from time to time reasonably request to discharge any expenditure responsibility, within the meaning of Sections 4945(d)(4) and 4945(h) of the Code, of the Foundation with respect to the Foundation Investment, and to otherwise monitor the charitable benefits intended to be served by the Foundation Investment; provided, that the Foundation will reimburse the Company for any reasonable third-party expenses incurred by the Company in order to prepare any information the Company is required to prepare solely as a result of this Section 7(c); and

(d) Full and complete financial reports of the type ordinarily required by commercial investors under similar circumstances to the extent required pursuant to Treasury Regulation 53.4945-5(b)(4); provided that as long as the Company is a reporting company under the Exchange Act, the timely filing of quarterly, annual and current reports pursuant to section 13 or 15(d) of the Exchange Act and all other required filings with the SEC shall be deemed to satisfy the financial reporting obligations in this Section 7(d).

(e) The Company will maintain books and records adequate to provide information ordinarily required by commercial investors under similar circumstances, including copies of any reports submitted to the Foundation related to each Global Health Project. The Company will retain such books, records, and reports for [***] and will make such books, records, and reports available at reasonable times to enable the Foundation to [***].

(f) The Company will permit employees or agents of the Foundation who are bound by written confidentiality obligations or policies at least as restrictive as those set forth herein, at any reasonable time and upon reasonable prior notice, during normal business hours, to examine or audit the Company's books and accounts of record and to make copies and memoranda of the same, in each case, at the Foundation's expense, to audit the Company's compliance with the use of the Foundation's funds; provided that the Foundation will not conduct such an examination more frequently than once per year unless: (i) required due to an audit, request, or inquiry of the Foundation by the Internal Revenue Service; or (ii) the Foundation has a reasonable belief that a Charitability Default has occurred. If the Company maintains any records (including without limitation computer generated records and computer software programs for the generation of such records) in the possession of a third-party, the Company, upon request of the Foundation, will notify such party to permit the Foundation access to such records at reasonable times and to provide the Foundation with copies of any records it may reasonably request in connection with such audit, request or inquiry, all at the Foundation's expense.

8. Assignment.

Notwithstanding anything in this Letter Agreement to the contrary, (a) the Foundation will have the right to assign this Letter Agreement (in whole but not in part) or transfer the Foundation Stock, subject to securities laws, to (i) any successor charitable organization of the Foundation from time to time that is a tax exempt organization as described in Section 501(c)(3) of the Code, or (ii) any tax exempt organization as described in Section 501(c)(3) of the Code controlled by one or more trustees of the Foundation; and (b) the Company will have the right to assign this Letter Agreement (in whole but not in part) without the consent of the Foundation or any other person: (x) in connection with a Sale Transaction, subject to the terms of Section 5; and (y) to any Affiliate of the Company (provided, that: (A) such Affiliate has adequate financial resources to perform the Company's obligations under this Letter Agreement; and (B) in the event any such Affiliate ceases to have adequate financial resources to perform the Company's obligations under

this Letter Agreement, the Company shall be secondarily liable for such obligations). Except as provided in the preceding sentence, neither party shall have the right to assign (whether by merger, sale of stock, sale or license of assets, or otherwise) this Letter Agreement without the prior written consent of the other party, which consent will not be unreasonably withheld, conditioned, or delayed. The Foundation or the Company, as applicable, will notify the other party of any such proposed assignment, including the identity of the assignee, in a timely manner. For the avoidance of doubt, if the Foundation transfers the Foundation Stock as permitted by this Section 8, the Foundation may assign to any such transferee all of its rights attached to such Foundation Stock, including the Withdrawal Right.

9. Prohibited Uses.

The Company shall not expend any proceeds of the Foundation Investment to carry on propaganda or otherwise to attempt to influence legislation, to influence the outcome of any specific public election or to carry on, directly or indirectly, any voter registration drive, or to participate or intervene in any political campaign on behalf of or in opposition to any candidate for public office within the meaning of Section 4945(d) of the Code. The proceeds of the Foundation Investment shall not (a) be earmarked to be used for any activity, appearance or communication associated with the activities described in the foregoing sentence, or (b) be intended for the direct benefit, and will not directly benefit, any person actually known to the Company (including after being identified to the Company by the Foundation) as having a personal or private interest in the Foundation, including without limitation, descendants of the founders of the Foundation, or persons related to or controlled by, directly or indirectly, such persons; provided, that in no event shall the Company (or any of its officers, directors, employees, agents, or representatives) have any duty of inquiry with respect to the foregoing.

For the avoidance of doubt, except as otherwise expressly permitted in this Letter Agreement, the Company will not use the Foundation Investment to pay a dividend or redeem shares.

10. Disqualified Person.

The Company represents and warrants to the Foundation that, as of the Amendment Effective Date, neither the Company nor, to the actual knowledge of the Company, any shareholder of the Company is a “disqualified person” with respect to the Foundation (as the term “disqualified person” is defined in Section 4946(a) of the Code). The Foundation represents and warrants to the Company that as of the Amendment Effective Date, the Foundation does not, and one or more disqualified persons with respect to the Foundation do not, directly or indirectly, control the Company.

11. Anti-Terrorism.

The Company will not use any portion of the Foundation Investment, directly or indirectly, in support of activities (a) prohibited by U.S. laws related to combatting terrorism; (b) with persons on the List of Specially Designated Nationals (www.treasury.gov/sdn) or entities owned or controlled by such persons; or (c) with countries or territories against which the U.S. maintains comprehensive sanctions (currently, Cuba, Iran, Syria, North Korea, and the Crimean Region of Ukraine), unless such activities are fully authorized by the U.S. government under applicable law and specifically approved by the Foundation in its sole discretion.

12. Anti-Corruption and Anti-Bribery.

The Company will not offer or provide money, gifts, or any other things of value directly or indirectly to anyone in order to improperly influence any act or decision relating to the Foundation or any activities contemplated by this Letter Agreement or the Company’s organizational documents (e.g.,

certificate of incorporation), including by assisting any party to secure an unlawful advantage. Training and information on compliance with these requirements are available at www.learnfoundationlaw.org.

13. Public Reports; Use of Name.

Each of the Foundation and the Company may include information on this investment in its periodic public reports and may make the investment public at any time on its web page and as part of press releases, public reports, speeches, newsletters, and other public documents; provided that public communications about the Foundation Investment made by the Company shall indicate that the Foundation Investment was made by the Foundation in furtherance of the Foundation's charitable purposes; provided, however, that the Foundation may not publicly disclose this Letter Agreement or the Antibody Development Investment prior to the Amendment Effective Date. Any announcement of the Foundation Investment by any third-party will require the prior written approval of the Foundation and the Company. Other than with respect to the foregoing rights, each party shall also obtain the other party's prior written approval for any other use of the other party's name or logo in any respect; provided, that each party may use the other party's name for any uses that have been previously approved in writing by such party. Notwithstanding the foregoing, each party's name and logo will not be used by the other party in any manner to market, sell or otherwise promote the Company, its products, services, and/or business.

14. Indemnification.

(a) Company Indemnity. The Company will indemnify, hold harmless, and defend the Foundation and its co-chairs, trustees, directors, officers, employees, and representatives other than Foundation sublicensees (collectively, the "**Foundation Indemnitees**") from and against any and all judgments, settlements, damages, penalties, losses, liabilities, and costs (including reasonable attorneys' fees and costs) as a result of third-party causes of action, claims, suits, or legal proceedings (each a "**Claim**") finally awarded to such third-party by a court of competent jurisdiction against any of the Foundation Indemnitees or agreed to as part of a monetary settlement of the Claim and arising out of or relating to: (a) bodily injury, death, or property damage caused by the activities or omissions of the Company, including any development, product launch, or commercialization activities carried out by the Company (including any failure to comply with applicable laws, regulations or rules in connection therewith), or by any Company product (other than to the extent such Claims were caused by commercialization or other activities conducted by a Foundation sublicensee without the involvement of the Company or any of its Affiliates); or (b) any Claim that the Platform Technology, any Funded Development or any Company product (other than to the extent such Claims were caused by commercialization or other activities conducted by a Foundation sublicensee without the involvement of the Company or any of its Affiliates) infringes upon a patent, proprietary, or other intellectual property right of a third-party. The Foundation will give the Company prompt written notice of any Claim subject to indemnification pursuant to this Section 14(a); provided that the Foundation's failure to promptly notify the Company will not affect the Company's indemnification obligations except to the extent that the Foundation's delay prejudices the Company's ability to defend the Claim. The Company will have sole control over the defense and settlement of each and every Claim subject to indemnification pursuant to this Section 14(a), with counsel of its own choosing which is reasonably acceptable to the Foundation; provided that the Company conducts the defense actively and diligently at the sole cost and expense of the Company and provided further that the Company will not enter into any settlement that adversely affects, in any material respect, any Foundation Indemnitee without the applicable Foundation Indemnitee's prior written consent, such consent not to be unreasonably withheld, conditioned or delayed. The Foundation will provide the Company, upon request, with reasonable cooperation in connection with the defense and settlement of the Claim. Subject to the Company's rights above to control the defense and settlement of Claims, the Foundation and any Foundation Indemnitee may, at its own expense, employ separate counsel to monitor and participate in the defense of any Claim under this Section 14(a). For the avoidance of doubt, the Company shall have no liability to the Foundation or

any obligation to indemnify the Foundation pursuant to this Section 14(a) to the extent such claim arises out of the Foundation's fraud, negligence, or willful misconduct.

(b) The parties will not be liable to each other for any indirect, incidental, consequential, or special damages (including lost revenues, lost savings, or lost profits suffered by such other party) suffered by such other party arising under or in connection with this Letter Agreement, regardless of the form of action, whether in contract or tort, including negligence of any kind whether active or passive, and regardless of whether the party knew of the possibility that such damages could result; provided that to the extent a Foundation Indemnitee is entitled to be indemnified hereunder for Claims of third parties and such third-party has been awarded indirect, incidental, consequential, reliance, or special damages (including lost revenues, lost savings, or lost profits), the Company's indemnification obligations to the Foundation Indemnitee shall extend to and include such third-party's indirect, incidental, consequential, reliance, or special damages (including lost revenues, lost savings, or lost profits). The parties further agree that under no circumstances will any party be liable to the other party (or to any Foundation Indemnitee) more than once for the same losses arising under or in connection with this Letter Agreement.

(c) The Foundation agrees that it will, as a condition to the grant of any sublicense hereunder, enter into an agreement with the sublicensee(s) that is consistent with industry standards at the time with respect to indemnification of the Company for costs, liabilities, and expenses arising from the conduct of activities by or on behalf of such sublicensee(s) in exercising such sublicense.

15. Entire Agreement; Modification.

The terms and conditions set forth in this Letter Agreement are in addition to the provisions stated in the Investment Documents and the terms and conditions of this Letter Agreement shall prevail over any inconsistent provision in any Investment Document. Unless mutually agreed otherwise by the Parties, to the extent any of the Global Access Commitments (including, for clarity, the definitions of Funded Developments and Platform Technology) in this Letter Agreement are inconsistent with any global access terms in any existing grant agreements between the Parties in connection with the HIV Vaccine Program and TB Vaccine Program, or future grant agreements (including any amendments to existing grant agreements) with respect to the development of the HIV Vaccine Product, TB Vaccine Product, HIV Vaccinal Antibody Product, and/or Malaria Vaccinal Antibody Product up through the completion of the first Phase 2 clinical trial for such respective product, the terms and conditions of this Letter Agreement shall prevail solely to the extent necessary to resolve such inconsistency. The Parties acknowledge that current and future grant agreement-specific global access terms that are not included in this Letter Agreement may be necessary to advance global access objectives prior to the completion of the first Phase 2 clinical trial for each respective product as noted in the preceding sentence, but such terms shall not contravene the Global Access Commitments nor modify the definitions of Funded Developments and Platform Technology in this Letter Agreement unless mutually agreed by the Parties. No change, modification or waiver of any term or condition of this Letter Agreement shall be valid unless it is in writing, it is signed by the party to be bound, and it expressly refers to this Letter Agreement.

16. Authority; Governing Law.

Each of the signatories below covenants, represents, and warrants that as of the Amendment Effective Date, he, she, or it had all authority necessary to execute this Letter Agreement and that, on execution, this Letter Agreement will be fully binding and enforceable in accordance with its terms, and that no other consents or approvals of any other person or third parties are required or necessary for this Letter Agreement to be so binding. This Letter Agreement shall be governed by the laws of the State of Washington, excluding provisions of conflicts of laws which would result in the application of the law of any other jurisdiction.

17. Dispute Resolution.

(a) Except as specifically otherwise provided herein, any disagreement or dispute between the parties arising out of or related to this Letter Agreement (a "**Dispute**"), shall be resolved in the manner provided in this Section 17. Should there develop a Dispute, such Dispute shall be resolved in the order of preference of Sections 17(b) - (d) below.

(b) [***].

(c) [***].

(d) [***].

(e) [***].

(f) [***].

(g) [***].

(h) [***].

(i) Both parties agree to continue performing their obligations under this Letter Agreement pending the resolution of any Dispute that is being resolved hereunder unless and until such obligations are terminated or expire in accordance with the provisions of this Letter Agreement.

(j) Notwithstanding the foregoing, and without waiting for the expiration of the time periods set forth above, each party shall have the right to apply to any court of competent jurisdiction for appropriate interim or provisional relief, as necessary to protect its rights or property. Furthermore, nothing herein shall prevent the parties from resorting to a court of competent jurisdiction in those instances where preliminary injunctive relief would be appropriate, pending final resolution of the Dispute through arbitration. Nothing in this Section 17 shall be construed to prevent a party from instituting formal proceedings at any time to avoid the expiration of any statute of limitations period or to preserve a superior position with respect to other creditors. For the avoidance of doubt, to the extent this Letter Agreement permits the parties to apply for relief to or institute a proceeding in a court of competent jurisdiction, nothing in this Letter Agreement or any other Investment Document will constitute a waiver of the right to a jury trial in such proceeding.

18. Confidential Information.

(a) Except to the extent expressly authorized by this Letter Agreement or otherwise agreed in writing, the receiving party (the "**Receiving Party**") shall keep confidential and shall not publish or otherwise disclose or use for any purpose other than as provided for in this Letter Agreement any Confidential Information of the other party (the "**Disclosing Party**"). Notwithstanding the foregoing, Confidential Information shall not include any information to the extent that: (i) it can be established by written documentation of the Receiving Party that such information is generally available to the public other than through unauthorized disclosure thereof by the Receiving Party; (ii) such information is lawfully acquired from other sources which are not prohibited from disclosing such information, and without obligation of confidentiality; (iii) such information is approved for disclosure by the consent of the Disclosing Party; or (iv) such information is independently developed by the Receiving Party without use or reference to the Disclosing Party's Confidential Information.

(b) Nothing in this Letter Agreement will be interpreted as placing any obligation of confidentiality or non-use on the Receiving Party with respect to any Confidential Information that the Receiving Party is required to disclose pursuant to law, regulation, or court order. In the event that Confidential Information is required to be disclosed by the Receiving Party pursuant to law, regulation, or court order, the Receiving Party shall make all reasonable efforts to notify the Disclosing Party of such requirement, in order to allow the Disclosing Party to seek a protective order or seek confidential treatment of such information.

(c) The Receiving Party may disclose Confidential Information of the Disclosing Party to its trustees, directors, officers, employees, consultants, and advisors (including lawyers and accountants) on a need to know basis, in each case subject to appropriate confidentiality provisions (or professional standards) reasonably acceptable to the Disclosing Party.

(d) Notwithstanding any other provision of this Letter Agreement, nothing herein shall prohibit the Foundation from any of the following: (i) analyzing Confidential Information; (ii) comparing the Confidential Information to information in the possession of the Foundation; or (iii) making any grant or other investment to, or entering into any agreement with, any third-party in furtherance of the Foundation's charitable purpose, so long as in doing so, the Foundation does not disclose any Confidential Information except as permitted pursuant to Sections 18(a) through (c).

19. Counterparts.

This Letter Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which shall be deemed to be and constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have caused this Letter Agreement to be executed as of the date first written above.

BILL & MELINDA GATES FOUNDATION

By: /s/ Carolyn Ainslie

Name: Carolyn Ainslie

Title: Chief Financial Officer

VIR BIOTECHNOLOGY, INC.

By: /s/ Howard Horn

Name: Howard Horn

Title: Chief Financial Officer

Appendix 1

Developing Countries

[***]

Appendix 2

Existing Agreements

[***]

Appendix 3

Vaccinal Antibody Development Program

Appendix 4

Platform Technology Objectives

[***]

Appendix 5

[***]

Appendix 6

HIV Antibody Product – Lead Selection Framework

[***]	[***]
[***]	[***]
[***]	[***]

HIV Antibody Product – Other Key Product Criteria

[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

Appendix 7

[OFFICER'S/DIRECTOR'S] CERTIFICATE

VIR BIOTECHNOLOGY, INC.

[DATE]

This certificate is being delivered by Vir Biotechnology, Inc., a Delaware corporation (the "Company"), pursuant to Section 7(a) of the Letter Agreement between the Company and the Bill & Melinda Gates Foundation dated as of January ___, 2022 (the "Letter Agreement"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Letter Agreement.

The Company certifies as follows:

1. During the fiscal year ended [DATE], the Company met the requirements of the Foundation Investment as set forth in the Letter Agreement that were required to be complied with or performed by the Company during such time period.

2. Attached as Exhibit A to this certificate is a description of the Company's use of proceeds of the Foundation Investment during the fiscal year ended [DATE].

3. Attached as Exhibit B to this certificate is the Company's evaluation of the Company's progress with respect to the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody Development Program, and Funded Developments, including information regarding progress against the Global Access Commitments (as set forth in the Letter Agreement) during the fiscal year ended [DATE].

IN WITNESS WHEREOF, the undersigned has executed this certificate and has caused this certificate to be delivered on the date first above written.

Vir Biotechnology, Inc.

By: _____

Name:

Title:

Appendix 8

[OFFICER'S/DIRECTOR'S] CERTIFICATE

VIR BIOTECHNOLOGY, INC.

[DATE]

This certificate is being delivered by Vir Biotechnology, Inc., a Delaware corporation (the "Company"), pursuant to Section 7(b) of the Letter Agreement between the Company and the Bill & Melinda Gates Foundation dated as of January ___, 2022 (the "Letter Agreement"). Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Letter Agreement.

The Company certifies as follows:

1. During the term of the Foundation Investment, the Company met the requirements of the Foundation Investment as set forth in the Letter Agreement that were required to be complied with or performed by the Company during such time period.

2. Attached as Exhibit A to this certificate is a description of the Company's use of proceeds of the Foundation Investment during the term of the Foundation Investment.

3. Attached as Exhibit B to this certificate is the Company's evaluation of the Company's progress with respect to the HIV Vaccine Program, TB Vaccine Program, Vaccinal Antibody Development Program and Funded Developments, including information regarding progress against the Global Access Commitments (as set forth in the Letter Agreement) during the term of the Foundation Investment.

IN WITNESS WHEREOF, the undersigned has executed this certificate and has caused this certificate to be delivered on the date first above written.

Vir Biotechnology, Inc.

By: _____

Name:

Title:

Appendix 9

Gates Foundation Open Access Policy

The Bill & Melinda Gates Foundation is committed to information sharing and transparency. We believe that published research resulting from our funding should be promptly and broadly disseminated. We have adopted an Open Access policy that enables the unrestricted access and reuse of all peer-reviewed published research funded, in whole or in part, by the foundation, including any underlying data sets.

As of January 1, 2015, our Open Access policy will be effective for all new agreements. During a two-year transition period, publishers will be permitted to apply up to a 12-month embargo period on the accessibility of the publication and its underlying data sets. This embargo period will no longer be allowed after January 1, 2017.

Our Open Access policy contains the following elements:

1. Publications Are Discoverable and Accessible Online. Publications will be deposited in a specified repository(s) with proper tagging of metadata.

2. Publication Will Be On “Open Access” Terms. All publications shall be published under the Creative Commons Attribution 4.0 Generic License (CC BY 4.0) or an equivalent license. This will permit all users of the publication to copy and redistribute the material in any medium or format and transform and build upon the material, including for any purpose (including commercial) without further permission or fees being required.

3. Foundation Will Pay Necessary Fees. The foundation would pay reasonable fees required by a publisher to effect publication on these terms.

4. Publications Will Be Accessible and Open Immediately. All publications shall be available immediately upon their publication, without any embargo period. An embargo period is the period during which the publisher will require a subscription or the payment of a fee to gain access to the publication. We are, however, providing a transition period of up to two years from the effective date of the policy (or until January 1, 2017). During the transition period, the foundation will allow publications in journals that provide up to a 12-month embargo period.

5. Data Underlying Published Research Results Will Be Accessible and Open Immediately. The foundation will require that data underlying the published research results be immediately accessible and open. This too is subject to the transition period and a 12-month embargo may be applied.

Exhibit 10.46

STOCK PURCHASE AGREEMENT

THIS STOCK PURCHASE AGREEMENT ("***Agreement***") is entered into as of January 12, 2022 (the "***Execution Date***"), by and between **the Bill & Melinda Gates Foundation**, a Washington charitable trust that is a tax-exempt private foundation having an office at 500 5th Ave N, Seattle, WA 98109 (the "***Foundation***"), and **Vir Biotechnology, Inc.** a Delaware corporation having an office at 499 Illinois Street, Suite 500, San Francisco, CA 94158 ("***Vir***"). The capitalized terms used herein and not otherwise defined have the meanings given to them in Appendix 1.

RECITALS

Vir has agreed to sell, and the Foundation has agreed to purchase, shares of Common Stock subject to and in accordance with the terms and provisions of this Agreement.

Contemporaneously with the execution of this Agreement, the Foundation and Vir are entering into amended and restated side letter agreement (the "***Side Letter***"), dated as of the Effective Date (collectively, the "***Gates Agreements***").

AGREEMENT

For good and valuable consideration, the Foundation and Vir agree as follows:

SECTION 1. SALE AND PURCHASE OF STOCK

1.1 Purchase of Stock. Subject to the terms and conditions of this Agreement, at the Closing, Vir will issue and sell to the Foundation, and the Foundation will purchase from Vir, a number of shares of Common Stock equal to $40,000,000 divided by the Share Value, rounded down to the nearest whole share (such shares of Common Stock, the "***Shares***"). The aggregate purchase price shall equal the number of Shares multiplied by the Share Value, rounded to the nearest cent (the "***Purchase Price***").

1.2 Payment. At the Closing, the Foundation will pay the Purchase Price by wire transfer of immediately available funds in accordance with wire instructions, which instructions will have been provided by Vir to the Foundation at least three (3) Business Days prior to the Closing, and Vir will deliver the Shares in restricted book-entry form to the Foundation.

1.3 Closing.

(a) Closing. The closing of the transaction contemplated by Section 1.1 (the "***Closing***") will be held through the electronic exchange of documents and signatures, as promptly as practicable, and in no event more than five (5) Business Days after the conditions to the Closing set forth in Section 5 are satisfied or waived for the Closing (other than those conditions that by their nature are to be satisfied or waived at the Closing), or at such other time and/or date as may be jointly designated by the Foundation and Vir for the Closing.

(b) Closing Deliverables.

(i) At the Closing, Vir will deliver to the Foundation:

A. a duly executed cross-receipt in form and substance reasonably satisfactory to each party (the "***Cross-Receipt***");

B. a certificate in form and substance reasonably satisfactory to the Foundation and duly executed on behalf of Vir by an authorized officer of Vir, certifying that the conditions to the Closing set forth in Section 5.2(a), (b), and (c) of this Agreement have been fulfilled;

C. a certificate of the secretary of Vir dated as of the Closing Date certifying that attached thereto is a true and complete copy of all resolutions adopted by the Board authorizing the execution, delivery and performance of the Gates Agreements and the transactions contemplated herein and therein and that all such resolutions are in full force and effect and are all the resolutions adopted in connection with the transactions contemplated hereby and thereby as of the Closing Date; and

D. a duly executed counterpart of the Side Letter;

(ii) At the Closing, the Foundation will deliver to Vir:

A. a duly-executed Cross-Receipt;

B. a certificate in form and substance reasonably satisfactory to Vir and duly executed on behalf of the Foundation by an authorized officer of the Foundation, certifying that the conditions to the Closing set forth in Section 5.1(b) and (c) of this Agreement have been fulfilled; and

C. a duly executed counterpart of the Side Letter.

SECTION 2. REPRESENTATIONS AND WARRANTIES OF VIR

Except as otherwise specifically contemplated by this Agreement, Vir hereby represents and warrants to the Foundation that:

2.1 Private Placement. Neither Vir nor any Person acting on its behalf, has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under any circumstances that would require registration of the Shares under the Securities Act. Subject to the accuracy of the representations made by the Foundation in Section 3, the Shares will be issued and sold to the Foundation in compliance with applicable exemptions from the registration and prospectus delivery requirements of the Securities Act and the registration and qualification requirements of all applicable securities Laws of the states of the United States. Vir has not engaged any brokers, finders or agents, or incurred, or will incur, directly or indirectly, any liability for brokerage or finder's fees or agents' commissions or any similar charges in connection with this Agreement and the transactions contemplated hereby.

2.2 Organization and Qualification. Vir is duly incorporated, validly existing and in good standing under the laws of the State of Delaware, with full corporate power and authority to conduct its business as currently conducted. Vir is duly qualified to do business and is in good standing in every jurisdiction in which the nature of the business conducted by it or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, would not reasonably be expected to have a Material Adverse Effect on Vir.

2.3 Authorization; Enforcement. Vir has all requisite corporate power and authority to enter into and to perform its obligations under this Agreement, to consummate the transactions contemplated hereby and to issue the Shares in accordance with the terms and conditions hereof. The execution, delivery and performance of this Agreement by Vir and the consummation by it of the transactions contemplated hereby (including the issuance of the Shares at the Closing in accordance with the terms and conditions hereof) have been duly authorized by the Board and no further consent or authorization of Vir, the Board, or its stockholders is required. This Agreement has been duly executed by Vir and constitutes a legal, valid and binding obligation of Vir enforceable against Vir in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, or moratorium or similar Laws affecting creditors' and contracting parties' rights generally.

2.4 Issuance of Shares. The Shares are duly authorized and, upon issuance in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable and will not be subject to preemptive rights or other similar rights of stockholders of Vir.

2.5 SEC Documents, Financial Statements.

(a) The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act. Vir has delivered or made available (by filing on the SEC's electronic data gathering and retrieval system (EDGAR)) to the Foundation complete copies of its most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, and any report on Form 8-K, in each case filed with the SEC after December 31, 2020 and prior to the Execution Date (the "***SEC Documents***"). As of its date, each SEC Document complied in all material respects with the requirements of the Exchange Act, and other Laws applicable to it, and, as of its date, such SEC Document did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. No inquiries or any other investigation conducted by or on behalf of the Foundation or its representatives or counsel will modify, amend or affect the Foundation's right to rely on the truth, accuracy and completeness of the SEC Documents and Vir's representations and warranties contained in this Agreement.

(b) The financial statements, together with the related notes and schedules, of Vir included in the SEC Documents comply as to form in all material respects with all applicable accounting requirements and the published rules and regulations of the SEC and all other applicable rules and regulations with respect thereto. Such financial statements, together with the related notes and schedules, have been prepared in accordance with GAAP applied on a consistent basis during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto or (ii) in the case of unaudited interim statements, to the extent they

may not include footnotes or may be condensed or summary statements), and fairly present in all material respects the financial condition of Vir and its consolidated subsidiaries as of the dates thereof and the results of operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments).

(c) The Common Stock is listed on Nasdaq, and Vir has taken no action designed to, or that to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq. As of the date of this Agreement, Vir has not received any notification that, and has no knowledge that, the SEC or Nasdaq is contemplating terminating such registration or listing.

2.6 Internal Controls; Disclosure Controls and Procedures. Vir maintains internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act. Vir has implemented the "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) required in order for the principal executive officer and principal financial officer of Vir to engage in the review and evaluation process mandated by the Exchange Act, and is in compliance with such disclosure controls and procedures in all material respects. Each of the principal executive officer and the principal financial officer of Vir has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 with respect to all reports, schedules, forms, statements and other documents required to be filed by Vir with the SEC.

2.7 Capitalization and Voting Rights.

(a) The authorized capital of Vir as of the date hereof consists of: (i) 300,000,000 shares of Common Stock of which, as of January 11, 2022, (A) 131,182,666 shares were issued and outstanding, (B) 12,680,218 shares were reserved for issuance pursuant to Vir's equity incentive plans (including its stock purchase plan) described in the SEC Documents, (C) 10,287,645 shares were issuable upon the exercise of stock options outstanding, and (D) 1,271,334 shares were issuable upon the release of restricted stock unit awards outstanding, and (ii) 10,000,000 shares of Preferred Stock, of which no shares are issued and outstanding as of the date of this Agreement. All of the issued and outstanding shares of Common Stock (1) have been duly authorized and validly issued, (2) are fully paid and non-assessable and (3) were issued in compliance with all applicable federal and state securities Laws and not in violation of any preemptive rights.

(b) All of the authorized shares of Common Stock are entitled to one (1) vote per share.

(c) Except as described or referred to in the SEC Documents, as of January 11, 2022, there were not: (i) any outstanding equity securities, options, warrants, rights (including conversion or preemptive rights) or other agreements pursuant to which Vir is or may become obligated to issue, sell or repurchase any shares of its capital stock or any other securities of Vir other than equity securities that may have been granted pursuant to its equity incentive plans, which plans are described in the SEC Documents; or (ii) any restrictions on the transfer of capital stock of Vir other than pursuant to federal or state securities Laws or as set forth in this Agreement.

(d) Vir is not a party to or subject to any agreement or understanding relating to the voting of shares of capital stock of Vir or the giving of written consents by a stockholder or director of Vir.

2.8 No Conflicts; Government Consents and Permits.

(a) The execution, delivery and performance of the Gates Agreements by Vir and the consummation by Vir of the transactions contemplated hereby and thereby (including the issuance of the Shares) will not (i) conflict with or result in a violation of any provision of Vir's Amended and Restated Certificate of Incorporation or Amended and Restated Bylaws, each as in effect on the date hereof, (ii) violate or conflict with, or result in a breach of any provision of, or constitute a default under, any agreement, indenture, or instrument to which Vir is a party, or (iii) result in a violation of any Law (including United States federal, state and international securities Laws and regulations and regulations of any self-regulatory organizations) applicable to Vir, except in the case of clauses (ii) and (iii) only, for such conflicts, breaches, defaults, and violations as would not reasonably be expected to have, a Material Adverse Effect on Vir or result in a liability for the Foundation.

(b) Vir is not required to obtain any consent, authorization or order of, or make any filing or registration with, any court or governmental agency or any regulatory agency or self-regulatory organization in order for it to execute, deliver or perform any of its obligations under the Gates Agreements in accordance with the terms and conditions hereof or thereof, or to issue and sell the Shares in accordance with the terms and conditions hereof other than such as have been made or obtained, and except for (i) any post-closing filings required to be made under federal or state securities Laws and (ii) any required filings or notifications regarding the issuance or listing of additional shares with Nasdaq.

2.9 Litigation. Other than as set forth in the SEC Documents filed prior to the date of this Agreement, there is no action, suit, proceeding or investigation pending (of which Vir has received notice or otherwise has knowledge) or, to Vir's knowledge, threatened, against Vir or that Vir intends to initiate, except where such action, suit, proceeding or investigation, as the case may be, would not reasonably be expected to have a Material Adverse Effect.

2.10 Licenses and Other Rights; Compliance with Laws. Vir has all franchises, permits, licenses and other rights and privileges ("***Permits***") necessary to permit it to own its properties and to conduct its business as presently conducted and is in compliance thereunder, except where the failure to be in compliance would not reasonably be expected to have a Material Adverse Effect. Vir has not taken any action that would interfere with its ability to renew all such Permit(s), except where the failure to renew such Permit(s) would not reasonably be expected to have, a Material Adverse Effect. Vir is and has been in compliance with all Laws applicable to its business, properties and assets, and to the products and services sold by it, except where the failure to be in compliance has not had and would not reasonably be expected to have a Material Adverse Effect.

2.11 Intellectual Property.

(a) The Intellectual Property that is owned by Vir or its subsidiaries is owned free from any Liens or restrictions. All of Vir's material Intellectual Property Licenses are in full force and effect in accordance with their terms, are free of any Liens or restrictions, and, to Vir's knowledge, neither Vir, nor any other party thereto, is in material breach of any such material Intellectual Property License. To Vir's knowledge, no event has occurred that with notice or lapse of time or both (i) would constitute a breach or default of any such material Intellectual Property License, (ii) would result in the termination thereof, or (iii) would cause or permit the acceleration or other change of any right or obligation or the loss of any benefit thereunder by Vir or its subsidiaries, except, in the case of each of clauses (i) through (iii), as would not reasonably be expected to have a Material Adverse Effect.

(b) Except as set forth in the SEC Documents, there is no legal claim or demand of any Person or any proceeding that is pending or threatened in writing, (i) challenging the right of Vir in respect of any Intellectual Property of Vir, or (ii) claiming that any default exists under any Intellectual Property License, except, in the case of clauses (i) and (ii) above, where any such claim, demand or proceeding has not had, and would not reasonably be expected to have, a Material Adverse Effect.

Except as set forth in the SEC Documents: (i) Vir or one of its subsidiaries owns, free and clear of any Lien or encumbrance, or, to Vir's knowledge, has a valid license, or an enforceable right to use, as it is used or held for use, all U.S. and non-U.S. patents, trade secrets, know-how, trademarks, service marks, copyrights, and other proprietary and Intellectual Property rights, and all grants and applications with respect to the foregoing (collectively, the "***Proprietary Rights***") necessary for the conduct of Vir's business, except where the failure to own or have any of the foregoing would not reasonably be expected to have a Material Adverse Effect (such Proprietary Rights owned by or licensed to Vir collectively, the "***Vir Rights***"); (ii) Vir and its subsidiaries have taken reasonable measures to protect the Vir Rights, consistent with prudent commercial practices in the biotechnology industry, except where failure to take such measures has not had, and would not reasonably be expected to have, a Material Adverse Effect, and (iii) without limiting the generality of the preceding, to the best of Vir's knowledge, Vir's current product candidates, if commercially sold at the projected launch, would not infringe any unlicensed third party granted US or non-US patent claims or, if granted without amendment, any unlicensed third party published US or non-US patent application claims, except to the extent any such infringement would not reasonably be expected to have a Material Adverse Effect.

2.12 Health Care Matters. Vir: (i) has operated and currently operates its business in compliance in all material respects with applicable provisions of the Health Care Laws (as defined below) of the Food and Drug Administration ("***FDA***"), the Department of Health and Human Services and any comparable state, foreign or other regulatory authority to which they are subject (collectively, the "***Applicable Regulatory Authorities***") applicable to the ownership, testing, development, manufacture, packaging, processing, use, sale, promotion, distribution, storage, import, export or disposal of any of Vir's product candidates or any product manufactured or distributed by Vir; (ii) has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any court or arbitrator or the Applicable Regulatory Authorities alleging or asserting non-compliance with any licenses,

certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Health Care Laws ("***Regulatory Authorizations***"); (iii) possesses all Regulatory Authorizations required to conduct its business as currently conducted and such Regulatory Authorizations are valid and in full force and effect and Vir is not in violation, in any material respect, of any term of any such Regulatory Authorizations; (iv) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or the Applicable Regulatory Authorities or any other third party alleging that any product operation or activity is in material violation of any Health Care Laws and has no knowledge that the Applicable Regulatory Authorities or any other third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (v) has not received notice that any of the Applicable Regulatory Authorities has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Regulatory Authorizations and has no knowledge that any of the Applicable Regulatory Authorities is considering such action; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Regulatory Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were materially corrected or supplemented by a subsequent submission); (vii) is not a party to and does not have any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Applicable Regulatory Authority; and (viii) along with its employees, officers and directors, has not been excluded, disqualified, suspended or debarred from participation in any government health care program or human clinical research or, to Vir's knowledge, subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, disqualification or exclusion.

2.13 Clinical Trials. Except for sotrovimab, none of Vir's product candidates has received marketing approval from any Applicable Regulatory Authority. All clinical and pre-clinical studies and trials conducted by or on behalf of or sponsored by Vir, or in which Vir has participated, with respect to Vir's product candidates, including any such studies and trials that are described in the SEC Documents, or the results of which are referred to in the SEC Documents, as applicable (collectively, "***Company Trials***"), were, and if still pending are, to Vir's knowledge, being conducted in all material respects in accordance with all applicable Health Care Laws of the Applicable Regulatory Authorities, including the FDA's current Good Clinical Practices and Good Laboratory Practices, standard medical and scientific research procedures and any applicable rules, regulations and policies of the jurisdiction in which such trials and studies are being conducted. The descriptions in the SEC Documents of the results of any Company Trials are accurate and complete descriptions in all material respects and fairly present the data derived therefrom as of the date of such SEC Documents. Vir has no knowledge of any other studies or trials not described in the SEC Documents, the results of which are inconsistent with or call into question the results described or referred to in the SEC Documents. Vir has not received any written notices, correspondence or other communications from the Applicable Regulatory Authorities or any other governmental entity or any institutional review board ("***IRB***") or independent ethics committee ("***IEC***") requiring or threatening the termination, material modification or suspension of Company Trials, other than ordinary course communications with respect to modifications in connection with the design and implementation of such studies or trials, and, to Vir's knowledge, there are no

reasonable grounds for the same. No investigational new drug application or comparable submission filed by or on behalf of Vir with the FDA has been terminated or suspended by the FDA or any other Applicable Regulatory Authority. Vir has obtained (or caused to be obtained) informed consent by or on behalf of each human subject who participated in a Company Trial, and Vir has obtained (or caused to be obtained) applicable IRB or IEC approvals for each Company Trial. To Vir's knowledge, none of the Company Trials involved any investigator who has been disqualified as a clinical investigator or has been found by the FDA to have engaged in scientific misconduct.

2.14 Absence of Certain Changes.

(a) Except as disclosed in the SEC Documents filed prior to the Execution Date, since September 30, 2021, no change or event has occurred, except where such change or event has not had, and would not reasonably be expected to have, a Material Adverse Effect on Vir.

(b) Except as set forth in the SEC Documents filed prior to the Execution Date since September 30, 2021, Vir has not (i) declared or paid any dividends, or authorized or made any distribution upon or with respect to any class or series of its capital stock, or (ii) sold, exchanged or otherwise disposed of any of its material assets or rights.

(c) Since September 30, 2021, Vir has not admitted in writing its inability to pay its debts generally as they become due, filed or consented to the filing against it of a petition in bankruptcy or a petition to take advantage of any insolvency act, made an assignment for the benefit of creditors, consented to the appointment of a receiver for itself or for the whole or any substantial part of its property, or had a petition in bankruptcy filed against it, been adjudicated a bankrupt, or filed a petition or answer seeking reorganization or arrangement under the federal bankruptcy Laws or any other Laws of the United States or any other jurisdiction.

2.15 Not an Investment Company. Vir is not, and after receipt of the Purchase Price, will not be, an "investment company" as defined in the Investment Company Act of 1940, as amended.

2.16 No Integration. Vir has not, directly or through any agent, sold, offered for sale, solicited offers to buy or otherwise negotiated in respect of, any security (as defined in the Securities Act) that is or will be integrated with the Shares sold pursuant to this Agreement in a manner that would require the registration of the Shares under the Securities Act.

SECTION 3. REPRESENTATIONS AND WARRANTIES OF THE FOUNDATION

Except as otherwise specifically contemplated by this Agreement, the Foundation hereby represents and warrants to Vir that:

3.1 Authorization; Enforcement. The Foundation has the requisite corporate or other similar power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. The Foundation has taken all necessary corporate or other similar action to authorize the execution, delivery and performance of this Agreement. Upon the execution and delivery of this Agreement, this Agreement will constitute a valid and binding obligation of the Foundation enforceable against the Foundation in accordance with its terms and conditions, except

as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar Laws affecting creditors' and contracting parties' rights generally.

3.2 No Conflicts; Government Consents and Permits.

(a) The execution, delivery and performance of this Agreement by the Foundation and the consummation by the Foundation of the transactions contemplated hereby (including the purchase of the Shares) will not (i) conflict with or result in a violation of any provision of the Foundation's organizational documents, (ii) violate or conflict with, or result in a breach of any provision of, or constitute a default under, any agreement, indenture, or instrument to which the Foundation is a party, or (iii) result in a violation of any Law (including U.S. federal and state and applicable non-U.S. securities Laws and regulations and regulations of any self-regulatory organizations) applicable to the Foundation, except in the case of clauses (ii) and (iii) only, for such conflicts, breaches, defaults, and violations as have not had, and would not reasonably be expected to have, a Material Adverse Effect on the Foundation or result in a liability for Vir.

(b) The Foundation is not required to obtain any consent, authorization or order of, or make any filing or registration with, any court or governmental agency or any regulatory agency or self-regulatory organization in order for it to execute, deliver or perform any of its obligations under this Agreement in accordance with the terms and conditions hereof, or to purchase the Shares in accordance with the terms and conditions hereof, other than such as have been made or obtained.

3.3 Investment Purpose. The Foundation is purchasing the Shares for its own account and not with a present view toward the public distribution thereof and has no arrangement or understanding with any other Persons regarding the distribution of such Shares except as would not result in a violation of the Securities Act. The Foundation will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) any of the Shares except in accordance with the Securities Act and to the extent permitted by Section 4.1 and Section 4.2.

3.4 Reliance on Exemptions. The Foundation understands that Vir intends for the Shares to be offered and sold to it in reliance upon specific exemptions from the registration requirements of United States federal and state securities Laws and that Vir is relying upon the truth and accuracy of, and the Foundation's compliance with, the representations, warranties, agreements, acknowledgments and understandings of the Foundation set forth herein in order to determine the availability of such exemptions and the eligibility of the Foundation to acquire the Shares.

3.5 Accredited Investor; Access to Information. The Foundation is an "accredited investor" as defined in Regulation D under the Securities Act and is knowledgeable, sophisticated and experienced in making, and is qualified to make, decisions with respect to investments in shares presenting an investment decision like that involved in the purchase of the Shares. The Foundation has been furnished with materials relating to the offer and sale of the Shares that have been requested by the Foundation, including the SEC Documents, and the Foundation has had the opportunity to review the SEC Documents. The Foundation has been afforded the opportunity to

ask questions of Vir. Neither such inquiries nor any other investigation conducted by or on behalf of the Foundation or its representatives or counsel will modify, amend or affect the Foundation's right to rely on the truth, accuracy and completeness of the SEC Documents and Vir's representations and warranties contained in this Agreement.

3.6 Restricted Securities. The Foundation understands that the Shares will be characterized as "restricted securities" under the U.S. federal securities Laws inasmuch as they are being acquired from Vir in a private placement under Section 4(a)(2) of the Securities Act and that under such Laws and applicable regulations such Shares may be resold without registration under the Securities Act only in certain limited circumstances.

3.7 Governmental Review. The Foundation understands that no U.S. federal or state agency or any other Governmental Authority has passed upon or made any recommendation or endorsement of the Shares or an investment therein.

SECTION 4.TRANSFER, RESALE, LEGENDS, REGISTRATION RIGHTS

4.1 Transfer or Resale. The Foundation understands that:

(a) the Shares have not been and are not being registered under the Securities Act or any applicable state securities Laws and, consequently, the Foundation may have to bear the risk of owning the Shares for an indefinite period of time because the Shares may not be transferred unless (i) the resale of the Shares is registered pursuant to an effective registration statement under the Securities Act; (ii) the Foundation has delivered to Vir an opinion of counsel (in form, substance and scope customary for opinions of counsel in comparable transactions) to the effect that the Shares to be sold or transferred may be sold or transferred pursuant to an exemption from such registration; or (iii) the Shares are sold or transferred pursuant to Rule 144 under the Securities Act ("***Rule 144***"); and

(b) any sale of the Shares made in reliance on Rule 144 may be made only in accordance with the terms of Rule 144 and, if Rule 144 is not applicable, any resale of the Shares under circumstances in which the seller (or the Person through whom the sale is made) may be deemed to be an underwriter (as that term is defined in the Securities Act) may require compliance with some other exemption under the Securities Act or the rules and regulations of the SEC thereunder.

4.2 Lock-Up. The Foundation agrees that it will hold and will not sell any of the Shares (or otherwise make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale of the Shares) until the one-year anniversary of the Closing Date. Notwithstanding the foregoing, this Section 4.2 will not preclude (i) distributions of Shares to general or limited partners, members, shareholders, Affiliates or wholly-owned subsidiaries of the Foundation or any investment fund or other entity controlled or managed by the Foundation; *provided*, in each case, that following any such transfer such Shares will remain subject to the provisions of this Section 4.2; (ii) transfers pursuant to a *bona fide* third party tender offer for all outstanding shares of Common Stock, merger, consolidation or other similar transaction made to all holders of Vir's securities involving a change of control of Vir (including the entering into any lock-up, voting or similar agreement pursuant to which the

Foundation may agree to transfer, sell, tender or otherwise dispose of Shares or other such securities in connection with such transaction, or vote any Shares or other such securities in favor of any such transaction); *provided*, that in the event that such tender offer, merger, consolidation or other such transaction is not completed, the Shares shall remain subject to the provisions of this Section 4.2; or (iii) sales or transfers of the Shares in connection with the Withdrawal Right (as defined in the Side Letter).

4.3 Legends. The Foundation understands the Shares will bear restrictive legends in substantially the following form (and a stop-transfer order may be placed against transfer of the Shares):

THE SHARES HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED, OR ANY APPLICABLE STATE SECURITIES LAWS. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF A REGISTRATION STATEMENT IN EFFECT WITH RESPECT TO THE SECURITIES UNDER SUCH ACT OR APPLICABLE STATE SECURITIES LAWS OR A CERTIFICATE AND/OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.

THE SALE, PLEDGE, HYPOTHECATION OR TRANSFER OF THESE SECURITIES IS SUBJECT TO THE TERMS AND CONDITIONS OF A STOCK PURCHASE AGREEMENT DATED JANUARY 12, 2022 BETWEEN VIR BIOTECHNOLOGY, INC. AND THE BILL & MELINDA GATES FOUNDATION.

If such Shares may be transferred pursuant to Section 4.2 (excluding transfers pursuant to Section 4.2(i)), the Foundation may request that Vir remove, and Vir agrees to authorize and instruct (including by causing any required legal opinion to be provided) the removal of any legend from the Shares, if permitted by applicable securities Law, within two (2) Business Days of any such request; *provided, however*, that each party will be responsible for any fees it incurs in connection with such request and removal.

4.4 Registration Rights. If, following the one-year anniversary of the Closing Date, the Foundation proposes to publicly resell the Shares pursuant to Rule 144, and the Foundation in good faith believes it will be unable to sell all of the Shares proposed to be sold by it pursuant to Rule 144 without volume or manner-of-sale restrictions, the Foundation shall notify Vir, and Vir shall file as promptly as practicable a secondary-only registration statement on Form S-3 (or any successor form to Form S-3) promulgated under the Securities Act (which, if Vir is then a "well-known seasoned issuer" (as defined in Rule 405 under the Securities Act), shall be filed pursuant to General Instruction I.D of Form S-3 (an "***Automatic Shelf Registration Statement***")), registering the resale of such Shares (the "***Registrable Securities***") (or, in the event that Form S-3 is not available for the registration of the resale of the Registrable Securities, another appropriate form reasonably acceptable to the Foundation) by the Foundation (the "***Registration Statement***"). Vir shall use commercially reasonable efforts (a) if the Registration Statement is not an Automatic Shelf Registration Statement, to cause the Registration Statement to become effective as promptly as practicable; (b) to cause the Registration Statement to remain effective until the earlier of (i) the date on which the Foundation has disposed of all of the Registrable Securities and (ii) Rule 144 is available for the disposition of all Registrable Securities without volume or manner-of-sale

restrictions; (c) to undertake any additional actions reasonably necessary to maintain the availability of, and to facilitate the disposition by the Foundation of the Registrable Securities pursuant to, the Registration Statement; and (d) to obtain any required consent under Vir's Amended and Restated Investors' Rights Agreement, dated as of November 19, 2017, by and among Vir and the investors party thereto or any other agreement to which Vir is a party related to the filing of the Registration Statement. The Foundation agrees to cooperate with Vir as reasonably requested by Vir in connection with the preparation and filing of the Registration Statement, including furnishing to Vir such information regarding itself, the shares of Common Stock held by it and the intended method of disposition of the Registrable Securities as shall be reasonably required to effect the registration of such Registrable Securities. Vir shall bear all expenses incurred in connection with the performance of its obligations under this Section 4.4; *provided, however*, that Vir shall have no obligation to pay for any commissions or transfer taxes of the Foundation. Vir's obligations under this Section 4.4 shall also apply to any shares in the capital of Vir issued or issuable with respect to the Registrable Securities as a result of any share split, share dividend, recapitalization, exchange or similar event.

SECTION 5.CONDITIONS TO CLOSING

5.1 Conditions to Obligations of Vir. Vir's obligation to complete the purchase and sale of the Shares and deliver the Shares to the Foundation is subject to the fulfillment or waiver of the following conditions at or prior to the Closing:

(a) Receipt of Funds. Vir will have received immediately available funds in the full amount of the Purchase Price for the Shares being purchased hereunder.

(b) Representations and Warranties. The representations and warranties made by the Foundation in Section 3 will be true and correct in all material respects as of the Closing Date, except to the extent such representations and warranties are made as of another date, in which case such representations and warranties will be true and correct in all material respects as of such other date.

(c) Covenants. All covenants and agreements contained in this Agreement to be performed or complied with by the Foundation on or prior to the Closing Date shall have been performed or complied with in all material respects.

(d) Absence of Litigation. No proceeding challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit, alter, prevent or materially delay the Closing, will have been instituted or be pending before any Governmental Authority.

(e) No Governmental Prohibition. The sale of the Shares by Vir and the purchase of the Shares by the Foundation will not be prohibited by any applicable Law at the time of the Closing.

(f) Closing Deliverables. All closing deliverables as required under Section 1.3(b)(ii) shall have been delivered by the Foundation to Vir.

5.2 Conditions to the Foundation's Obligations at the Closing. The Foundation's obligation to complete the purchase and sale of the Shares is subject to the fulfillment or waiver of the following conditions at or prior to the Closing:

(a) Representations and Warranties. The representations and warranties made by Vir in Section 2 will be true and correct in all material respects as of the Closing Date, except to the extent such representations and warranties are made as of another date, in which case such representations and warranties will be true and correct in all material respects as of such other date.

(b) Covenants. All covenants and agreements contained in this Agreement to be performed or complied with by Vir on or prior to the Closing Date shall have been performed or complied with in all material respects.

(c) Transfer Agent Instructions. Vir will have delivered to its transfer agent irrevocable written instructions to issue the Shares to the Foundation in a form and substance acceptable to such transfer agent.

(d) Absence of Litigation. No proceeding challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit, alter, prevent or materially delay the Closing, will have been instituted or be pending before any Governmental Authority.

(e) No Governmental Prohibition. The sale of the Shares by Vir, and the purchase of the Shares by the Foundation will not be prohibited by any applicable Law at the time of the Closing.

(f) Closing Deliverables. All closing deliverables as required under Section 1.3(b)(i) shall have been delivered by Vir to the Foundation.

SECTION 6. GOVERNING LAW; JURISDICTION

6.1 Governing Law. This Agreement, and any other agreement, document or instrumented delivered pursuant hereto (other than the Side Letter), and all claims or causes of action (whether in contract or tort) that may be based upon, arise out of or relate to this Agreement (or such other document) or the negotiation, execution, termination, performance or nonperformance of this Agreement (or such other document) (including any claim or cause of action based upon, arising out of or related to any representation or warranty made in or in connection with this Agreement or as an inducement to enter into this Agreement), shall be governed by and interpreted in accordance with the laws of the State of Delaware without regard to the principles of conflict of laws that would require the application of the substantive Laws of another jurisdiction.

6.2 Jurisdiction. Each of the parties hereby (a) expressly and irrevocably submits to the exclusive personal jurisdiction of the Delaware Court of Chancery, any other court of the State of Delaware or any Federal court sitting in the State of Delaware in the event any dispute arises out of this Agreement or any of the transactions contemplated hereby (other than in connection with the Side Letter), (b) agrees that it will not attempt to deny or defeat such personal jurisdiction

by motion or other request for leave from any such court, (c) agrees that it will not bring any action relating to this Agreement or any of the transactions contemplated hereby (other than in connection with the Side Letter) in any court other than the Delaware Court of Chancery, any other court of the State of Delaware or any Federal court sitting in the State of Delaware and (d) agrees that the other party shall have the right to bring any action or proceeding for enforcement of a judgment entered by the Delaware Court of Chancery, any other court of the State of Delaware or any Federal court sitting in the State of Delaware. Each of Vir and the Foundation agrees that a final judgment in any action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by Law.

SECTION 7.MISCELLANEOUS

7.1 Counterparts; Electronic Signatures. This Agreement may be executed and delivered (including by facsimile transmission or PDF or any other electronically transmitted signatures) in two counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

7.2 Headings. The headings of this Agreement are for convenience of reference only, are not part of this Agreement and do not affect its interpretation.

7.3 Rules of Construction.

(a) For purposes of this Agreement, whenever the context requires: the singular number shall include the plural, and vice versa; the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include the masculine and feminine genders.

(b) As used in this Agreement, (i) the words “include” and “including,” and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words “without limitation”, (ii) the words “hereby,” “herein,” “hereunder” and “hereto” shall be deemed to refer to this Agreement in its entirety and not to any specific section of this Agreement and (iii) “or” has the inclusive meaning represented by the phrase “and/or”.

(c) Except as otherwise indicated, all references in this Agreement to “Sections” and “Appendices” are intended to refer to Sections of this Agreement, as appropriate, and Appendices to this Agreement.

(d) As used in this Agreement, the term “days” means calendar days unless otherwise specified. When calculating the period of time before which, within which or following which any act is to be done or step taken pursuant to this Agreement, the date that is the reference date in calculating such period shall be excluded. If the last day of such period is a non-Business Day, the period in question shall end on the next succeeding Business Day.

(e) Unless otherwise indicated, all monetary amounts herein are in United States dollars.

7.4 Severability. If any provision of this Agreement should be held invalid, illegal or unenforceable in any jurisdiction, the parties will negotiate in good faith a valid, legal and

enforceable substitute provision that most nearly reflects the original intent of the parties and all other provisions hereof will remain in full force and effect in such jurisdiction and will be liberally construed in order to carry out the intentions of the parties hereto as nearly as may be possible. Such invalidity, illegality or unenforceability will not affect the validity, legality or enforceability of such provision in any other jurisdiction.

7.5 Entire Agreement; Amendments. The Gates Agreements (including any schedules, appendices and exhibits hereto or thereto and any certificates delivered hereunder or thereunder) constitute the entire agreement between the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein or therein. This Agreement supersedes all prior agreements and understandings between the parties hereto with respect to the subject matter hereof. No provision of this Agreement may be waived or amended other than by an instrument in writing signed by the party to be charged with enforcement. Any amendment or waiver effected in accordance with this Section 8.5 shall be binding upon the Foundation and Vir.

7.6 Notices. All notices required or permitted hereunder will be in writing and will be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed email if sent during normal business hours of the recipient, if not, then on the next Business Day, or (c) one Business Day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. The addresses for such communications are:

If to Vir, addressed to:	Vir Biotechnology, Inc 499 Illinois Street, Suite 500 San Francisco, CA 94158 Attention: Chief Financial Officer E-mail: hhorn@vir.bio
and	Vir Biotechnology, Inc. 499 Illinois Street, Suite 500 San Francisco, CA 94158 Attention: Head of Legal E-mail: ipleasure@vir.bio
with a copy to:	Cooley LLP 3175 Hanover Street Palo Alto, CA 94304-1130 Attention: Laura Berezin E-mail: lberezin@cooley.com
If to the Foundation, addressed to:	Bill & Melinda Gates Foundation 1432 Elliott Ave W Seattle, WA 98119 Attention: Director, Strategic Investment Fund Phone: (206) 709-3100 Email: SIFPortfolio@gatesfoundation.org
and	Bill & Melinda Gates Foundation 1432 Elliott Ave W Seattle, WA 98119 Attention: Keith Matthews, General Counsel Phone: (206) 709-3100 Email: Keith.Matthews@gatesfoundation.org
with a copy to:	Morrison & Foerster LLP 425 Market St. San Francisco, CA 94105 Attention: Jaclyn Liu Email: jliu@mofo.com

7.7 Successors and Assigns. This Agreement is binding upon and inures to the benefit of the parties and their successors and assigns. Vir will not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Foundation, and the Foundation will not assign this Agreement or any rights or obligations hereunder without the prior written consent of Vir; *provided, however*, that the Foundation may assign this Agreement together with all of the

Shares it then owns (subject to Section 4) to any wholly-owned subsidiary and any such assignee may assign this Agreement together with all of the Shares it then owns (subject to Section 4) to the Foundation or any other subsidiary wholly-owned by the Foundation, in any such case, without such consent; *provided* that the assignee agrees to assume the Foundation's obligations under Section 4 of this Agreement.

7.8 Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto, their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

7.9 Further Assurances. Each party will do and perform, or cause to be done and performed, all such further acts and things, and will execute and deliver all other agreements, certificates, instruments and documents, as the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

7.10 No Strict Construction. The language used in this Agreement is deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against a party.

7.11 Equitable Relief. Vir recognizes that, if it fails to perform or discharge any of its obligations under this Agreement, any remedy at Law may prove to be inadequate relief to the Foundation. Vir therefore agrees that the Foundation is entitled to seek temporary and permanent injunctive relief or specific performance in any such case. The Foundation also recognizes that, if it fails to perform or discharge any of its obligations under this Agreement, any remedy at Law may prove to be inadequate relief to Vir. The Foundation therefore agrees that Vir is entitled to seek temporary and permanent injunctive relief or specific performance in any such case.

7.12 Expenses. Vir and the Foundation are each liable for, and will pay, their own expenses incurred in connection with the negotiation, preparation, execution and delivery of this Agreement, including attorneys' and consultants' fees and expenses.

7.13 Public Disclosure. On or within five Business Day of the Execution Date, Vir and the Foundation shall issue a joint press release in a form mutually agreed to by Vir and the Foundation. In addition, if applicable, Vir shall file a Current Report on Form 8-K with the SEC within the time period required by such form and including such disclosures as required by such form with respect to this Agreement and the transactions contemplated herein, such Current Report on Form 8-K to be in a form mutually agreed to by Vir and the Foundation. No other written release, public announcement, disclosure or filing concerning the purchase of the Shares, the Gates Agreements or the transactions contemplated hereby or thereby shall be issued, filed or furnished, as the case may be, by any party without the prior written consent of the other party (which consent shall not be unreasonably withheld, conditioned or delayed) and, except as set forth in this Section 8.13, the parties agree to keep the terms of the Gates Agreements confidential. Notwithstanding the foregoing, the parties acknowledge and agree that applicable Law or the requirements of a national securities exchange or another similar regulatory body may require either party to file or otherwise disclose a copy of this Agreement and/or the Side Letter. The party required to make such filing or otherwise disclose shall notify the other party and shall provide the other party with

at least three (3) days to request redactions thereof prior to making such filing or disclosure. The disclosing party shall use commercially reasonable efforts to procure confidential treatment of such proposed redactions pursuant to the Securities Act and the Exchange Act, in each case as amended, and the rules, regulations and guidelines promulgated thereunder, or any other applicable Law or the rules, regulations or guidelines promulgated hereunder; *provided* that the foregoing shall not prevent the party from making such public disclosures as it must make to comply with applicable Law.

[Remainder of page intentionally left blank.]

In Witness Whereof, the Foundation and Vir have caused this Agreement to be duly executed as of the date first above written.

Bill & Melinda Gates Foundation
By: /s/ Carolyn Ainslie
Its: Chief Financial Officer

Vir Biotechnology, Inc.
By: /s/ Howard Horn
Its: Chief Financial Officer

[*Signature page to Stock Purchase Agreement*]

APPENDIX 1

DEFINED TERMS

"***Affiliate***" of an entity means any corporation, firm, partnership or other entity that directly or indirectly through one or more intermediaries controls, is controlled by or is under common control with it. An entity will be deemed to control another entity if it (i) owns, directly or indirectly, at least 50% of the outstanding voting securities or capital stock (or such lesser percentage that is the maximum allowed to be owned by a foreign corporation in a particular jurisdiction) of such other entity, or has other comparable ownership interest with respect to any entity other than a corporation; or (ii) has the power, whether pursuant to contract, ownership of securities or otherwise, to direct the management and policies of the entity.

"***Agreement***" has the meaning set forth in the preamble.

"***Applicable Regulatory Authorities***" has the meaning set forth in Section 2.12.

"***Automatic Shelf Registration Statement***" has the meaning set forth in Section 4.4.

"***Board***" means the board of directors of Vir.

"***Business Day***" means a day Monday through Friday on which banks are generally open for business in the State of California and the State of Washington.

"***Closing***" has the meaning set forth in Section 1.3(a).

"***Closing Date***" means the date on which the Closing actually occurs.

"***Common Stock***" means shares of Vir's common stock, par value $0.0001 per share.

"***Company Trials***" has the meaning set forth in Section 2.13.

"***Cross-Receipt***" has the meaning set forth in Section 1.3(b)(i)A).

"***DOJ***" means the U.S. Department of Justice.

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC thereunder.

"***Execution Date***" has the meaning set forth in the preamble.

"***FDA***" has the meaning set forth in Section 2.12.

"***Foundation***" has the meaning set forth in the preamble.

"***FTC***" means the U.S. Federal Trade Commission.

"***GAAP***" means generally accepted accounting principles in the United States of America.

"Good Clinical Practices" means the legal, scientific and ethical standards for the performance of clinical research on medicinal products involving humans, including as reflected in the regulations of the FDA at 21 C.F.R. parts 50, 54, 56, and 312.

"Good Laboratory Practices" means the legal, scientific and ethical standards for the performance of nonclinical laboratory studies, including as set out in the regulations of the FDA at 21 C.F.R. part 58.

"***Governmental Authority***" means any federal, state, provincial, local, municipal, foreign or other governmental or quasi-governmental authority, including any arbitrator and applicable securities exchanges, or any department, minister, agency, commission, commissioner, board, subdivision, bureau, instrumentality, court or other tribunal of any of the foregoing.

"***Health Care Laws***" means Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395lll (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396w-5 (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act 42 U.S.C. 1320a-7b(a); any other criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287 and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq., ("***HIPAA***"); the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a; the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the Exclusion Laws, 42 U.S.C. § 1320a-7; HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, 42 U.S.C. §§ 17921 et seq.; the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state and local laws and regulations, each and all as may be amended from time to time.

"***HIPAA***" has the meaning set forth in the definition of "Health Care Laws."

"***IEC***" has the meaning set forth in Section 2.13.

"***Intellectual Property***" shall mean trademarks, trade names, trade dress, service marks, copyrights, and similar rights (including registrations and applications to register or renew the registration of any of the foregoing), patents and patent applications, trade secrets, and any other similar intellectual property rights.

"***Intellectual Property License***" shall mean any license, permit, authorization, approval, contract or consent granted, issued by or with any Person relating to the use of Intellectual Property.

"***IRB***" has the meaning set forth in Section 2.13.

"***Law***" means any federal, state, local or foreign constitution, treaty, law, statute, ordinance, rule, regulation, interpretation, directive, policy, order, writ, decree, injunction, judgment, stay or restraining order of any Governmental Authority, the terms of any permit, and any other ruling or decision of, agreement with or by, or any other requirement of, any Governmental Authority.

"***Lien***" means any lien (statutory or otherwise), claim, charge, option, security interest, pledge, mortgage, restriction, financing statement or similar encumbrance of any kind or nature whatsoever (including any conditional sale or other title retention agreement and any lease having substantially the same effect as any of the foregoing and any assignment or deposit arrangement in the nature of a security device).

"***Material Adverse Effect***" means any change, effect or circumstance, individually or in the aggregate, (a) that is reasonably likely to be materially adverse to the business, operations, assets or financial condition of Vir or the Foundation, as the case may be, taken as a whole, or (b) that materially impairs the ability of Vir or the Foundation to perform its obligations pursuant to the transactions contemplated by this Agreement or the Gates Agreements; *provided however*, that, none of the following (alone or when aggregated with any other effects), shall be deemed to be a Material Adverse Effect, and none of the following (alone or when aggregated with any other effects), shall be taken into account for purposes of clause (a) above: (A) (1) general market, economic or political conditions or (2) conditions (or any changes therein) in the industries in which Vir or the Foundation conducts business, in each case, including any acts of terrorism or war, weather conditions, global virus pandemics, epidemics or other force majeure events, in the case of each of clauses (1) and (2), solely to the extent that such effects do not have and are not reasonably likely to have a material disproportionate impact on Vir or the Foundation, as the case may be; (B) this Agreement, the Side Letter and the transactions contemplated hereby and thereby; or (C) changes in the trading price or volume of the Common Stock.

"***Nasdaq***" means The Nasdaq Global Select Market.

"***Permits***" has the meaning set forth in Section 2.10.

"***Person***" means a human being, labor organization, partnership, firm, enterprise, association, joint venture, corporation, limited liability company, cooperative, legal representative, foundation, society, political party, estate, trust, trustee, trustee in bankruptcy, receiver or any other organization or entity whatsoever, including any Governmental Authority.

"***Preferred Stock***" means shares of Vir's preferred stock, par value $0.0001 per share.

"***Proprietary Rights***" has the meaning set forth in Section 2.11(c).

"***Purchase Price***" has the meaning set forth in Section 1.1.

"***Registrable Securities***" has the meaning set forth in Section 4.4.

"***Registration Statement***" has the meaning set forth in Section 4.4.

"***Regulatory Authorizations***" has the meaning set forth in Section 2.12.

"***Rule 144***" has the meaning set forth in Section 4.1(a).

"***SEC***" means the United States Securities and Exchange Commission or any successor entity.

"***SEC Documents***" has the meaning set forth in Section 2.5(a).

"***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations of the SEC thereunder.

"***Share Value***" means a price per Share (rounded to the nearest cent) equal to the volume weighted average price of a share of Common Stock for a thirty (30) Trading Day period, starting with the opening of trading on the thirtieth (30^{th}) Trading Day prior to the date hereof and ending with the close of trading on the Trading Day prior to the date hereof, as reported by Bloomberg, L.P.

"***Shares***" has the meaning set forth in Section 1.1.

"***Tax***" means any federal, state, local, or foreign income, gross receipts, license, payroll, employment, excise, severance, stamp, occupation, premium, windfall profits, environmental (including taxes under Section 59A of the Internal Revenue Code of 1986, as amended), customs duties, capital stock, franchise, profits, withholding, social security (or similar), unemployment, disability, real property, personal property, sales, use, transfer, registration, value added, alternative or add-on minimum, estimated, or other tax of any kind whatsoever, including any interest, penalty, or addition thereto, whether disputed or not.

"***Trading Day***" means a day on which Nasdaq is open for trading.

"***Vir***" has the meaning set forth in the preamble.

"***Vir Rights***" has the meaning set forth in Section 2.11(c).

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT VIR BIOTECHNOLOGY, INC. TREATS AS PRIVATE OR CONFIDENTIAL.

GRANT AGREEMENT

Investment ID INV-033423

AGREEMENT SUMMARY & SIGNATURE PAGE

GRANTEE INFORMATION	
Name:	Vir Biotechnology Inc
Tax Status:	Not exempt from federal income tax under U.S. IRC § 501(c)(3) You confirm that the above information is correct and agree to notify the Foundation immediately of any change.
Expenditure Responsibility:	This Agreement is subject to "expenditure responsibility" requirements under the U.S. Internal Revenue Code.
Mailing Address:	499 Illinois Street, Suite 500, San Francisco, California 94158, USA
Primary Contact:	[***]

FOUNDATION INFORMATION	
Mailing Address:	P. O. Box 23350, Seattle, Washington 98102, USA
Primary Contact:	[***]

AGREEMENT INFORMATION	
Title:	Development of Vaccinal Abs for HIV and Malaria
"Charitable Purpose":	to develop enhanced antibody therapies for the treatment of HIV and prevention of malaria disproportionately affecting those living in low- and middle-income countries (LMICs)
"Start Date":	Date of last signature
"End Date":	December 31, 2023
This Agreement includes and incorporates by this reference:	This Agreement Summary & Signature Page and: • Grant Amount and Reporting & Payment Schedule (Attachment A) • Terms and Conditions (Attachment B) • Investment Document (date submitted October 21, 2021) • Budget (date submitted October 21, 2021) • VIR/BMGF Series A/B Financing side letter ("Side Letter"), dated 23 December 2016 (as subsequently amended and restated)

THIS AGREEMENT is between Vir Biotechnology Inc ("*You*" or "*Grantee*") and the Bill & Melinda Gates Foundation ("*Foundation*"), and is effective as of date of last signature. Each party to this Agreement may be referred to individually as a "Party" and together as the "*Parties*." As a condition of this grant, the Parties enter into this Agreement by having their authorized representatives sign below.

BILL & MELINDA GATES FOUNDATION

/s/ Omar Vandal
By: Omar Vandal

Title: Senior Program Officer

January 12, 2022
Date

VIR BIOTECHNOLOGY INC

/s/ George Scangos
By: George Scangos

Title: CEO

January 12, 2022
Date

ATTACHMENT A
GRANT AMOUNT AND REPORTING & PAYMENT SCHEDULE

GRANT AMOUNT
The Foundation will pay You the total grant amount specified in the Reporting & Payment Schedule below. The Foundation's Primary Contact must approve in writing any Budget cost category change of more than [***].

REPORTING & PAYMENT SCHEDULE
Payments are subject to Your compliance with this Agreement, including Your achievement, and the Foundation's approval, of any applicable targets, milestones, and reporting deliverables required under this Agreement. The Foundation may, in its reasonable discretion, modify payment dates or amounts and will notify You of any such changes in writing.

REPORTING
You will submit reports according to the Reporting & Payment Schedule using the Foundation's templates or forms, which the Foundation will make available to You and which may be modified from time to time. For a progress or final report to be considered satisfactory, it must demonstrate meaningful progress against the targets or milestones for that investment period. If meaningful progress has not been made, the report should explain why not and what adjustments You are making to get back on track. Please notify the Foundation's Primary Contact if You need to add or modify any targets or milestones. The Foundation must approve any such changes in writing. You agree to submit other reports the Foundation may reasonably request.

ACCOUNTING FOR PERSONNEL TIME
You will track the time of all employees, contingent workers, and any other individuals whose compensation will be paid in whole or in part by Grant Funds. Such individuals will keep records (e.g., timesheets) of actual time worked on the Project in increments of sixty minutes or less and brief descriptions of tasks performed. You will report actual time worked consistent with those records in Your progress and final budget reports. You will submit copies of such records to the Foundation upon request.

REPORTING & PAYMENT SCHEDULE				
Investment Period	*Target, Milestone, or Reporting Deliverable*	*Due By*	*Payment Date*	*Payment Amount (U.S.$)*
	[***]	[***]	[***]	[***]
	[***]			
[***]	[***]	[***]		
[***]	[***]	[***]		
			Total Grant Amount	**$10,000,000.00**

ATTACHMENT B
TERMS & CONDITIONS

This Agreement is subject to the following terms and conditions.

PROJECT SUPPORT

PROJECT DESCRIPTION AND CHARITABLE PURPOSE
The Foundation is awarding You this grant to carry out the project described in the Investment Document ("*Project*") in order to further the Charitable Purpose. The Foundation, in its discretion, may approve in writing any request by You to make non-material changes to the Investment Document.

MANAGEMENT OF FUNDS

USE OF FUNDS
You may not use funds provided under this Agreement ("*Grant Funds*") for any purpose other than the Project. You may not use Grant Funds to reimburse any expenses You incurred prior to the Start Date. At the Foundation's request, You will repay any portion of Grant Funds and/or Income used or committed in material breach of this Agreement, as determined by the Foundation in its discretion.

INVESTMENT OF FUNDS
You must invest Grant Funds in highly liquid investments with the primary objective of preservation of principal (e.g., interest-bearing bank accounts or a registered money market mutual fund) so that the Grant Funds are available for the Project. Together with any progress or final reports required under this Agreement, You must report the amount of any currency conversion gains (or losses) and the amount of any interest or other income generated by the Grant Funds (collectively, "*Income*"). Any Income must be used for the Project.

SEGREGATION OF FUNDS
You must maintain Grant Funds in a physically separate bank account or a separate bookkeeping account maintained as part of Your financial records and dedicated to the Project.

GLOBAL ACCESS

GLOBAL ACCESS COMMITMENT
You will conduct and manage the Project and the Funded Developments in a manner that ensures Global Access as further described in the Side Letter and any subsequent amendments. Your Global Access commitments will survive the term of this Agreement. "*Funded Developments*" means the products, services, processes, technologies, materials, software, data, other innovations, and intellectual property resulting from the Project (including modifications, improvements, and further developments to Background Technology). "*Background Technology*" means any and all products, services, processes, technologies, materials, software, data, or other innovations, and intellectual property created by You or a third party prior to or outside of the Project used as part of the Project. "*Global Access*" means: (a) the knowledge and information gained from the Project will be promptly and broadly disseminated; and (b) the Funded Developments will be made available and accessible at an affordable price (i) to people most in need within developing countries, or (ii) in support of the U.S. educational system and public libraries, as applicable to the Project.

PUBLICATION
Consistent with Your Global Access commitments, if the Project description specifies Publication or Publication is otherwise requested by the Foundation, You will seek prompt Publication of any Funded Developments consisting of data and results. “Publication” means publication in a peer-reviewed journal or other method of public dissemination specified in the Project description or otherwise approved by the Foundation in writing. Publication may be delayed for a reasonable period for the sole purpose of seeking patent protection, provided the patent application is drafted, filed, and managed in a manner that best furthers Global Access. If You seek Publication in a peer-reviewed journal, You agree to adhere to the Foundation’s Open Access Policy available at: www.gatesfoundation.org/How-We-Work/General-Information/Open-Access-Policy, which may be modified from time to time. Nothing in this section shall be construed as requiring Publication in contravention of any applicable ethical, legal, or regulatory requirements. You will mark any Funded Development subject to this clause with the appropriate notice or attribution, including author, date and copyright (e.g., © 20<> <Name>).

INTELLECTUAL PROPERTY REPORTING
During the term of this Agreement and for 5 years after, You will submit upon request annual intellectual property reports relating to the Funded Developments, Background Technology, and any related agreements using the Foundation’s templates or forms, which the Foundation may modify from time to time.

SUBGRANTS AND SUBCONTRACTS

SUBGRANTS AND SUBCONTRACTS
You may not make subgrants under this Agreement. You have the exclusive right to select subcontractors to assist with the Project.

RESPONSIBILITY FOR OTHERS
You are responsible for (a) all acts and omissions of any of Your trustees, directors, officers, employees, subgrantees, subcontractors, contingent workers, agents, and affiliates assisting with the Project, and (b) ensuring their compliance with the terms of this Agreement.

PROHIBITED ACTIVITIES

ANTI-TERRORISM
You will not use funds provided under this Agreement, directly or indirectly, in support of activities (a) prohibited by U.S. laws relating to combating terrorism; (b) with persons on the List of Specially Designated Nationals (www.treasury.gov/sdn) or entities owned or controlled by such persons; or (c) in or with countries or territories against which the U.S. maintains comprehensive sanctions (currently, Cuba, Iran, Syria, North Korea, and the Crimea Region of Ukraine), including paying or reimbursing the expenses of persons from such countries or territories, unless such activities are fully authorized by the U.S. government under applicable law and specifically approved by the Foundation in its sole discretion.

ANTI-CORRUPTION; ANTI-BRIBERY
You will not offer or provide money, gifts, or any other things of value directly or indirectly to anyone in order to improperly influence any act or decision relating to the Foundation or the Project, including by assisting any party to secure an improper advantage. Training and information on compliance with these requirements are available at www.learnfoundationlaw.org.

POLITICAL ACTIVITY AND ADVOCACY
You may not use Grant Funds to influence the outcome of any election for public office or to carry on any voter registration drive. You may not use Grant Funds to support lobbying activity or to otherwise support attempts to influence local, state, federal, or foreign legislation. Your strategies and activities, and any materials produced with Grant Funds, must comply with applicable local, state, federal, or foreign lobbying law. You agree to comply with lobbying, gift, and ethics rules applicable to the Project.

OTHER

PUBLICITY
A Party may publicly disclose information about the award of this grant, including the other Party's name, the total amount awarded, and a description of the Project, provided that a Party obtains prior written approval before using the other Party's name for promotional purposes or logo for any purpose. Any public disclosure by You or Your subgrantees, subcontractors, contingent workers, agents, or affiliates must be made in accordance with the Foundation's then-current brand guidelines, which are available at: www.gatesfoundation.org/brandguidelines.

LEGAL ENTITY AND AUTHORITY
You confirm that: (a) You are an entity duly organized or formed, qualified to do business, and in good standing under the laws of the jurisdiction in which You are organized or formed; (b) You are not an individual (i.e., a natural person) or a disregarded entity (e.g., a sole proprietor or sole-owner entity) under U.S. law; (c) You have the right to enter into and fully perform this Agreement; and (d) Your performance will not violate any agreement or obligation between You and any third party. You will notify the Foundation immediately if any of this changes during the term of this Agreement.

COMPLIANCE WITH LAWS
In carrying out the Project, You will comply with all applicable laws, regulations, and rules and will not infringe, misappropriate, or violate the intellectual property, privacy, or publicity rights of any third party.

COMPLIANCE WITH REQUIREMENTS
You will conduct, control, manage, and monitor the Project in compliance with all applicable ethical, legal, regulatory, and safety requirements, including applicable international, national, local, and institutional standards ("*Requirements*"). You will obtain and maintain all necessary approvals, consents, and reviews before conducting the applicable activity. As a part of Your annual progress report to the Foundation, You must report whether the Project activities were conducted in compliance with all Requirements.

If the Project involves:
a. any protected information (including personally identifiable, protected health, or third-party confidential), You will not disclose this information to the Foundation without obtaining the Foundation's prior written approval and all necessary consents to disclose such information;
b. children or vulnerable subjects, You will obtain any necessary consents and approvals unique to these subjects; and/or
c. any trial involving human subjects, You will adhere to current Good Clinical Practice as defined by the International Council on Harmonisation (ICH) E-6 Standards (or local regulations if more stringent) and will obtain applicable trial insurance.

Any activities by the Foundation in reviewing documents and providing input or funding does not modify Your responsibility for determining and complying with all Requirements for the Project.

RELIANCE
You acknowledge that the Foundation is relying on the information You provide in reports and during the course of any due diligence conducted prior to the Start Date and during the term of this Agreement. You represent that the Foundation may continue to rely on this information and on any additional information You provide regarding activities, progress, and Funded Developments.

INDEMNIFICATION
If the Project involves clinical trials, trials involving human subjects, post-approval studies, field trials involving genetically modified organisms, experimental medicine, or the provision of medical/health services ("*Indemnified Activities*"), You will indemnify, defend, and hold harmless the Foundation and its trustees, employees, and agents ("*Indemnified Parties*") from and against any and all demands, claims, actions, suits, losses, damages (including property damage, bodily injury, and wrongful death), arbitration and legal proceedings, judgments, settlements, or costs or expenses (including reasonable attorneys' fees and expenses) (collectively, "*Claims*") arising out of or relating to the acts or omissions, actual or

alleged, of You or Your employees, subgrantees, subcontractors, contingent workers, agents, and affiliates with respect to the Indemnified Activities. You agree that any activities by the Foundation in connection with the Project, such as its review or proposal of suggested modifications to the Project, will not modify or waive the Foundation's rights under this paragraph. An Indemnified Party may, at its own expense, employ separate counsel to monitor and participate in the defense of any Claim. Your indemnification obligations are limited to the extent permitted or precluded under applicable federal, state or local laws, including federal or state tort claims acts, the Federal Anti-Deficiency Act, state governmental immunity acts, or state constitutions. Nothing in this Agreement will constitute an express or implied waiver of Your governmental and sovereign immunities, if any.

INSURANCE
You will maintain insurance coverage sufficient to cover the activities, risks, and potential omissions of the Project in accordance with generally-accepted industry standards and as required by law. You will ensure Your subgrantees and subcontractors maintain insurance coverage consistent with this section.

TERM AND TERMINATION

TERM
This Agreement commences on the Start Date and continues until the End Date, unless terminated earlier as provided in this Agreement. The Foundation, in its discretion, may approve in writing any request by You for a no-cost extension, including amending the End Date and adjusting any affected reporting requirements.

TERMINATION
The Foundation may modify, suspend, or discontinue any payment of Grant Funds or terminate this Agreement if: (a) the Foundation is not reasonably satisfied with Your progress on the Project; (b) there are significant changes to Your leadership or other factors that the Foundation reasonably believes may threaten the Project's success; (c) there is a change in Your control; (d) there is a change in Your tax status; or (e) You fail to comply with this Agreement.

RETURN OF FUNDS
Any Grant Funds, plus any Income, that have not been used for, or committed to, the Project upon expiration or termination of this Agreement, must be returned promptly to the Foundation.

MONITORING, REVIEW, AND AUDIT
The Foundation may monitor and review Your use of the Grant Funds, performance of the Project, and compliance with this Agreement, which may include onsite visits to assess Your organization's governance, management and operations, discuss Your program and finances, and review relevant financial and other records and materials. In addition, the Foundation may conduct audits, including onsite audits, at any time during the term of this Agreement, and within four years after Grant Funds have been fully spent. Any onsite visit or audit shall be conducted at the Foundation's expense, following prior written notice, during normal business hours, and no more than once during any 12-month period.

INTERNAL OR THIRD PARTY AUDIT
If during the term of this Agreement You are audited by your internal audit department or by a third party, You will provide the audit report to the Foundation upon request, including the management letter and a detailed plan for remedying any deficiencies observed ("*Remediation Plan*"). The Remediation Plan must include (a) details of actions You will take to correct any deficiencies observed, and (b) target dates for successful completion of the actions to correct the deficiencies.

RECORD KEEPING
You will maintain complete and accurate accounting records and copies of any reports submitted to the Foundation relating to the Project. You will retain such records and reports for 4 years after Grant Funds have been fully spent. At the Foundation's request, You will make such records and reports available to enable the Foundation to monitor and evaluate how Grant Funds have been used or committed.

SURVIVAL
A Party's obligations under this Agreement will be continuous and survive expiration or termination of this Agreement as expressly provided in this Agreement or otherwise required by law or intended by their nature.

GENERAL

ENTIRE AGREEMENT, CONFLICTS, AND AMENDMENTS
This Agreement along with the Side Letter and any subsequent amendments contain the entire agreement of the Parties and supersedes all prior and contemporaneous agreements concerning its subject matter. If there is a conflict between this Agreement and the Investment Document this Agreement will prevail. Except as specifically permitted in this Agreement, no modification, amendment, or waiver of any provision of this Agreement will be effective unless in writing and signed by authorized representatives of both Parties.

NOTICES AND APPROVALS
Written notices, requests, and approvals under this Agreement must be delivered by mail or email to the other Party's primary contact specified on the Agreement Summary & Signature Page, or as otherwise directed by the other Party.

SEVERABILITY
Each provision of this Agreement must be interpreted in a way that is enforceable under applicable law. If any provision is held unenforceable, the rest of the Agreement will remain in effect.

ASSIGNMENT
You may not assign, or transfer by operation of law or court order, any of Your rights or obligations under this Agreement without the Foundation's prior written approval. This Agreement will bind and benefit any permitted successors and assigns.

COUNTERPARTS AND ELECTRONIC SIGNATURES
Except as may be prohibited by applicable law or regulation, this Agreement and any amendment may be signed in counterparts, by facsimile, PDF, or other electronic means, each of which will be deemed an original and all of which when taken together will constitute one agreement. Facsimile and electronic signatures will be binding for all purposes.

EXHIBIT 10.66

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) IS THE TYPE THAT VIR BIOTECHNOLOGY, INC. TREATS AS PRIVATE OR CONFIDENTIAL.

LEASE

THE EXCHANGE

KRE EXCHANGE OWNER LLC

a Delaware limited liability company

as Landlord,

and

VIR BIOTECHNOLOGY, INC.,

a Delaware corporation

As Tenant.

1800 Owens Street,
San Francisco, California

North Tower

Floors 8, 9, 10, 11 and 12

TABLE OF CONTENTS

EXHIBITS

THE EXCHANGE

LEASE

This Lease (the "**Lease**"), dated as of the date set forth in Section 1 of the Summary of Basic Lease Information (the "**Summary**"), below, is made by and between **KRE EXCHANGE OWNER LLC**, a Delaware limited liability company ("**Landlord**"), and **VIR BIOTECHNOLOGY, INC.**, a Delaware corporation ("**Tenant**").

A. Tenant presently subleases the same leased premises (as the Premises in this Lease) pursuant to that certain Sublease entered into as of November 4, 2020, by and between Dropbox, Inc., a Delaware corporation ("**Dropbox**") and Tenant (the "**Existing Sublease**"); Landlord's predecessor-in-interest, KR Mission Bay, LLC, a Delaware limited liability company, consented to the Existing Sublease pursuant to a certain Consent to Sublease made as of December 21, 2020.

B. Pursuant to the Existing Sublease, Tenant has been working with Dropbox and Landlord, as master landlord, to process plans for the construction of alterations to the subleased premises to accomplish a build out of the subleased premises.

C. Subject to the terms and conditions of this Lease, Tenant desires to lease the Premises directly from Landlord, terminating the Sublease and replacing it with this Lease thereby eliminating Dropbox from its role as sublandlord (and the tenant under the primary lease with Landlord).

D. Effective as of the Lease Commencement Date (as defined below), this Lease supersedes and replaces the Existing Sublease, but notwithstanding the replacement of the Existing Sublease with this Lease, Tenant will remain in occupancy of the Premises without interruption.

SUMMARY OF BASIC LEASE INFORMATION

TERMS OF LEASE		DESCRIPTION
1.	Dated as of:	November 1, 2021
2.	Premises (Article 1).	
	2.1 Project:	That certain project containing approximately 750,370 rentable square feet of space located at 1800 Owens Street, Sectors 1, 2, 3 and 4, San Francisco, California 94158. The Project is more particularly described in Section 1.1.2 below.
	2.2 Premises:	Approximately 133,896 rentable square feet of space on floors 8, 9, 10, 11 and 12 of the North Tower (as defined in Section 1.1.2 below), as further set forth in **Exhibit 1.1.1-1** to the Lease.
3.	Lease Term (Article 2).	
	3.1 Length of Term:	Twelve (12) years (i.e., one hundred forty-four (144) months).
	3.2 Lease Commencement Date:	The later of (i) November 1, 2021, and (ii) the date of Lease is executed and delivered by Landlord and Tenant and the existing lease with Dropbox has either been amended to eliminate floors eight (8) through twelve (12) of the North Tower therefrom or such existing lease has been partially terminated as to such floors (such that Landlord has recaptured such floors).
	3.3 Rent Commencement Date:	The same date as the Lease Commencement Date.
	3.4 Lease Expiration Date:	The last day of the one hundred forty-fourth (144^{th}) full month of the Lease Term (e.g., if the Lease Commencement Date is, in fact, December 14, 2021, then the Lease Expiration Date will be December 31, 2033.
4.	Base Rent (Article 3):	

Lease Months	Annual Base Rent	Monthly Installment of Base Rent	Monthly Base Rent per Rentable Square Foot
1 - 7[1]	$0.00	$0.00	$0.00
8[2] - 12	$4,251,198.00	$850,239.60	$6.35
13 - 24	$10,508,158.08	$875,679.84	$6.54
25 - 36	$10,829,508.48	$902,459.04	$6.74
37 - 48	$11,150,858.88	$929,238.24	$6.94
49 - 60	$11,488,276.80	$957,356.40	$7.15
61 - 72	$11,825,694.72	$985,474.56	$7. 36
73 - 84	$12,179,179.20	$1,014,931.60	$7.58
85 - 96	$12,548,732.40	$1,045,727.70	$7.81
97 - 108	$12,918,285.60	$1,076,523.80	$8.04
109 - 120	$13,303,905.60	$1,108,658.80	$8.28
121 - 132	$13,705,593.60	$1,142,132.80	$8.53
133 - 144	$14,123,349.60	$1,176,945.80	$8.79

[1] Tenant shall be entitled to receive a Base Rent abatement for the first seven (7) full calendar months of the Lease Term (the "**Abatement Period**"). Tenant shall be obligated to pay Tenant's Share of Direct Expenses attributable to such period. Pursuant to Section 2.1 of this Lease, any partial calendar month of Month 1 shall be excluded from the Abatement Period.

[2] Tenant shall be entitled to a one-time credit against Base Rent for full calendar month 8 of the Lease Term in the amount of $693,666.03 pursuant to Section 1.3 of this Lease. Accordingly, Tenant's payment amount for month 8's Base Rent will be $156,573.57.

5.	Tenant Improvement Allowance:	$36,151,920.00, to be used by Tenant to construct improvements in the Premises in accordance with the terms of the work letter attached hereto as **Exhibit 1.1.1-2** (the "**Tenant Work Letter**"). In addition, Tenant shall be entitled to an additional $2,343,180.00 to be used by it to construct certain additional improvements in accordance with the Tenant Work Letter.
6.	NNN Lease:	In addition to the Base Rent, Tenant shall be responsible to pay Tenant's Share of Direct Expenses in accordance with the terms of Article 4 of the Lease.
7.	Tenant's Share (Article 4):	Shall mean the following percentages, as applicable: (i) 100% with respect to the Operating Expenses allocated by Landlord to the Premises; (ii) 17.844% (133,896 RSF ÷ 750,370 RSF) with respect to Operating Expenses allocated by Landlord to the entire Project; (iii) 44.74% (133,896 RSF ÷ 299,255 RSF) with respect to Operating Expenses allocated by Landlord to the North Tower; and (iv) such percentage as is reasonably calculated with respect to Operating Expenses allocated by Landlord to portions of the Project that include the Premises and consist of less than the entire Project but more than the North Tower.
8.	Permitted Use (Article 5):	The Premises shall be used only for general office and life sciences research and development, laboratory, storage and other lawful accessory uses reasonably related to and incidental to such specified uses, all (i) consistent with "Comparable Buildings" (as defined in Section 4.2.4 below) in the San Francisco, California area, and (ii) in compliance with, and subject to, Applicable Laws and the terms of this Lease.
9.	Security Deposit (Article 21):	$5,708,655.96, in the form of a letter of credit in accordance with Article 21 of this Lease and which amount is subject to reduction in accordance with Section 21.5 of this Lease.
10.	Guarantor (Article 21):	None
11.	Parking Pass Ratio (Article 28):	One hundred thirty-four (134) (i.e., one (1) unreserved parking spaces for every 1,000 rentable square feet of the Premises, subject to the terms of Article 28 of the Lease.

12.	Address of Tenant (Section 29.18):	Vir Biotechnology, Inc. 499 Illinois Street, Suite 500 San Francisco, California 94158 Attention: General Counsel with a copy to (which shall not constitute, nor be required for effective, notice): Vir Biotechnology, Inc. 499 Illinois Street, Suite 500 San Francisco, California 94158 Attention: Head of Real Estate and Facilities
13.	Address of Landlord (Section 29.18):	KRE Exchange Owner LLC c/o Longfellow Real Estate Partners 260 Franklin Street, Suite 1920 Boston, MA 02110 Attention: Asset Management and KRE Exchange Owner LLC c/o Longfellow Property Management Services CA, Inc. 1800 Owens Street, Suite 350 San Francisco, CA 94158 Attention: Property Management and KRE Exchange Owner LLC c/o Longfellow Property Management Services CA, Inc. 1800 Owens Street, Suite 350 San Francisco, CA 94158 Attention: General Manager
14.	Broker(s) (Section 29.24):	Newmark Knight Frank, representing the Tenant exclusively

1. PREMISES, BUILDING, PROJECT AND COMMON AREAS

1.1 **Premises, Building, Project and Common Areas**.

1.1.1 **The Premises**. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises set forth in Section 2.2 of the Summary (the "**Premises**"). The outlines of each floor of the Premises are set forth in **Exhibit 1.1.1-1** attached hereto. The parties hereto agree that the lease of the Premises is upon and subject to the terms, covenants and conditions herein set forth, and Tenant covenants as a material part of the consideration for this Lease to keep and perform each and all of such terms, covenants and conditions by it to be kept and performed and that this Lease is made upon the condition of such performance. The parties hereto hereby acknowledge that the purpose of **Exhibit 1.1.1-1** is to show the approximate location of the Premises in the "**Building**" (as that term is defined in Section 1.1.2 below), only, and such Exhibit is not meant to constitute an agreement, representation or warranty as to the construction of the Premises, the precise area thereof or the specific location of the "**Common Areas**" (as that term is defined in Section 1.1.3 below), or the elements thereof or of the accessways to the Premises or the "**Project**" (as that term is defined in Section 1.1.2 below). Tenant shall accept the Premises in its presently existing "as-is" condition and Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Premises except as otherwise expressly set forth in this Lease or in the Tenant Work

Letter attached hereto as **Exhibit 1.1.1-2**. Notwithstanding the foregoing, Landlord shall deliver to Tenant the Premises with the plumbing, electrical systems, fire sprinkler and life-safety system, lighting, air conditioning and heating systems and all other building systems serving the Premises (collectively, the "**Building Systems**") in good operating condition and repair, and Landlord will be responsible for all repairs at its sole cost (and not as part of Operating Expenses) during the six (6) months following the Lease Commencement Date; provided, however, if any failure of the Building Systems to be in good operating condition and repair is attributable to Tenant's construction of improvements pursuant to the Tenant Work Letter, then Tenant shall be solely liable for the cost of any such repairs. Tenant acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty regarding the condition of the Premises, the Building or the Project or with respect to the suitability of any of the foregoing for the conduct of Tenant's business, except as specifically set forth in this Lease and the Tenant Work Letter. The Premises shall exclude Common Areas, including without limitation exterior faces of exterior walls, the entry, vestibules and main lobby of the Building, the common stairways and stairwells, elevators and elevator wells, boiler room, sprinkler rooms, elevator rooms, mechanical rooms, loading and receiving areas, electric and telephone closets, janitor closets, and pipes, ducts, conduits, wires and appurtenant fixtures and equipment serving exclusively or in common with other parts of the Building.

1.1.2 **The Building and The Project**. The Premises are a part of the Project set forth in Section 2.1 of the Summary, specifically a portion of the twelve-story building known as the North Tower (the "**North Tower**". The term "**Project**", as used in this Lease, shall mean (i) the North Tower located at 1800 Owens Street, Sector 1, San Francisco, California, containing 299,255 rentable square feet and the Common Areas, (ii) the land (which is improved with landscaping, parking facilities and other improvements) upon which the North Tower and the Common Areas are located, as more particularly described on **Exhibit 1.1.2** attached hereto, (iii) the other buildings located in the Project known as "The Exchange", more particularly described as that certain (1) six (6)-story building (the "**North Building**") located at 1800 Owens, Sector 2, San Francisco, California, containing 125,200 rentable square feet, (2) twelve (12)-story building (the "**South Tower**") located at 1800 Owens, Sector 3, San Francisco, California, containing 259,551 rentable square feet, and (3) six (6)-story building (the "**South Building**") located at 1800 Owens, Sector 4, San Francisco, California, containing 66,365 rentable square feet, and the land upon which such other buildings are located, and (iv) at Landlord's discretion, any additional real property, areas, land, buildings or other improvements added thereto outside of the Complex. The North Tower and the North Building are collectively, the "**North Complex**" containing a total of 424,455 retable square feet. The South Tower and the South Building are collectively, the "**South Complex**," containing a total of 325,916 rentable square feet. The North Complex and the South Complex are each referred to herein as a "**Complex**." The North Tower, North Building, South Tower and South Building may be referred herein separately as a sub-building and together as simply the "**Building**." The Project contains a total of 750,370 square feet; provided however, approximately 14,670 rentable square feet is retail space on the ground floor of the North Complex (i.e., 12,289 rentable square feet in the North Tower and 2,381 rentable square feet is retail space in the North Building (collectively, the "**Retail Space**").

1.1.3 **Common Areas**. Tenant shall have the non-exclusive right to use in common with other tenants in the Project, and subject to the rules and regulations referred to in Article 5 of this Lease, those portions of the Project which are provided, from time to time, for use in common by Landlord, Tenant and any other tenants of the Project (such areas, together with such other portions of the Project designated by Landlord, in its discretion, including certain areas designated for the exclusive use of certain tenants, including Tenant, or to be shared by Landlord and certain tenants, including Tenant, are collectively referred to herein as the "**Common Areas**"). The Common Areas shall consist of the "**Project Common Areas**" and the "**Building Common Areas**." The term "**Project Common Areas**", as used in this Lease, shall mean the portion of the Project designated from time to time as such by Landlord (inclusive of any exterior landscaped areas). The term "**Building Common Areas**", as used in this Lease, shall mean the portions of the Common Areas located within the Building designated from time to time as such by Landlord. The Project includes two (2) ground floor lobbies: one (1) lobby (the "**North Lobby**") provides access to the North Building and North Tower, including the Retail Space; and one (1) lobby (the "**South Lobby**") provides access to both the South Building and the South Tower. The North Lobby is a Building Common Area. For the sake of clarity, Tenant and each of its authorized employees and invitees shall have access to the North Lobby, the Parking Facility and the Bicycle Storage Ares in common with other occupants of the Complex. Landlord shall maintain the Common Areas in a condition consistent with Comparable Buildings. The term "Comparable Buildings" shall mean the Building and those other office and life science buildings which are comparable to the Building in terms of age (based upon the date of completion of construction or major renovation of the building), quality of construction, level of services and amenities, size and appearance, and are located in the City of San Francisco,

California. Tenant's use of the Common Areas shall be subject to such rules, regulations and restrictions as Landlord may make from time to time in accordance with Section 5.2 below. Any rules and regulations established by the Landlord for use of the Common Areas shall not unreasonably restrict Tenant's access to or use of the Premises for conduct of its business, nor diminish Tenant's rights under this Lease. In the event of any conflict between such rules and regulations and the terms of this Lease, the latter shall control Landlord reserves the right to close temporarily, make alterations or additions to, or change the location of elements of the Project and the Common Areas, provided that, in connection therewith, Landlord shall perform such closures, alterations, additions or changes in a commercially reasonable manner and, in connection therewith, shall use commercially reasonable efforts to minimize any material interference with Tenant's use of and access to the Premises.

1.2 **Stipulation of Rentable Square Feet of Premises**. For purposes of this Lease, the rentable square feet of the Premises and the North Tower shall be deemed to be as set forth in Section 2.2 of the Summary, and the rentable square feet of each of the North Building, South Tower and South Building shall be deemed as set forth in Section 1.1.2 above, none of which shall be subject to remeasurement or adjustment during the Lease Term unless the Premises are physically expanded or contracted.

1.3 **Adjustment of Rentable Square Feet of Premises**. Landlord acknowledges that the installation of the Mechanical Shaft described in Section 2.2(e) of the Tenant Work Letter will result in a reduction of approximately 669 rentable square feet of Premises, and as a consequence thereof, Landlord will give to Tenant a credit against Base Rent for month 8 of the Lease Term in the amount of $693,666.03 as full and complete compensation to Tenant for the loss of such rentable square footage (and in exchange for Tenant enjoying such rent credit, Tenant will nevertheless pay Base Rent under this Lease without any reduction or adjustment in rentable square footage of the Premises).

1.4 **Right of First Refusal**. Landlord hereby grants to the Tenant named in the Summary (the "**Original Tenant**") and any Permitted Assignee a right of first refusal with respect to the entire seventh (7th) floor of the Building as more particularly described on Exhibit 1.4 (the "**First Refusal Space**"). Notwithstanding the foregoing, such first refusal right of Tenant shall commence only following the expiration or earlier termination of the Existing Lease with Dropbox of the First Refusal Space, and such right of first refusal shall be subordinate to all rights of Dropbox which are set forth in the Existing Lease as of the date hereof with respect to such First Refusal Space. Tenant's right of first refusal shall **not** be applicable after the third (3rd) anniversary of the Lease Commencement Date (which three (3) year period may be referred to as the "**First Refusal Period**"). Tenant's right of first refusal shall be on the terms and conditions set forth in this Section 1.4.

1.4.1 **Procedure for Offer**. Prior to entering any lease for all or any portion of the First Refusal Space during the First Refusal Period, Landlord shall provide a written notice to Tenant (the "**First Refusal Notice**"), offering to lease to Tenant the applicable portion of the First Refusal Space. The First Refusal Notice shall describe the terms on which the other prospective tenant may lease the First Refusal Space, including setting forth the rent and the other material economic terms upon which Landlord is willing to lease such space to such other tenant.

1.4.2 **Procedure for Acceptance**. If Tenant wishes to exercise Tenant's right of first refusal with respect to the space described in the First Refusal Notice, then within seven (7) business days after delivery of the First Refusal Notice to Tenant, Tenant shall deliver notice to Landlord of Tenant's election to exercise its right of first refusal with respect to the entire space described in the First Refusal Notice on the terms contained in such notice. If Tenant does not so notify Landlord within the seven (7) business day period, then Landlord shall be free to lease the space described in the First Refusal Notice to the other tenant or any affiliate thereof on generally the same terms as contained in the First Refusal Notice, provided that, prior to entering into a lease of such space on material economic terms that are more than seven and one-half percent (7.5%) more favorable to the tenant than the Base Rent set forth in the First Refusal Notice, Landlord shall first deliver another First Refusal Notice to Tenant offering such space to Tenant on such reduced terms. Tenant shall respond to any such "re-offer" within five (5) business days after delivery of such "re-offer" notice. Notwithstanding anything to the contrary contained herein, Tenant must elect to exercise its right of first refusal, if at all, with respect to all of the space covered by the First Refusal Notice, and Tenant may not elect to lease only a portion thereof. The First Refusal Space shall be leased by Tenant on all of the terms and conditions of this Lease except as set forth in the First Refusal Notice and this Section 1.3.

1.4.3 **Construction In First Refusal Space**. Tenant shall take the First Refusal Space in its "as is" condition unless otherwise set forth in the First Refusal Notice.

1.4.4 **Amendment to Lease**. If Tenant timely exercises Tenant's right to lease the First Refusal Space as set forth herein, then the First Refusal Space shall be added to the Premises on the terms set forth herein (except that the term of any such lease shall be appropriately adjusted to be co-terminous with the Lease Term of this Lease) and, at the election of Landlord or Tenant, the parties shall promptly thereafter execute an amendment to this Lease for such First Refusal Space (but the execution of such amendment shall not be required for the lease of the First Refusal Space to become effective). Tenant shall commence payment of Rent for the First Refusal Space, and the term of the First Refusal Space shall commence upon the date of delivery of the First Refusal Space to Tenant in the condition required by the First Refusal Notice (the "**First Refusal Commencement Date**") and terminate on the Lease Expiration Date.

1.4.5 **Termination of Right of First Refusal**. The rights contained in this Section 1.2 shall be personal to the Original Tenant (and any Permitted Assignee) and may only be exercised by the Original Tenant (and not any other assignee, sublessee or other transferee of the Original Tenant's interest in this Lease other than a Permitted Assignee) if the Original Tenant or a Permitted Assignee occupies the entire Premises. Except as expressly set forth in this Section 1.4, the right of first refusal granted herein shall terminate as to a particular First Refusal Notice (and the First Refusal Space applicable thereto) upon the failure by Tenant to exercise its right of first refusal with respect to such First Refusal Space as offered by Landlord. Tenant shall not have the right to lease First Refusal Space, as provided in this Section 1.4, if, as of the date of the attempted exercise of any right of first refusal by Tenant, or as of the scheduled date of delivery of such First Refusal Space to Tenant, Tenant is in default under this Lease, after the expiration of any applicable notice and cure period, or Tenant has previously been in default, after the expiration of any applicable notice and cure period, under this Lease more than once during the First Refusal Period.

1.5 **Condition Precedent**. Tenant acknowledges and agrees that this Lease is subject to the following express conditions precedent: (i) Landlord consummating an amendment with Dropbox of its lease covering the entire Project (other than the Retail Space) so as to eliminate floors eight (8) through twelve (12) of the North Tower therefrom (such that Landlord has recaptured such floors) and converting the Project from a single tenant project to a multi-tenant project (which amendment may be referred to as the "**Dropbox Amendment**") and (ii) the termination of the Existing Sublease. The terms and conditions of the Dropbox Amendment shall be satisfactory to Landlord in its sole and absolute discretion.

1.6 **Meeting Rooms**. So long as Tenant is not in default hereunder beyond applicable notice and cure periods, Landlord shall use commercially reasonable efforts to make available Common Area meeting rooms, if any, in the Project (collectively, the "**Common Area Meeting Spaces**") for Tenant's use for business meetings and special events. Such use shall be subject to availability, on a first come, first serve basis, and shall be upon and subject to such rules, regulations and limitations as Landlord may reasonably establish from time to time for use of the Common Area Meeting Spaces (including, without limitation, as to scheduling, catering, hours of use, the provision and cost of janitorial and security services, facility and equipment usage charges, reimbursement of Landlord's costs and expenses reasonably incurred in facilitating such use by Tenant, and cleaning/security deposits); provided, however, that (a) Landlord shall use commercially reasonable efforts to give Tenant equitable access with other tenants to the Common Area Meeting Rooms and, accordingly, not allow other tenants of the Project to block-book the Common Area Meeting Rooms (i.e. reserve spaces for more than three (3) business days in a row unless connected to a special event); and (b) once Tenant has properly booked the use of the Common Area Meeting Spaces for a particular date and time, such booking may not be cancelled without Tenant's prior consent. If requested by Tenant, Landlord will provide a schedule of available dates and times for use of the Common Area Meeting Spaces. In connection with its use of the Common Area Meeting Spaces, Tenant shall enter into Landlord's then-current form of agreement for the use of such spaces. Tenant use of the Common Area Meeting Spaces shall be at Tenant's sole risk and Tenant acknowledges and agrees that Landlord shall have no liability whatsoever to Tenant, its employees and/or visitors for personal injury or property damage or theft relating to or connected with any use of the Common Area Meeting Spaces by Tenant or its employees and/or visitors. Landlord specifically reserves the right to change the location, size, configuration, design, layout and all other aspects of the Common Area Meeting Spaces at any time and Tenant acknowledges and agrees that Landlord may from time to time, on a temporary basis, or on a permanent basis, close, close-off or restrict access to the Common Area Meeting Spaces. The right to use the Common Area Meeting Spaces may not be assigned or in any other way transferred to any other person or entity. Tenant acknowledges that the waiver of claims and indemnification provided in this Lease apply to the use of the Common Area Meeting Spaces by Tenant. Notwithstanding anything to the contrary contained in this Lease, Tenant acknowledges that, as of the date of this Lease, the Project does not have any Common Area Meeting Rooms.

2. LEASE TERM

2.1 **Lease Term**. The terms and provisions of this Lease shall be effective as of the date of this Lease. The term of this Lease (the "**Lease Term**") shall be as set forth in Section 3.1 of the Summary, shall commence on the date set forth in Section 3.2 of the Summary (the "**Lease Commencement Date**"), and shall terminate on the date set forth in Section 3.4 of the Summary (the "**Lease Expiration Date**") unless this Lease is sooner terminated as hereinafter provided. For purposes of this Lease, the term "**Lease Year**" shall mean the consecutive twelve (12) month period following and including the Lease Commencement Date and each subsequent twelve (12) month period during the Lease Term; provided, however, if the Lease Commencement Date is other than the first (1st) day of a calendar month, "Month 1" will include the first full calendar month following the Lease Commencement Date plus any partial calendar month following the Lease Commencement Date. In the event Month 1 includes any partial calendar month, Tenant shall pay the prorated amount of Monthly Base Rent for such partial calendar month pursuant to Article 3 in addition to the Monthly Base Rent for the ninth (9th) full calendar month of the Lease Term (and to the extent that Month 1 is included as part of the Abatement Period, any such partial calendar month shall be excluded from the Abatement Period). At any time during the Lease Term, Landlord may deliver to Tenant a notice in the form as set forth in **Exhibit 2.1**, attached hereto, as a confirmation only of the information set forth therein, which Tenant shall execute (or provide factual correction to) and return to Landlord within ten (10) business days of receipt thereof, but execution of such instrument shall not be a condition to Lease commencement or Tenant's obligations hereunder.

3. BASE RENT

3.1 **Payment of Rent**. Tenant shall pay, without prior notice or demand, to Landlord's agent at the management office of the Project or at such place as Landlord may from time to time designate in writing, by a check for currency which, at the time of payment, is legal tender for private or public debts in the United States of America or pursuant to wire or electronic payment instructions provided by Landlord, base rent ("**Base Rent**") as set forth in Section 4 of the Summary, payable in equal monthly installments as set forth in Section 4 of the Summary, in advance, on or before the first day of each and every calendar month during the Lease Term, without any setoff or deduction whatsoever, except as may be expressly set forth in this Lease. Base Rent for the first full month of the Lease Term shall be paid at the time of Tenant's execution of this Lease. If any Rent payment date (including the Lease Commencement Date) falls on a day of the month other than the first day of such month or if any payment of Rent is for a period which is shorter than one month, the Rent for any fractional month shall accrue on a daily basis for the period from the date such payment is due to the end of such calendar month or to the end of the Lease Term at a rate per day which is equal to 1/365 of the applicable annual Rent. All other payments or adjustments required to be made under the terms of this Lease that require proration on a time basis shall be prorated on the same basis. Base Rent and Additional Rent shall together be denominated "**Rent**". Without limiting the foregoing, Tenant's obligation to pay Rent shall be absolute, unconditional and independent of any Landlord covenants and shall not be discharged or otherwise affected by any law or regulation now or hereafter applicable to the Premises, or any other restriction on Tenant's use, or (except as expressly provided herein) any casualty or taking, or any failure by Landlord to perform any covenant contained herein, or any other occurrence; and Tenant assumes the risk of the foregoing and waives all rights now or hereafter existing to terminate or cancel this Lease or quit or surrender the Premises or any part thereof (absent a judicial order providing for such termination or cancellation), or to assert any defense in the nature of constructive eviction (in which Tenant asserts that its use and enjoyment of the Premises has been disrupted due to any entry by Landlord of the Premises in accordance with Section 27.2 of this Lease, any renovation of the Project or any casualty or condemnation affecting the Project) to any action seeking to recover rent (except to the extent Tenant's obligation to pay Base Rent may be expressly abated pursuant to Articles 11 and 13 of this Lease). Tenant's covenants contained herein are independent and not dependent, and Tenant hereby waives the benefit of any statute or judicial law to the contrary.

3.2 **Rents from Real Property**. Landlord and Tenant hereby agree that it is their intent that all Base Rent, Additional Rent and other rent and charges payable to the Landlord under this Lease (hereinafter individually and collectively referred to as "**Rent**") shall qualify as "rents from real property" within the meaning of Section 856(d) of the Internal Revenue Code of 1986, as amended (the "**Code**"), and the Department of the U.S. Treasury Regulations promulgated thereunder (the "**Regulations**"). Should the Code or the Regulations, or interpretations thereof by the Internal Revenue Service contained in revenue rulings or other similar public pronouncements, be changed so that any Rent no longer so qualifies as "rent from real property" for purposes of Section 856(d) of the Code and the Regulations promulgated thereunder, such Rent shall be adjusted in such manner as the Landlord may require so that it will so

qualify; provided, however, that any adjustments required pursuant to this Section 7.3 shall be made so as to produce the equivalent (in economic terms) Rent as payable prior to such adjustment.

4. ADDITIONAL RENT

4.1 **General Terms**. In addition to paying the Base Rent specified in Article 3 of this Lease, Tenant shall pay "**Tenant's Share**" of the annual "**Direct Expenses**" as those terms are defined in Sections 4.2.6 and 4.2.2 of this Lease, respectively. Such payments by Tenant, together with any and all other amounts payable by Tenant to Landlord pursuant to the terms of this Lease other than Base Rent, are hereinafter collectively referred to as the "**Additional Rent**". All amounts due under this Article 4 as Additional Rent shall be payable for the same periods and in the same manner as the Base Rent. Without limitation on other obligations of Tenant which survive the expiration of the Lease Term, the obligations of Tenant to pay the Additional Rent provided for in this Article 4 shall survive the expiration of the Lease Term, subject to Section 4.4.1.

4.2 **Definitions of Key Terms Relating to Additional Rent**. As used in this Article 4, the following terms shall have the meanings hereinafter set forth:

4.2.1 Intentionally Omitted.

4.2.2 "**Direct Expenses**" shall mean "**Operating Expenses**" and "**Tax Expenses**".

4.2.3 "**Expense Year**" shall mean each calendar year in which any portion of the Lease Term falls, through and including the calendar year in which the Lease Term expires, provided that Landlord, upon notice to Tenant, may change the Expense Year from time to time to any other twelve (12) consecutive month period, and, in the event of any such change, Tenant's Share of Direct Expenses shall be equitably adjusted for any Expense Year involved in any such change.

4.2.4 "**Operating Expenses**" shall mean all expenses, costs and amounts of every kind and nature which Landlord pays or accrues during any Expense Year because of or in connection with the ownership, management, maintenance, security, repair, replacement, restoration or operation of the Project or any portion thereof (including, without limitation, any amenities (e.g., fitness center) available to tenants within the Building or Project). Without limiting the generality of the foregoing, Operating Expenses shall specifically include any and all of the following: (i) the cost of supplying all utilities, the cost of operating, repairing, maintaining, and renovating the utility, telephone, mechanical, sanitary, storm drainage, and elevator systems, and the cost of maintenance and service contracts in connection therewith; (ii) the cost of licenses, certificates, permits and inspections and the cost of contesting any governmental enactments which may affect Operating Expenses, and the costs incurred in connection with providing a shuttle service, if any, and the costs incurred in connection with any federal, state or municipal governmentally mandated transportation demand management program or similar program; (iii) the cost of all insurance carried by Landlord in connection with the Project (including, without limitation, commercial general liability insurance, physical damage insurance covering damage or other loss caused by fire, earthquake, flood and other water damage, explosion, vandalism and malicious mischief, theft or other casualty, rental interruption insurance, and such insurance as may be required by any lessor under any present or future ground or underlying lease of the Building or Project or any holder of a mortgage, trust deed or other encumbrance now or hereafter in force against the Building or Project or any portion thereof or as required pursuant to the Underlying Documents); (iv) the cost of landscaping, re-lamping, and all supplies, tools, equipment and materials used in the operation, repair and maintenance of the Project, or any portion thereof; (v) all costs incurred in connection with the Parking Facilities; (vi) fees and other costs, including management, consulting fees, legal fees and accounting fees, of all contractors and consultants in connection with the management, operation, maintenance and repair of the Project; (vii) payments under any equipment rental agreements and the fair rental value of any management space; (viii) wages, salaries and other compensation and benefits, including taxes levied thereon, of all persons engaged in the operation, maintenance and security of the Project; (ix) costs under any instrument pertaining to the sharing of costs by the Project; (x) operation, repair, maintenance and replacement of all systems and equipment and components thereof of the Project; (xi) the cost of janitorial, alarm, security and other services, replacement of wall and floor coverings, ceiling tiles and fixtures in Common Areas, maintenance and replacement of curbs and walkways, repair to roofs and re-roofing; (xii) amortization (including reasonable interest on the unamortized cost) over such period as Landlord shall reasonably determine, of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and repair of the Project or any portion thereof; (xiii) the cost of capital improvements, capital repairs or other capital costs

incurred in connection with the Project (A) which are intended to reduce expenses in the operation or maintenance of the Project, or any portion thereof, or to reduce current or future Operating Expenses or to enhance the safety or security of the Project or its occupants, (B) that are required to comply with present or anticipated mandatory energy conservation programs, (C) which are replacements or modifications of nonstructural items located in the Common Areas required to keep the Common Areas in the same good order or condition as on the Lease Commencement Date, or (D) that are required under any federal, state or municipal governmental law or regulation that was not in force or effect as of the Lease Commencement Date; provided, however, that the costs of any capital improvement shall be amortized (including with interest at the Amortization Interest Rate on the amortized cost as reasonably determined by Landlord) over the useful life of the capital item in question, as Landlord shall reasonably determine, in a manner consistent with the practices of landlords of "Comparable Buildings" (i.e., similar buildings located with the area depicted in **Exhibit 4.2.4** attached hereto) and otherwise in accordance with sound real estate management and accounting practices or, with respect to cost saving capital expenditures, their recovery/payback period as Landlord shall reasonably determine, in a manner consist with the practices of landlords of Comparable Buildings and otherwise in accordance with sound real estate management and accounting practices, consistently applied; (xiv) costs, fees, charges or assessments imposed by, or resulting from any mandate imposed on Landlord by, any federal, state or municipal government for fire and police protection, trash removal, community services, or other services which do not constitute "Tax Expenses" (as that term is defined in Section 4.2.5 below); (xv) cost of tenant relation programs reasonably established by Landlord, and (xvi) payments under any Underlying Documents (as that term is defined in Article 24 below). In the event that Landlord or Landlord's managers or agents perform services for the benefit of the Building off-site which would otherwise be performed on-site (e.g., accounting), the cost of such services shall be reasonably allocated among the properties benefitting from such service and shall be included in Operating Expenses. Notwithstanding the foregoing, for purposes of this Lease, **Operating Expenses shall not, however, include**:

(a) costs, including legal fees, space planners' fees, advertising and promotional expenses, and brokerage fees incurred in connection with the original construction or development, or original or future leasing of the Project, and costs, including permit, license and inspection costs, incurred with respect to the installation of tenant improvements made for tenants or incurred in renovating or otherwise improving, decorating, painting or redecorating vacant space for tenants of the Project (excluding, however, such costs relating to any Common Areas), and any costs or expenses incurred in connection with the relocation of any tenants of the Building or Project;

(b) except as set forth in items (xii), (xiii), and (xiv) above, depreciation, interest and principal payments on mortgages and other debt costs, if any, penalties and interest, and costs of capital improvements (as distinguished from non-capital repairs or replacements);

(c) costs for which Landlord is reimbursed by any tenant or occupant of the Project (other than as Direct Expenses) or by insurance by its carrier or any tenant's carrier or by anyone else (or would have been reimbursed if Landlord had carried the insurance Landlord is required to carry pursuant to this Lease or enforced its rights against such third-party, as applicable), and electric power costs for which any tenant directly contracts with the local public service company or pays directly to Landlord;

(d) any bad debt loss, rent loss, or reserves for bad debts or rent loss;

(e) costs associated with the operation of the business of the partnership or entity which constitutes Landlord, as the same are distinguished from the costs of operation of the Project (which shall specifically include, but not be limited to, accounting costs associated with the operation of the Project). Costs associated with the operation of the business of the partnership or entity which constitutes Landlord include costs of partnership accounting and legal matters, costs of defending any lawsuits with any mortgagee (except as the actions of Tenant may be in issue), costs of selling, syndicating, financing, mortgaging or hypothecating the Project or any of Landlord's interest in the Project, and costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Project management, or between Landlord and other tenants or occupants;

(f) the wages and benefits of any employee who does not devote substantially all of his or her employed time to the Project unless such wages and benefits are prorated to reflect time spent on operating and managing the Project vis-a-vis time spent on matters unrelated to operating and managing the Project; provided, that in no event shall Operating Expenses for purposes of this Lease include wages and/or benefits attributable to personnel above the level of Project manager;

(g) amount paid as ground rental for the Project by Landlord;

(h) except for a property management fee (and subject to the exclusion in item (q) below), overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for services in the Project to the extent the same exceeds the costs of such services rendered by qualified, first-class unaffiliated third parties on a competitive basis;

(i) any compensation paid to clerks, attendants or other persons in commercial concessions operated by Landlord, provided that any compensation paid to any concierge at the Project shall be includable as an Operating Expense;

(j) all items and services for which Tenant or any other tenant in the Project reimburses (or is obligated to reimburse) Landlord (other than as Direct Expenses) or which Landlord provides selectively to one or more tenants (other than Tenant) without reimbursement;

(k) rent for any office space occupied by Project management personnel to the extent the size or rental rate of such office space exceeds the size or fair market rental value of office space occupied by management personnel of Comparable Buildings, with adjustment where appropriate for the size of the applicable project;

(l) costs incurred to comply with laws relating to the removal of Hazardous Materials (other than Hazardous Materials typically found in comparable buildings, such as recyclable materials and typical construction materials, and costs to comply with the operation and maintenance plan, if any);

(m) Landlord's general overhead expenses not related to the Project;

(n) legal fees, accountants' fees (other than normal bookkeeping expenses) and other expenses incurred in connection with disputes of tenants or other occupants of the Project or associated with the enforcement of the terms of any leases with tenants or the defense of Landlord's title to or interest in the Project or any part thereof;

(o) any reserve funds;

(p) costs arising due to a violation by Landlord or any other tenant of the Project of the terms and condition of a lease, or arising from the gross negligence or willful misconduct of Landlord, or its agents, employees, vendors, contractors, or providers of materials or services;

(q) any management fee, of which Tenant's Share in a particular Expense Year exceeds three percent (3%) of Tenant's Base Rent (adjusted and grossed up during any period in which Tenant's Base Rent (or portion thereof) is abated);

(r) advertising and promotional expenditures, and costs of signs in or on the Project identifying the owner of the Project or any tenant of the Project;

(s) fees, penalties and interest resulting from Landlord's failure to pay any Operating Expense as and when due;

(t) costs to comply with Applicable Laws where such violation of Applicable Laws existed as of the date the Project was originally built (i.e., 2018); and

(u) any costs expressly excluded from Operating Expenses elsewhere in this Lease.

If Landlord is not furnishing any particular work or service (the cost of which, if performed by Landlord, would be included in Operating Expenses) to a tenant who has undertaken to perform such work or service in lieu of the performance thereof by Landlord, Operating Expenses shall be deemed to be increased by an amount equal to the additional Operating Expenses which would reasonably have been incurred during such period by Landlord if it had at its own expense furnished such work or service to such tenant. If the Project is not at least one hundred percent (100%) occupied during all or a portion of any Expense Year, Landlord shall make an appropriate adjustment to the

components of Operating Expenses for such year to determine the amount of Operating Expenses that would have been incurred had the Project been one hundred percent (100%) occupied; and the amount so determined shall be deemed to have been the amount of Operating Expenses for such year. Landlord and Tenant acknowledge and agree that the intention of this Article 4 is to facilitate Landlord's recovery of Operating Expenses as opposed to generating a profit center.

4.2.5 **Taxes**.

4.2.5.1 "**Tax Expenses**" shall mean all federal, state, county, or local governmental or municipal taxes, fees, charges or other impositions of every kind and nature, whether general, special, ordinary or extraordinary (including, without limitation, real estate taxes, general and special assessments, transit taxes, payments in lieu of taxes, business improvement district charges, leasehold taxes or taxes based upon the receipt of rent, including gross receipts or sales taxes applicable to the receipt of rent (inclusive of any so-called "Proposition C" taxes), unless required to be paid by Tenant, personal property taxes imposed upon the fixtures, machinery, equipment, apparatus, systems and equipment, appurtenances, furniture and other personal property used by Landlord in connection with the Project, or any portion thereof), which shall be paid or accrued during any Expense Year (without regard to any different fiscal year used by such governmental or municipal authority) because of or in connection with the ownership, leasing and operation of the Project, or any portion thereof (including, without limitation, the land upon which the Building, including the Parking Facilities, are located).

4.2.5.2 Tax Expenses shall include, without limitation: (i) Any tax on the rent, right to rent or other income from the Project, or any portion thereof, or as against the business of leasing the Project, or any portion thereof; (ii) any assessment, tax, fee, levy or charge in addition to, or in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax, it being acknowledged by Tenant and Landlord that Proposition 13 was adopted by the voters of the State of California in the June 1978 election ("**Proposition 13**") and that assessments, taxes, fees, levies and charges may be imposed by governmental agencies for such services as fire protection, street, sidewalk and road maintenance, refuse removal and for other governmental services formerly provided without charge to property owners or occupants, and, in further recognition of the decrease in the level and quality of governmental services and amenities as a result of Proposition 13, Tax Expenses shall also include any governmental or private assessments or the Project's contribution towards a governmental or private cost-sharing agreement for the purpose of augmenting or improving the quality of services and amenities normally provided by governmental agencies; (iii) any assessment, tax, fee, levy, or charge allocable to or measured by the area of the Premises or the Rent payable hereunder, including, without limitation, any business or gross income tax or excise tax with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof; and (iv) any assessment, tax, fee, levy or charge, upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises or the improvements thereon; and (v) all of the real estate taxes and assessments imposed upon or with respect to the buildings and all of the real estate taxes and assessments imposed on the land and improvements comprising the Project, including any such taxes or assessments relating to the Underlying Documents or Mission Bay Requirements. If at any time during the Lease Term there shall be assessed on Landlord, in addition to or lieu of the whole or any part of the ad valorem tax on real or personal property, a capital levy or other tax on the gross rents or other measures of building operations, or a governmental income, franchise, excise or similar tax, assessment, levy, charge or fee measured by or based, in whole or in part, upon building valuation, gross rents or other measures of building operations or benefits of governmental services furnished to the Building, then any and all of such taxes, assessments, levies, charges and fees, to the extent so measured or based, shall be included within the term Tax Expenses, but only to the extent that the same would be payable if the Building and Land were the only property of Landlord.

4.2.5.3 Any costs and expenses (including, without limitation, reasonable attorneys' and consultants' fees) incurred in attempting to protest, reduce or minimize Tax Expenses in good faith shall be included in Tax Expenses in the Expense Year such expenses are incurred. Tax refunds shall be credited against Tax Expenses and refunded to Tenant regardless of when received, based on the Expense Year to which the refund is applicable, provided that in no event shall the amount to be refunded to Tenant for any such Expense Year exceed the total amount paid by Tenant as on account of Tax Expenses under this Article 4 for such Expense Year. The foregoing sentence shall survive the expiration or earlier termination of this Lease. If Tax Expenses for any period during the Lease Term or any extension thereof are increased after payment thereof for any reason, including, without limitation, escape

assessment or error or reassessment by applicable governmental or municipal authorities, Tenant shall pay Landlord Tenant's Share of any such increased Tax Expenses within thirty (30) days after Landlord's request, together with supporting documentation of such increase. Notwithstanding anything to the contrary contained in this Section 4.2.5, there shall be excluded from Tax Expenses (i) all excess profits taxes, franchise taxes, gift taxes, capital stock taxes, inheritance and succession taxes, estate taxes, documentary transfer taxes (incurred in connection with the sale or financing of the Project or any portion thereof, but any changes in Tax Expenses following a reassessment of the Project relating to a change in ownership shall continue to be includable in Tax Expenses), federal and state income taxes, and other taxes to the extent applicable to Landlord's general or net income (as opposed to rents, receipts or income attributable to operations at the Project), (ii) any items included as Operating Expenses, (iii) any items paid by Tenant under Section 4.5 of this Lease, (iv) tax penalties, fees or interest incurred as a result of Landlord's failure to make payments and/or to file any tax or informational returns when due, and (v) any assessments on real property or improvements located outside of the Project. For purposes of calculating Tax Expenses for the Project for any Expense Year, if such Tax Expenses do not reflect an assessment (or Tax Expenses) for a one hundred percent (100%) leased, completed and occupied project (such that existing or future leasing, improvements and/or occupancy may result in an increased assessment and/or increased Tax Expenses) with the Project being one hundred percent (100%) occupied by tenants paying full rent, such Tax Expenses shall adjusted, on a basis consistent with sound real estate accounting principles, to reflect an assessment for (and Tax Expenses for) a one hundred percent (100%) leased, completed and occupied project with the Project being one hundred percent (100%) occupied by tenants paying full rent.

4.2.5.4 Notwithstanding anything to the contrary set forth in this Lease, only Landlord may institute proceedings to reduce Tax Expenses and the filing of any such proceeding by Tenant without Landlord's consent shall constitute a Default by Tenant.

4.2.6 "**Tenant's Share**" is based upon the ratio that the rentable square feet of the Premises bears to the rentable square feet of the Building and initially shall mean the percentage set forth in Section 7 of the Summary, subject to adjustment in the event that Tenant physically expands or contracts the Premises within the Building. For the avoidance of doubt, and notwithstanding anything to the contrary herein, no remeasurement of the Building or Project shall result in an increase in the Base Rent payable under this Lease.

4.3 **Allocation of Direct Expenses**.

4.3.1 **Method of Allocation**. The parties acknowledge that the Project contains four (4) sub- buildings or sectors (i.e., the North Tower, the North Building, the South Tower and the South Building, each a sub- building herein and together comprising the entire Building) and that the costs and expenses incurred in connection with the Project (i.e., the Direct Expenses) should be equitably allocated among those sub-buildings comprising the Project and shared by the tenants of each of those sub-buildings. Accordingly, as set forth in Section 4.2 above, Direct Expenses (which consist of Operating Expenses and Tax Expenses) attributable only to a particular sub-building or sub-buildings, but not the Project generally, shall be included in Direct Expenses for such sub-building or sub- buildings, but excluded from Direct Expenses for any other sub-buildings, and Direct Expenses that are attributable to the Project as a whole shall be allocated among the Building pro rata based on the relative rentable square footages of each of the sub-buildings as compared to the rentable square footage of the entire Building in the aggregate. Accordingly, such portion of Direct Expenses allocated to the tenants of the sub-building shall include all Direct Expenses attributable solely to the sub-building and an equitable portion of the Direct Expenses attributable to the entire Building as a whole. Further, Landlord shall have the right, from time to time, to allocate equitably some or all of the Direct Expenses for a sub-building or the Project among different portions or occupants of the sub-building or Project, in Landlord's reasonable discretion, in a manner reflecting commercially reasonable cost pools for such Direct Expenses so allocated. The Direct Expenses within each cost pool shall be allocated and charged to the tenants within such cost pool in an equitable manner.

4.3.2 **Cost Pools**. The parties acknowledge that certain of the costs and expenses incurred in connection with the Project (i.e., the Direct Expenses) should be separately allocated to the office space and the Retail Space. Direct Expenses shall be allocated between the office space and Retail Space (each, a "**Cost Pool**") based on the estimated benefit derived by the space which is the subject of the Cost Pool, and such allocations shall be reasonably determined by Landlord. Accordingly, Direct Expenses shall be charged to the Retail Space and the office space by virtue of the creation of Cost Pools. Direct Expenses which apply equally to the Retail Space and the office space (such as Landlord's insurance costs), as reasonably determined by Landlord, shall be allocated to the office

space Cost Pool and the Retail Space Cost Pool based on the square footage of each of those spaces, respectively, compared to the total square footage of the applicable Building. After the date of this Lease, Landlord may reasonably establish additional Cost Pools in connection with any new leases of the Project, such as a life sciences Cost Pool. Any costs allocated to a Cost Pool (e.g. the Retail Space Cost Pool) which does not include a portion of the Premises shall be excluded from the definition of Direct Expenses for the purposes of this Lease.

4.3.3 **Costs Attributable to Laboratory Use**. In addition to the payment of Tenant's Share of Operating Expenses provided for hereinabove, Tenant shall be solely responsible for the payment of one hundred percent (100%) of any costs (whether or not otherwise included in Operating Expenses, but Tenant shall not be directly invoiced for costs already included in Operating Expenses) attributable to, or incurred or payable by Landlord as a consequence of, Tenant's use of any portion of the Premises for the Laboratory Use, as determined by Landlord in its reasonable judgement and following the delivery of reasonable documentation supporting said additional costs as attributable to Tenant's use of a portion of the Premises for the Laboratory Use. If not otherwise included as a special allocation to Tenant as contemplated by Section 4.3.2 above of any such costs in the Operating Expense payments made by Tenant, Landlord will invoice Tenant, on a periodic basis, for any such costs, and Tenant shall pay such costs as additional Rent hereunder within fifteen (15) days following Landlord's delivery of any such invoice to Tenant.

4.4 **Calculation and Payment of Additional Rent**. Tenant shall pay to Landlord, in the manner set forth in Section 4.4.1 below, and as Additional Rent, Tenant's Share of Direct Expenses for each Expense Year.

4.4.1 **Statement of Actual Direct Expenses and Payment by Tenant**. Landlord shall use commercially reasonable efforts to give to Tenant on or before May 1 following the end of each Expense Year, a statement (the "**Statement**") which shall state the Direct Expenses incurred or accrued for such preceding Expense Year, and which shall indicate the amount of Tenant's Share of Direct Expenses. Upon receipt of the Statement for each Expense Year commencing or ending during the Lease Term, Tenant shall pay, with its next installment of Base Rent due, the full amount of Tenant's Share of Direct Expenses for such Expense Year, less the amounts, if any, paid during such Expense Year as "**Estimated Direct Expenses**" (as that term is defined in Section 4.4.2 below), and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Tenant shall receive a credit in the amount of Tenant's overpayment against Rent next due under this Lease or, if Landlord elects, Landlord shall reimburse such overpayment amount to Tenant or, if the Lease Term has ended, Landlord shall refund such amount to Tenant within thirty (30) days of the date of such Statement. The failure of Landlord to timely furnish the Statement for any Expense Year shall not prejudice Landlord or Tenant from enforcing its rights under this Article 4, provided, however, that Tenant shall not be responsible for payment of any Direct Expenses first shown on a Statement delivered more than twenty-four (24) months after expiration of the applicable Expense Year. Even though the Lease Term has expired and Tenant has vacated the Premises, when the final determination is made of Tenant's Share of Direct Expenses for the Expense Year in which this Lease terminates, Tenant shall pay to Landlord such amount within thirty (30) days after delivery of the applicable Statement to Tenant, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Landlord shall, within thirty (30) days after delivery of the applicable Statement to Tenant, pay to Tenant the amount of the overpayment. The provisions of this Section 4.4.1 shall survive the expiration or earlier termination of the Lease Term.

4.4.2 **Statement of Estimated Direct Expenses**. In addition, Landlord shall use commercially reasonable efforts to give Tenant on or before May 1 following the end of each Expense Year, a yearly expense estimate statement (the "**Estimate Statement**") which shall set forth Landlord's reasonable estimate (the "**Estimate**") of what the total amount of Direct Expenses for the then-current Expense Year shall be and the estimated Tenant's Share of Direct Expenses (the "**Estimated Direct Expenses**"). The failure of Landlord to timely furnish the Estimate Statement for any Expense Year shall not preclude Landlord from enforcing its rights to collect any Estimated Direct Expenses under this Article 4, nor shall Landlord be prohibited from revising any Estimate Statement or Estimated Direct Expenses theretofore delivered to the extent necessary (but not more than three (3) times per Expense Year). Thereafter, Tenant shall pay, with its next installment of Base Rent due, a fraction of the Estimated Direct Expenses for the then-current Expense Year (reduced by any amounts paid pursuant to the last sentence of this Section 4.4.2). Such fraction shall have as its numerator the number of months which have elapsed in such current Expense Year, including the month of such payment, and twelve (12) as its denominator. Until a new Estimate Statement is furnished (which Landlord shall have the right to deliver to Tenant at any time [but not more than three (3) times per Expense Year]), Tenant shall pay monthly, with the monthly Base Rent installments, an amount equal to one-twelfth (1/12) of the total Estimated Direct Expenses set forth in the previous Estimate Statement delivered by Landlord to Tenant.

4.4.3 **Mission Bay Requirements**. As set forth in **Exhibit 4.4.3** attached hereto, the Project is subject to certain covenants, requirements, and disclosures (collectively, the "**Mission Bay Requirements**"), which include, without limitation, certain limitations on (i) Landlord's ability to lease space at the Project to a Tax-Exempt Entity and (ii) Landlord's ability to obtain reductions in the assessed value of the Project below the Minimum Amount. In connection with the foregoing, to the extent that Tenant is exempt from certain Tax Expenses, but Landlord is otherwise obligated to continue to pay such Tax Expenses (the "**Tenant-Exempt Tax Expenses**"), then, notwithstanding Tenant's tax-exempt status, Tenant shall continue to be obligated to pay to Landlord, as part of Direct Expenses, all such Tenant-Exempt Tax Expenses.

4.5 **Taxes and Other Charges for Which Tenant Is Directly Responsible**.

4.5.1 Tenant shall be liable for and shall pay before delinquency, taxes levied against Tenant's equipment, furniture, fixtures and any other personal property located in or about the Premises. If any such taxes on Tenant's equipment, furniture, fixtures and any other personal property are levied against Landlord or Landlord's property or if the assessed value of Landlord's property is increased by the inclusion therein of a value placed upon such equipment, furniture, fixtures or any other personal property and if Landlord pays the taxes based upon such increased assessment, which Landlord shall have the right to do regardless of the validity thereof but only under proper protest if requested by Tenant, Tenant shall within thirty (30) days after Landlord's demand (together with reasonable back-up evidencing the same) repay to Landlord the taxes so levied against Landlord or the proportion of such taxes resulting from such increase in the assessment, as the case may be.

4.5.2 If the improvements in the Premises, whether installed and/or paid for by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, are assessed for real property tax purposes at a valuation higher than the valuation at which "building standard" improvements are assessed, then the Tax Expenses levied against Landlord or the property by reason of such excess assessed valuation shall be deemed to be taxes levied against personal property of Tenant and shall be governed by the provisions of Section 4.5.1 above. Landlord and Tenant hereby agree that the valuation of Landlord's "building standard" improvements for all tenants of the Project shall be equal to One Hundred Dollars ($100.00) per rentable square foot. Landlord and Tenant shall cooperate with respect to the information provided by either of them to the appropriate taxing authority regarding the valuation of the improvements in the Premises so as to avoid duplicative assessments being levied on such improvements.

4.5.3 Notwithstanding any contrary provision herein, Tenant shall pay prior to delinquency any (i) rent tax (e.g., gross receipts tax on commercial rents) or sales tax, service tax, transfer tax or value added tax, or any other applicable tax on the rent or services herein or otherwise respecting this Lease, or (ii) taxes assessed upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises or any portion of the Project, including the Parking Facilities.

4.6 **Landlord's Books and Records**. Following Tenant's receipt of a Statement, Tenant shall have the right by written notice to Landlord to commence and complete an audit of Landlord's books concerning the Direct Expenses for the Expense Year which are the subject of such Statement, within the later to occur of (x) six (6) months following the delivery of such Statement and (y) the date that is sixty (60) days after Landlord makes Landlord's books and records available for Tenant's audit, provided that Tenant notifies Landlord of Tenant's intent to audit Landlord's books and records within the six (6) month period described in clause (x) above (the "**Audit Period**"). Following the giving of such written notice, Tenant shall have the right during Landlord's regular business hours taking into account the workload of Landlord's employees involved in the audit at the time of the audit request and on reasonable prior notice, to audit, at Landlord's corporate offices in the San Francisco Bay area, at Tenant's sole cost, Landlord's records, provided that Tenant is not then in Default. The audit of Landlord's records may be conducted only by a reputable certified public accountant, subject to Landlord's approval, which approval shall not be unreasonably withheld. Any accounting firm selected by Tenant in connection with the audit (i) shall be a reputable independent nationally or regionally recognized certified public accounting firm which has previous experience in auditing financial operating records of landlords of office/life science buildings; (ii) shall not already be providing accounting and/or lease administration services to Tenant and shall not have provided accounting and/or lease administration services to Tenant in the past three (3) years; (iii) shall not be retained by Tenant on a contingency fee basis (i.e. Tenant must be billed based on the actual time and materials that are incurred by the accounting firm in the performance of the audit), a copy of the executed audit agreement, between Tenant and auditor, shall be provided to Landlord prior to the commencement of the audit; and (iv) at Landlord's option, both Tenant and its agent shall be

required to execute a commercially reasonable confidentially agreement prepared by Landlord. Any audit report prepared by Tenant's auditors shall be delivered concurrently to Landlord and Tenant within the Audit Period. If, after such audit of Landlord's records, Tenant disputes the amount of Direct Expenses for the year under audit, Landlord and Tenant shall meet and attempt in good faith to resolve the dispute. If the parties are unable to resolve the dispute within sixty (60) days after completion of Tenant's audit, then, at Tenant's request, a certified public accounting firm selected by Landlord, and reasonably approved by Tenant, shall, at Tenant's cost, conduct an audit of the relevant Direct Expenses (the "**Neutral Audit**"). Tenant shall pay all costs and expenses of the Neutral Audit unless the final determination in such Neutral Audit is that Landlord overstated Direct Expenses in the Statement for the year being audited by more than five percent (5%) in which case Landlord shall pay all costs and expenses of the Neutral Audit, as well as Tenant's reasonable out-of-pocket costs actually incurred by Tenant in the audit of Landlord's books and records. In any event, Landlord will reimburse or provide a credit for any overstatement of Direct Expenses and Tenant shall pay to Landlord any understatement of Direct Expenses. To the extent Landlord and Tenant fail to otherwise reach mutual agreement regarding Direct Expenses, the foregoing audit and Neutral Audit procedures shall be the sole methods to be used by Tenant to dispute the amount of any Direct Expenses payable by Tenant pursuant to the terms of the Lease.

5. USE OF PREMISES

5.1 **Permitted Use**. Tenant shall use the Premises solely for the Permitted Use set forth in Section 8 of the Summary and Tenant shall not use or permit the Premises or the Project to be used for any other purpose or purposes whatsoever without the prior written consent of Landlord, which consent may be withheld in Landlord's sole discretion.

5.2 **Prohibited Uses**. The uses prohibited under this Lease shall include, without limitation, use of the Premises or a portion thereof for (i) offices of any agency or bureau of the United States or any state or political subdivision thereof; (ii) offices or agencies of any foreign governmental or political subdivision thereof; (iii) offices of any health care professionals or service organization (but occupational health professionals employed by Tenant shall not violate the foregoing prohibition); (iv) schools or other training facilities which are not ancillary to corporate, executive or professional office use; (v) retail use or the operation of any restaurant offering services to the public; or (vi) communications firms such as radio and/or television stations. Tenant further covenants and agrees that Tenant shall not use, or suffer or permit any person or persons claiming by, through, or under Tenant to use, the Premises or any part thereof for any use or purpose contrary to the provisions of the Rules and Regulations attached hereto as **Exhibit 5.2**, as the same may be amended by Landlord from time to time (the "**Rules and Regulations**"), or in violation of Applicable Laws or any Underlying Documents. Any modifications to the Rules and Regulations shall be reasonable and non-discriminatory and shall be provided to Tenant in writing or posted to a conspicuous place in the Building. In the event of a conflict between any modifications to the Rules and Regulations and the terms of this Lease, the latter shall control. Tenant shall not do or permit anything to be done in or about the Premises which will in any way damage the reputation of the Project or unreasonably obstruct or interfere with the rights of other tenants or occupants of the Building, or injure or annoy them or use or allow the Premises to be used for any improper, unlawful or objectionable purpose, nor shall Tenant cause, maintain or permit any nuisance in, on or about the Premises. Tenant shall comply with, and Tenant's rights and obligations under the Lease and Tenant's use of the Premises shall be subject and subordinate to, all Underlying Documents; provided that, following the date of this Lease, Landlord shall not voluntarily enter into new, or modify existing, Underlying Documents that would unreasonably interfere with Tenant's access to the Premises or use of the Premises for the Permitted Use. Tenant shall only place equipment within the Premises with floor loading consistent with the Building's structural design, and such equipment shall be placed in a location designed to carry the weight of such equipment. Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations therefrom from extending into the Common Areas or other offices in the Project.

5.3 **Tenant's Bicycles**. Tenant's employees shall be permitted to bring their bicycles ("**Bicycles**") into portions of the Project designated by Landlord for Bicycle storage, subject to the provisions of this Section 5.3, and such additional reasonable rules and regulations as may be promulgated by Landlord from time to time (in Landlord's reasonable discretion) that do not unreasonably interfere with Tenant's ability to park its Bicycles as contemplated herein and provided to Tenant, and only to the extent such Bicycles are used on a daily basis for commuting to and from work by such employees. AT NO TIME ARE RIDERS ALLOWED TO RIDE ANY BICYCLE IN THE PREMISES, THE PARKING FACILITIES OR THE BUILDINGS. Storage of any Bicycle anywhere on the Project

other than as expressly set forth in this Section 5.3 is prohibited. Tenant shall keep its employees informed of these rules and regulations and any modifications thereto.

5.3.1 **Bicycle Storage Area**. The Parking Facilities include a secured bicycle storage area that will accommodate at least two hundred (200) Bicycles (collectively, the "**Landlord Bicycle Storage Area**"). Tenant shall have the non-exclusive right (at no additional charge other than Tenant's Share of Direct Expenses relating thereto) to use the Landlord Bicycle Storage Area for day use parking of Bicycles by Tenant and Tenant's employees, visitors, invitees and sublessees not to exceed Tenant's pro rata share (which is presently 40 based on the Landlord Bicycle Storage presently accommodating up to 228 Bicycles) of the number of Bicycles that the Landlord Bicycle Storage Area from time to time accommodates (which shall not be less than 200 Bicycles), and Tenant shall also have the right, at Tenant's sole cost and expense, to convert certain areas of the Parking Facilities, reasonably designated by Landlord and approved by Tenant, for additional exclusive day use parking (the "**Tenant Bicycle Storage Area**") for Bicycles by Tenant and its employees, visitors, invitees and sublessees, which shall include the installation of Bicycle storage lockers or other Bicycle storage facilities, installed as an Alteration ("**Bicycle Improvements**"). The Landlord Bicycle Storage Area and Tenant Bicycle Storage Area are collectively, the "**Bicycle Storage Area**". Other than the Bicycle Storage Area, Tenant and Tenant's employees, visitors, invitees and sublessees shall not be entitled to use any secured bicycle storage areas at the Project, and Tenant's employees shall not be permitted to bring their Bicycles in the Premises. Motorized vehicles of any kind, including motorcycles and mopeds, are prohibited in the Bicycle Storage Area, as is the storage of any property other than Bicycles. Each rider shall use the Bicycle Storage Area at its sole risk. Landlord specifically reserves the right to reasonably change the location, size, configuration, design, layout and all other aspects of the Landlord Bicycle Storage Area at any time (provided that no such action will materially diminish the capacity of the Landlord Bicycle Storage Area on other than a temporary basis), and Tenant acknowledges and agrees that Landlord may, without incurring any liability to Tenant and without any abatement of Rent under this Lease, from time to time, temporarily close-off or restrict access to the Bicycle Storage Area for purposes of permitting or facilitating any such construction, alteration or improvements. Landlord has no obligation to provide any security whatsoever in connection with the Bicycle Storage Area except as expressly set forth in this Section 5.3.1. Landlord shall provide twenty-four (24) hours per day, seven (7) days per week, reasonable access control services for the Landlord Bicycle Storage Area in a manner materially consistent with the services provided by landlords of Comparable Buildings. Notwithstanding the foregoing, Landlord shall in no case be liable for personal injury or property damage for any error with regard to the admission to or exclusion from the Bicycle Storage Area of any person. Upon the expiration or earlier termination of this Lease, Tenant shall have removed all Bicycles belonging to its employees from the Bicycle Storage Area and Tenant, at Tenant's sole cost and expense, shall repair all damage to the Bicycle Storage Area caused by the removal of Tenant's property therefrom, and if Tenant fails to repair such damage, Landlord may undertake such repair on account of Tenant and Tenant shall pay to Landlord upon demand the cost of such repair. If Tenant fails to remove any Bicycles at the expiration or earlier termination of this Lease, Landlord may dispose of said Bicycles in such lawful manner as it shall determine in its sole and absolute discretion.

5.4 **Tenant's Use of Base Building Stairwells**. Subject to Applicable Laws and Tenant's receipt of all necessary governmental or quasi-governmental approvals (collectively, "**Governmental Approvals**"), Tenant shall have right during the Lease Term to use the base building stairwells between the floors of the Premises (each, a "**Stairwell**") solely for purposes of ingress and egress from and between different floors of the Premises. In its use of the Stairwells, Tenant shall comply with all Applicable Laws, Governmental Approvals and the rules and regulations for the Project. Tenant shall have no right to alter or change any Stairwell in any manner whatsoever, except that Tenant may paint or perform other purely decorative Alterations or Improvements to the Stairwells in accordance with Article 8 or the Work Letter, as applicable, and may install Tenant's Security System as set forth in Section 6.1.11 below. Tenant acknowledges and agrees that Tenant's use of the Stairwells shall be at Tenant's sole risk and Landlord shall have no liability whatsoever in connection therewith. Tenant hereby waives any and all claims against Landlord for any damages arising from Tenant's exercise of its rights under this Section 5.5.

5.5 **Hazardous Materials**.

5.5.1 **Tenant's Obligations**.

5.5.1.1 **Prohibitions**. As a material inducement to Landlord to enter into this Lease with Tenant, Tenant has fully and accurately completed Landlord's Pre-Leasing Environmental Exposure Questionnaire

(the "**Environmental Questionnaire**"), which is attached as **Exhibit 5.5.1.1**. Tenant hereby represents, warrants and covenants that except for those chemicals or materials, and their respective quantities, specifically listed on the Environmental Questionnaire (as may be updated from time to time as described below), neither Tenant nor Tenant's subtenants or assigns, or any of their respective employees, contractors and subcontractors of any tier, entities with a contractual relationship with such parties (other than Landlord), or any entity acting as an agent or sub-agent of such parties or any of the foregoing (collectively, "**Tenant Parties**") will produce, use, store or generate any "Hazardous Materials", as that term is defined below, on, under or about the Premises, nor cause or permit any Hazardous Material to be brought upon, placed, stored, manufactured, generated, blended, handled, recycled, used or "Released", as that term is defined below, on, in, under or about the Premises or Project. If any information provided to Landlord by Tenant on the Environmental Questionnaire, or otherwise relating to information concerning Hazardous Materials is intentionally false, incomplete, or misleading in any material respect, the same shall be deemed a default by Tenant under this Lease. Upon Landlord's request, or in the event of any "Material Change" in Tenant's use of Hazardous Materials at the Premises, Tenant shall deliver to Landlord an updated Environmental Questionnaire. As used herein, "Material Change" shall refer to any change in the use, presence (including, without limitation, a material change in the quantity stored within the Premises at any one time) or handling of Hazardous Materials by Tenant that would (A)reasonably be expected to have a significant effect on the Premises or the Project, (B) violate the compliance with or provisions of any existing permits, licenses, registrations and other similar documents used by any governmental or quasi-governmental authority that authorizes any use, storage or handling of Hazardous Materials in, on or about the Premises or the Project by Tenant or any Tenant Parties, or (C) cause the information provided in the Environmental Questionnaire, as previously updated from time to time, to become untrue or inaccurate in any material respect. Landlord's prior written consent shall be required for any Hazardous Materials use for the Premises not described on the initial Environmental Questionnaire, but such consent not to be unreasonably withheld, conditioned or delayed. Whenever Tenant submits to Landlord an updated Environmental Questionnaire, Landlord shall respond to Tenant within five (5) business days with its approval or disapproval thereof. Tenant shall not install or permit any underground storage tank on the Premises. In addition, Tenant agrees that it: (i) shall not cause or suffer to occur, the Release (as defined below) of any Hazardous Materials at, upon, under or within the Premises or any contiguous or adjacent premises; and (ii) shall not engage in activities at the Premises that give rise to, or lead to the imposition of, liability upon Tenant or Landlord or the creation of an environmental lien or use restriction upon the Premises. For purposes of this Lease, "**Hazardous Materials**" means all flammable explosives, petroleum and petroleum products, oil, radon, radioactive materials, toxic pollutants, asbestos, polychlorinated biphenyls ("**PCBs**"), medical waste, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including without limitation any chemical, element, compound, mixture, solution, substance, object, waste or any combination thereof, which is or may hereafter be determined to be hazardous to human health, safety or to the environment due to its radioactivity, ignitability, corrosiveness, reactivity, explosiveness, toxicity, carcinogenicity, infectiousness or other harmful or potentially harmful properties or effects, or defined as, regulated as or included in, the definition of "hazardous substances", "hazardous wastes", "hazardous materials", or "toxic substances" under any Environmental Laws. The term "Hazardous Materials" for purposes of this Lease shall also include any mold, fungus or spores, whether or not the same is defined, listed, or otherwise classified as a "hazardous material" under any Environmental Laws, if such mold, fungus or spores may pose a risk to human health or the environment or negatively impact the value of the Premises. Hazardous Materials shall also include any "biohazardous waste," "medical waste," or other waste under California Health and Safety Code Division 20, Chapter 6.1 (Medical Waste Management Act). For purposes of this Lease, "**Release**" or "**Released**" or "**Releases**" shall mean any release, deposit, discharge, emission, leaking, spilling, seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Materials into the environment.

Any use or storage of Hazardous Materials by Tenant permitted pursuant to this Article 5 shall not exceed Tenant's legally permissible quantity of similarly classed Hazardous Materials. Notwithstanding anything contained herein to the contrary, in no event shall Tenant or anyone claiming by through or under Tenant perform work above the risk category Biosafety Level 3 as established by the Department of Health and Human Services ("**DHHS**") and as further described in the DHHS publication Biosafety in Microbiological and Biomedical Laboratories (5th Edition) (as it may be or may have been further revised, the "**BMBL**") or such nationally recognized new or replacement standards as Landlord may reasonable designate. Tenant shall comply with all applicable provisions of the standards of the BMBL to the extent applicable to Tenant's operations in the Premises.

5.5.1.2 **Notices to Landlord**. Unless Tenant is required by Applicable Laws to give earlier notice to Landlord, Tenant shall notify Landlord in writing as soon as possible but in no event later than five (5) days after (i) Tenant becomes aware of the occurrence of any actual, alleged or threatened Release of any Hazardous Material in, on, under, from, about or in the vicinity of the Premises (whether past or present), regardless of the source or quantity of any such Release, or (ii) Tenant becomes aware of any regulatory actions, inquiries, inspections, investigations, directives, or any cleanup, compliance, enforcement or abatement proceedings (including any threatened or contemplated investigations or proceedings) relating to or potentially affecting the Premises, or (iii) Tenant becomes aware of any claims by any person or entity relating to any Hazardous Materials in, on, under, from, about or in the vicinity of the Premises, whether relating to damage, contribution, cost recovery, compensation, loss or injury. Collectively, the matters set forth in clauses (i), (ii) and (iii) above are hereinafter referred to as "**Hazardous Materials Claims**". Tenant shall promptly forward to Landlord copies of all orders, notices, permits, applications and other communications and reports in connection with any Hazardous Materials Claims. Additionally, Tenant shall promptly advise Landlord in writing of Tenant's discovery of any occurrence or condition on, in, under or about the Premises that could subject Tenant or Landlord to any liability, or restrictions on ownership, occupancy, transferability or use of the Premises under any "Environmental Laws", as that term is defined below. Tenant shall not enter into any legal proceeding or other action, settlement, consent decree or other compromise with respect to any Hazardous Materials Claims without first notifying Landlord of Tenant's intention to do so and affording Landlord the opportunity to join and participate, as a party if Landlord so elects, in such proceedings and in no event shall Tenant enter into any agreements which are binding on Landlord or the Project without Landlord's prior written consent. Landlord shall have the right to appear at and participate in, any and all legal or other administrative proceedings concerning any Hazardous Materials Claim. For purposes of this Lease, "**Environmental Laws**" means all applicable present and future laws relating to the protection of human health, safety, wildlife or the environment, including, without limitation, (i) all requirements pertaining to reporting, licensing, permitting, investigation and/or remediation of emissions, discharges, Releases, or threatened Releases of Hazardous Materials, whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of Hazardous Materials; and (ii) all requirements pertaining to the health and safety of employees or the public. Environmental Laws include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC § 9601, et seq., the Hazardous Materials Transportation Authorization Act of 1994, 49 USC § 5101, et seq., the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and Hazardous and Solid Waste Amendments of 1984, 42 USC § 6901, et seq., the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 USC § 1251, et seq., the Clean Air Act of 1966, 42 USC § 7401, et seq., the Toxic Substances Control Act of 1976, 15 USC § 2601, et seq., the Safe Drinking Water Act of 1974, 42 USC §§ 300f through 300j, the Occupational Safety and Health Act of 1970, as amended, 29 USC § 651 et seq., the Oil Pollution Act of 1990, 33 USC § 2701 et seq., the Emergency Planning and Community Right-To-Know Act of 1986, 42 USC § 11001 et seq., the National Environmental Policy Act of 1969, 42 USC § 4321 et seq., the Federal Insecticide, Fungicide and Rodenticide Act of 1947, 7 USC § 136 et seq., asbestos, polychlorobiphenyls (i.e., PCB's) and petroleum and petroleum by products; and any other State of California or local law counterparts, as amended, as such Applicable Laws, are in effect as of the Lease Commencement Date, or thereafter adopted, published or promulgated.

5.5.1.3 **Releases of Hazardous Materials**. If due to the acts or omissions of Tenant or any Tenant Party any Release of any Hazardous Material in, on, under, from or about the Premises in violation of, or requiring any Clean-Up (as defined below), in addition to notifying Landlord as specified above, Tenant, at its own sole cost and expense, shall (i) immediately comply with any and all reporting requirements imposed pursuant to any and all Environmental Laws, (ii) provide a written certification to Landlord indicating that Tenant has complied with all applicable reporting requirements, (iii) take any and all necessary investigation, corrective, remedial and other Clean-up action in accordance with any and all applicable Environmental Laws, utilizing an environmental consultant reasonably approved by Landlord, all in accordance with the provisions and requirements of this Section 5.6, including, without limitation, Section 5.5.4, and (iv) take any such additional investigative, remedial and corrective actions as Landlord shall in its reasonable discretion deem necessary such that the Premises and Project are remediated to a condition allowing unrestricted use of the Premises (i.e., to a level that will allow any future use of the Premises, including residential, without any engineering controls or deed restrictions), all in accordance with the provisions and requirements of this Section 5.5. Landlord may, as required by any and all Environmental Laws, report the Release of any Hazardous Material by Tenant or any Tenant Party to the appropriate governmental authority, identifying Tenant as the responsible party. Tenant shall deliver to Landlord copies of all administrative orders, notices, demands, directives or other communications directed to Tenant from any governmental authority with respect to any Release

of Hazardous Materials in, on, under, from, or about the Premises, together with copies of all investigation, assessment, and remediation plans and reports prepared by or on behalf of Tenant in response to any such regulatory order or directive.

5.5.1.4 **Indemnification**.

5.5.1.4.1 **In General**. Without limiting in any way Tenant's obligations under any other provision of this Lease, Tenant shall be solely responsible for and shall protect, defend, indemnify and hold the Landlord Parties harmless from and against any and all claims, judgments, losses, damages, costs, expenses, penalties, enforcement actions, taxes, fines, remedial actions, liabilities (including, without limitation, actual attorneys' fees, litigation, arbitration and administrative proceeding costs, expert and consultant fees and laboratory costs) including, without limitation, consequential damages and sums paid in settlement of claims, which arise during or after the Lease Term, whether foreseeable or unforeseeable, directly or indirectly arising out of or attributable to the presence, use, generation, manufacture, treatment, handling, refining, production, processing, storage, Release or presence of Hazardous Materials in, on, under or about the Premises or Project by any Tenant Party, except to the extent such liabilities result from the negligence or willful misconduct of Landlord following the Lease Commencement Date. The foregoing obligations of Tenant shall include, without limitation: (i) the costs of any required or necessary removal, repair, cleanup or remediation of the Premises and Project, and the preparation and implementation of any closure, removal, remedial or other required plans; (ii) judgments for personal injury or property damages; and (iii) all costs and expenses incurred by Landlord in connection therewith. It is the express intention of the parties to this Lease that Tenant assumes all such liabilities, and holds Landlord harmless from all such liabilities, associated with the environmental condition of the Premises, arising on or after the date Tenant takes possession of the Premises.

5.5.1.4.2 **Limitations**. Notwithstanding anything to the contrary in this Lease, Tenant shall not be responsible to remediate nor otherwise be liable or responsible for (not shall Tenant be responsible to indemnify Landlord with respect to except to the extent that Tenant's construction activities and/or Tenant's other acts or omissions caused or exacerbated the subject claim) any Hazardous Materials (i) located in, on, under or about the Project, Building and/or Premises prior to the date of the Existing Sublease, (ii) brought upon the Project by Landlord or any Landlord Party(ies), or (iii) that have migrated onto the Project, Building and/or Premises from other properties or premises ("**Landlord's Hazardous Materials**"), except to the extent any of the Hazardous Materials described in items (i), (ii) or (iii) are generated, used, transported, exacerbated, released or disturbed, by Tenant or any Tenant Party. To the extent that Landlord's Hazardous Materials are discovered at the Project, Building or Premises and remediation of the same is required a governmental authority with jurisdiction (which remediation is not triggered because of the particular use of the Premises by Tenant or its subtenants or assigns), any remediation thereof of the Landlord's Hazardous Substances (to the extent required by the applicable governmental authority) by Landlord shall be at Landlord's sole cost and expense, and not subject to inclusion in Operating Expenses.

5.5.1.5 **Compliance with Environmental Laws**. Without limiting the generality of Tenant's obligation to comply with Applicable Laws as otherwise provided in this Lease, Tenant shall, at its sole cost and expense, comply with all Environmental Laws applicable to the use, handling, storage and disposal by Tenant or by any Tenant's Agents of any Hazardous Materials. Tenant shall obtain and maintain any and all necessary permits, licenses, certifications and approvals appropriate or required for the use, handling, storage, and disposal of any Hazardous Materials used, stored, generated, transported, handled, blended, or recycled by Tenant on the Premises. Landlord shall have a continuing right, without obligation, to require Tenant to obtain, and to review and inspect any and all such permits, licenses, certifications and approvals, together with copies of any and all Hazardous Materials management plans and programs, any and all Hazardous Materials risk management and pollution prevention programs, and any and all Hazardous Materials emergency response and employee training programs respecting Tenant's use of Hazardous Materials. If Landlord has grounds to be concerned that Tenant has failed to comply with the provisions of this Article 5, then upon request of Landlord, Tenant shall deliver to Landlord a narrative description explaining the nature and scope of Tenant's activities involving Hazardous Materials and showing to Landlord's reasonable satisfaction compliance with all Environmental Laws and the terms of this Lease.

5.5.2 **Assurance of Performance**.

5.5.2.1 **Environmental Assessments In General**. Provided that Landlord gives Tenant no less than two (2) days prior notice of intended entry (other than in any emergency context) and complies with Tenant's security measures then in effect Landlord may, but shall not be required to, engage from time to time such contractors

as Landlord determines to be appropriate to perform "Environmental Assessments", as that term is defined below, to ensure Tenant's compliance with the requirements of this Lease with respect to Hazardous Materials. For purposes of this Lease, "**Environmental Assessment**" means an assessment including, without limitation: (i) an environmental site assessment conducted in accordance with the then-current standards of the American Society for Testing and Materials and meeting the requirements for satisfying the "all appropriate inquiries" requirements; and (ii) sampling and testing of the Premises based upon potential recognized environmental conditions or areas of concern or inquiry identified by the environmental site assessment.

5.5.2.2 **Costs of Environmental Assessments**. All costs and expenses incurred by Landlord in connection with any such Environmental Assessment initially shall be paid by Landlord; provided that if any such Environmental Assessment shows that Tenant has failed to comply with the provisions of this Section 5.5, then all of the costs and expenses of such Environmental Assessment shall be reimbursed by Tenant as Additional Rent within thirty (30) days after receipt of written demand therefor, together with documentation of such cost.

5.5.3 **Tenant's Obligations upon Surrender**. At the expiration or earlier termination of the Lease Term, Tenant, at Tenant's sole cost and expense, shall: (i) cause an Environmental Assessment of the Premises to be conducted in accordance with Section 15.3; (ii) cause all Hazardous Materials for which Tenant is responsible for under this Lease to be removed from the Premises and disposed of in accordance with all Environmental Laws and as necessary to allow the Premises to be used for any purpose in a manner consistent with Comparable Buildings (but for the sake of clarity, Tenant's return to Landlord of the Premises in the condition that existed prior to the Lease Commencement Date shall satisfy Tenant's obligation as to removal of Hazardous Materials from the Premises); and (iii) cause to be removed all containers installed or used by any Tenant Parties to store any Hazardous Materials on the Premises, and cause to be repaired any damage to the Premises caused by such removal.

5.5.4 **Clean-up**.

5.5.4.1 **Environmental Reports; Clean-Up**. If any written report, including any report containing results of any Environmental Assessment (an "**Environmental Report**") shall indicate (i) the presence of any Hazardous Materials as to which Tenant has a removal or remediation obligation under this Section 5.5, and (ii) that as a result of same, the investigation, characterization, monitoring, assessment, repair, closure, remediation, removal, or other clean-up (the "**Clean-up**") of any Hazardous Materials is required, Tenant shall immediately prepare and submit to Landlord within thirty (30) days after receipt of the Environmental Report a comprehensive plan, subject to Landlord's written approval (not to be unreasonably withheld), specifying the actions to be taken by Tenant to perform the Clean-up so that the Premises are restored to the conditions required by this Lease. Upon Landlord's approval of the Clean-up plan, Tenant shall, at Tenant's sole cost and expense, without limitation of any rights and remedies of Landlord under this Lease, immediately implement such plan with a consultant reasonably acceptable to Landlord and proceed to Clean-Up Hazardous Materials in accordance with all applicable laws and as required by such plan and this Lease. If, within thirty (30) days after receiving a copy of such Environmental Report, Tenant fails either (a) to complete such Clean-up, or (b) with respect to any Clean-up that cannot be completed within such 30-day period, fails to proceed with diligence to prepare the Clean-up plan and complete the Clean-up as promptly as practicable, then Landlord shall have the right, but not the obligation, and without waiving any other rights under this Lease, to carry out any Clean-up recommended by the Environmental Report or required by any governmental authority having jurisdiction over the Premises, and recover all of the costs and expenses thereof from Tenant as Additional Rent, payable within thirty (30) days after receipt of written demand therefor, together with documentation of such cost.

5.5.4.2 **No Rent Abatement**. Tenant shall continue to pay all Rent due or accruing under this Lease during any Clean-up, and shall not be entitled to any reduction, offset or deferral of any Base Rent or Additional Rent due or accruing under this Lease during any such Clean-up.

5.5.4.3 **Surrender of Premises**. Tenant shall complete any Clean-up required by this Section 5.5 prior to surrender of the Premises upon the expiration or earlier termination of this Lease and shall fully comply with all Environmental Laws and requirements of any governmental authority with respect to such completion, including, without limitation, fully comply with any requirement to file a risk assessment, mitigation plan or other information with any such governmental authority in conjunction with the Clean-up prior to such surrender. If applicable, Tenant shall obtain and deliver to Landlord a letter or other written determination from the overseeing governmental authority confirming that the Clean-up has been completed in accordance with all requirements of such

governmental authority and that no further response action of any kind is required for the unrestricted use of the Premises ("**Closure Letter**"), unless such governmental authority's standard practices at the relevant time do not provide for such Closure Letter. Upon the expiration or earlier termination of this Lease, Tenant shall also be obligated to close all permits obtained in connection with Hazardous Materials in accordance with Applicable Laws.

5.5.4.4 **Failure to Timely Clean-Up**. Should any Clean-up for which Tenant is responsible for under this Section 5.5 not be completed, or should Tenant not receive the Closure Letter (unless such governmental authority's standard practices at the relevant time do not provide for such Closure Letter) and any governmental approvals required under Environmental Laws in conjunction with such Clean-up prior to the expiration or earlier termination of this Lease, and Tenant's failure to receive the Closure Letter is prohibiting Landlord from leasing the Premises or any part thereof to a third party, or prevents the occupancy or use of the Premises or any part thereof by a third party, then Tenant shall be liable to Landlord as a holdover tenant (as more particularly provided in Article 16) until Tenant has fully complied with its obligations under this Section 5.5.

5.5.5 **Confidentiality**. Unless compelled to do so by applicable law, Tenant agrees that Tenant shall not disclose, discuss, disseminate or copy any information, data, findings, communications, conclusions and reports regarding the environmental condition of the Premises to any Person (other than Tenant's consultants, attorneys, property managers and employees that have a need to know such information), including any governmental authority, without the prior written consent of Landlord. In the event Tenant reasonably believes that disclosure is required by Applicable Laws, it shall provide Landlord ten (10) days' advance notice (or such shorter time as may be necessary due to applicable laws) of disclosure of confidential information so that Landlord may attempt to obtain a protective order. Tenant may additionally release such information to bona fide prospective purchasers, lenders, assignees or subtenants, subject to any such parties' written agreement to be bound by the terms of this Section 5.5.

5.5.6 **Copies of Environmental Reports**. Within thirty (30) days of receipt thereof, Tenant shall provide Landlord with a copy of any and all environmental assessments, audits, studies and reports regarding Tenant's activities with respect to the Premises, or ground water beneath the Land, or the environmental condition or Clean-up thereof that are in Tenant's possession or control. Tenant shall be obligated to provide Landlord with a copy of such materials without regard to whether such materials are generated by Tenant or prepared for Tenant, or how Tenant comes into possession of such materials, unless to do so would expose Tenant to a claim of breach of nondisclosure obligation or be a violation of applicable law.

5.5.7 **Signs, Response Plans, Etc**. Tenant shall be responsible for posting on the Premises any signs required under applicable Environmental Laws. Tenant shall also complete and file any business response plans or inventories required by any applicable Environmental Laws. Tenant shall concurrently file a copy of any such business response plan or inventory with Landlord.

5.5.8 **Survival**. Each covenant, agreement, representation, warranty and indemnification made by Tenant set forth in this Section 5.5 shall survive the expiration or earlier termination of this Lease and shall remain effective until all of Tenant's obligations under this Section 5.5 have been completely performed and satisfied.

5.6 **Premises Compliance with ADA**. Notwithstanding any other provision herein to the contrary, Tenant shall be responsible for all liabilities, costs and expenses arising out of or in connection with the compliance of the Premises with the Americans with Disabilities Act, 42 U.S.C. § 1210 I, et seq., and any state and local accessibility laws, codes, ordinances and rules (collectively, and together with regulations promulgated pursuant thereto, the "**ADA**"), and Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold Landlord and its affiliates, employees, agents and contractors; and any lender, mortgagee or beneficiary (each, a "**Lender**" and, collectively with Landlord its partners and subpartners, and their respective officers, members, directors, shareholders, agents, property managers, employees and independent contractors, the "**Landlord Indemnitees**") harmless from and against any demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses (including reasonable attorneys' fees, charges and disbursements) incurred in investigating or resisting the same (collectively, "**Claims**") arising out of any such failure of the Premises to comply with the ADA. Notwithstanding the foregoing or anything to the contrary in this Lease, Tenant's foregoing indemnity obligations shall not apply to any liability arising from noncompliance of the Premises with the ADA where such noncompliance existed prior to the date of the Existing Sublease. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

5.7 **Rules and Regulations, CC&Rs, Parking Facilities and Common Areas**.

5.7.1 Tenant shall have the non-exclusive right, in common with others, to use the Common Areas, subject to the Rules and Regulations. The manner in which the Common Areas are maintained and operated shall be at the sole discretion of Landlord (but such maintenance and operations must be consistent with Comparable Buildings) and the use thereof shall be subject to the Rules and Regulations, as Landlord may make from time to time, subject to Section 5.2.

5.7.2 This Lease is subject to any recorded covenants, conditions or restrictions on the Project or Property (the "**CC&Rs**"), as the same may be amended, amended and restated, supplemented or otherwise modified from time to time; provided that any such amendments, restatements, supplements or modifications do not materially modify Tenant's rights or obligations hereunder, or materially restrict or impair (other than for a reasonable, temporary period) Tenant's access to the Premises or parking facilities. Tenant shall comply with the CC&Rs.

5.7.3 Tenant shall have a non-exclusive, irrevocable license to use throughout the Lease Term the number of unreserved parking passes set forth in Section 11 of the Summary in at such locations in the parking facilities serving the Building as may be determined by Landlord from time to time in common with the other occupants of the Building, on an unreserved basis at no cost to Tenant. Tenant shall use only such parking facilities to park Tenant's vehicles. In no event shall Tenant park or store any items other than automotive vehicles at such parking facilities.

5.7.4 Tenant agrees not to unreasonably overburden the parking facilities and agrees to cooperate with Landlord and other tenants in the use of the parking facilities. Landlord reserves the right to determine that parking facilities are becoming overcrowded and to limit Tenant's use thereof in a non-discriminatory manner with respect to other tenants of the Project (and provided that Tenant still has the right to the number of unreserved parking passes set forth in Section 11 of the Summary). Landlord may reasonably allocate parking spaces among Tenant and other tenants of the Building or the Project and Tenant shall be entitled to use throughout the Lease Term the number of unreserved parking passes set forth in Section 11 of the Summary. Nothing in this Section, however, is intended to create an affirmative duty on Landlord's part to monitor parking.

5.7.5 Landlord reserves the right to modify the Common Areas, including the right to add or remove exterior and interior landscaping and to subdivide real property, in accordance with the terms and conditions of this Lease. Tenant acknowledges that Landlord specifically reserves the right to allow the exclusive use of corridors and restroom facilities located on specific floors to one or more tenants occupying such floors; provided, however, that Tenant shall not be deprived of the use of the corridors reasonably required to serve the Premises or of restroom facilities serving the floor upon which the Premises are located. Landlord reserves the right to close temporarily, make alterations or additions to, or change the location of elements of the Project and the Common Areas. Landlord agrees to use commercially reasonable efforts to mitigate interference with Tenant's use of and access to the Premises in connection with such closures, alterations or additions to the Common Areas.

5.8 **Storage Facilities**. [***].

6. SERVICES AND UTILITIES

6.1 **Standard Tenant Services**. Landlord shall provide the following services during the Lease Term.

6.1.1 **HVAC**. In accordance with the "**Base Building**" definition as provided in Section 1 of the Work Letter, the Building shall be equipped with a heating and air conditioning ("**HVAC**") system serving the Premises (the "**BB HVAC System**"). Subject to limitations imposed by all governmental rules, regulations and guidelines applicable thereto, Landlord shall provide BB HVAC System service during the "HVAC System Hours" (defined below). Landlord will operate the BB HVAC System for the benefit of the Premises the hours of 8:00 A.M. to 6:00 P.M. on Monday through Friday (the "**HVAC System Hours**"). Tenant shall cooperate fully with Landlord at all times and abide by all regulations and requirements that Landlord may reasonably prescribe for the proper functioning and protection of the BB HVAC System. If Tenant requires after-hours operation of the BB HVAC System ("**Excess Hours**") and Tenant gives Landlord at least twenty-four (24) hours advance notice on a business day, then Landlord shall supply such HVAC to Tenant at Landlord's actual cost (which shall be treated as Additional Rent, but not as an Operating Expense) on a zone-by-zone basis, including the cost of increased depreciation on the BB HVAC

System, but excluding the cost of electricity to the extent already paid for directly by Tenant, but including the electrical costs specified as follows; provided, however, if Tenant gives Landlord less than twenty-four (24) hours advance notice, Landlord will nevertheless endeavor to accommodate Tenant's request so long as such shorter notice is given on a business day. Landlord shall reasonably and equitably allocate the portion of the electrical costs of the BB HVAC System attributable to Tenant's use of the BB HVAC System for the Excess Hours to Tenant, and Tenant shall pay for the costs of such use along with the increased depreciation as set forth above, within thirty (30) days after demand, and as Additional Rent under this Lease (and not as part of the Operating Expenses) (the "**Extra HVAC Costs**"). Notwithstanding anything to the contrary contained in the foregoing, the HVAC Systems Hours shall not be applicable to the lab portions of the Premises (located on floors 10, 11 and 12); instead, Landlord shall operate the BB HVAC System as to the lab floors on a twenty-four (24) hours per day basis, and Tenant shall have the ability from within the Premises to access thermostats for controlling the temperature settings for the HVAC serving the lab floors of the Premises (it being understood that Tenant needs to operate the HVAC, and all other rooftop equipment exclusively serving the lab floors, outside of Building Hours and will run HVAC, and all other rooftop equipment exclusively serving the lab floors, 24 hours per day), and Tenant shall be liable for the Extra HVAC Costs.

6.1.2 **Electricity**. Landlord shall provide electrical wiring and facilities for connection to Tenant's lighting and Tenant's incidental use equipment as described in **Schedule 2 to Exhibit B**. Tenant shall not use combined electrical load for Tenant's incidental use equipment and Tenant's lighting fixtures in excess of its pro rata share of the capacity of the feeders, which electrical usage shall be subject to Applicable Laws, including Title 24. Tenant shall bear the cost of replacement of lamps, starters and ballasts for non-Building standard lighting fixtures within the Premises (Landlord, as part of Operating Expenses, will replace Building-standard lamps, starters and ballasts). Tenant shall reasonably cooperate with Landlord at all times and abide by all regulations and requirements that Landlord may reasonably prescribe for the proper functioning and protection of the Building Systems. All electricity usage at the Project shall be monitored using separate submeters (the "**Submetering Equipment**") which shall be (i) installed by Landlord or any tenant, for other tenant space in the Project, (ii) installed by Tenant for the Premises (not including the "Building Systems", as that term is defined in Article 7 of this Lease), and (iii) installed by Landlord for the Common Areas and Building Systems. Tenant shall have no obligation to pay for any costs of electricity (including as part of Operating Expenses) shown on the Submetering Equipment described in item (i) above. Tenant shall be responsible to pay directly, and not as a part of Operating Expenses, for the cost of all electricity shown on the Submetering Equipment described in item (ii) above. The cost of all electricity shown on the Submetering Equipment described in item (iii) above (except to the extent included in the Extra HVAC Costs) shall be included in Operating Expenses. Tenant may audit Landlord's readings of the Submetering Equipment and Landlord shall deliver reasonably detailed invoices to Tenant reflecting Landlord's reading of the Submetering Equipment and resulting electricity costs.

6.1.3 **Water and Sewer**. Landlord shall cause water and sewer to be supplied to the regular Building outlets for drinking, lavatory and toilet purposes within the Building and for laboratory purposes within the Premises (to the extent consistent with usage volumes for life science tenants within Comparable Buildings). Landlord shall reasonably and equitably allocate the portion of such utilities attributable to Tenant's direct use to Tenant, and Tenant shall pay for the costs of such direct use, within thirty (30) days after demand and as Additional Rent under this Lease (and not as part of the Operating Expenses), and other water and sewer costs shall be reasonably and equitably included as part of Operating Expenses, to the extent permitted by the terms of Section 4.2.4 above or charged directly to other tenants of the Project. If Landlord determines that Tenant may be using an amount of water in excess of its pro rata share, Landlord reserves the right to install submetering equipment, at Tenant's expense, to monitor Tenant's usage and bill Tenant for such usage. Landlord shall designate the utility providers from time to time.

6.1.4 **Gas**. Landlord shall cause gas to be supplied to the Project, and Tenant shall be entitled to its pro rata share of gas supplied to the Project. The portion of the gas used in connection with the Retail Space shall be separately submetered and paid for directly by such retail tenants. The cost of all other gas supplied to the Project shall be included in Operating Expenses. Landlord's approval shall be required if Tenant desires gas service within the Premises. If Landlord approves such request, the cost of installing any equipment and lines necessary for such service shall be at Tenant's sole cost and expense, including, without limitation, the cost of installing and maintaining submeters to monitor such gas usage within the Premises. Landlord will invoice Tenant periodically for such direct gas use as shown on such submeters (as a direct expense and not part of Operating Expenses) and Tenant shall be paid by it within fifteen (15) days following Landlord's delivery of any such invoice to Tenant.

6.1.5 **Janitorial**. Landlord shall provide janitorial services for the Common Areas and exterior window washing services, in a manner consistent with the Comparable Buildings; but Landlord shall not provide janitorial services for the Premises. Tenant shall perform all janitorial services and other cleaning within the Premises in a manner consistent with the standards of other first-class, institutionally owned office/life science buildings in the City of San Francisco ("City") using a janitorial contract approved by Landlord, which approval shall not be unreasonably withheld, conditioned or delayed (provided, however, Landlord hereby preapproves AC Janitorial Service and CW Maintenance as janitorial contractors that may be retained by Tenant). Without Landlord's prior consent, Tenant shall not use (and upon notice from Landlord shall cease using) janitorial service providers who would, in Landlord's reasonable and good faith judgment, disturb labor harmony with the workforce or trades engaged in performing other work, labor or services in or about the Buildings or the Common Areas.

6.1.6 **Elevator**. Landlord shall provide non-attended automatic passenger elevator service during the building hours reasonably designated by Landlord (the "**Building Hours**") and shall have one (1) elevator available serving each Building at all other times.

6.1.7 **Loading Dock**. Landlord shall provide use of the loading dock in the North Tower for deliveries to Tenant, provided that (i) Tenant shall schedule its use of such loading dock with Landlord at least 24 hours in advance (provided, however, in the event that Tenant has not given such advance notice, Tenant's use of the loading dock shall be subject to the prior use thereof by users who have scheduled such use in advance), and (ii) use of the loading dock is limited to between 6:00 AM and 5:00 PM Monday through Friday ("**Loading Dock Hours**"), such hours subject to change upon written notice from Landlord; provided, however, if Tenant requests access to the loading dock outside of the Loading Dock Hours, Tenant shall pay Landlord an after-hours charge of $50 per visit for Landlord to engage its security personnel in connection with such loading dock access (such after-hours charge subject to adjustment by Landlord from time to time). The Loading Dock Hours shall not apply to Tenant's initial move-in to the Premises and the loading dock shall be made available for Tenant's initial move-in without charge; provided, that Tenant shall reasonably coordinate such initial move-in with Landlord.

6.1.8 **Risers, Raceways, Shafts, Conduits**. Subject to Landlord's reasonable rules, regulations, and restrictions and the terms of this Lease, Landlord shall permit Tenant, at no additional charge to Tenant, to utilize the Building's risers, raceways, shafts and conduit, provided that there is available space in the Building's risers, raceways, shafts and/or conduit for Landlord's reasonable use and reasonable use by the other tenants of the Project, which availability shall be determined by Landlord in Landlord's sole discretion. Landlord shall have the right to re- route the planned location of Tenant's cabling in such risers, raceways, shafts and conduit, as determined by Landlord in its reasonable discretion.

6.1.9 **Access Control**. The Building and Parking Facilities have an access-control system, including, without limitation, door access controls, lobby turnstiles and elevator access controls; provided however, the parties acknowledge that the North Lobby is open to the public, and access will not be restricted during general business hours. Landlord shall not be obligated to provide any other security equipment. Notwithstanding any provision to the contrary set forth in this Lease, in no case, shall Landlord be liable for personal injury or property damage for any lack of security in the Building or for any error with regard to the admission to or exclusion from the Buildings or Project of any person.

6.1.10 **Security Personnel**. Landlord shall provide on-site security services, including security personnel in the North Lobby and the Parking Facilities, consistent with the services provided by landlords at Comparable Buildings (the "**Security Personnel**"), the costs of which shall be included in Direct Expenses. In addition, (a) the Security Personnel shall be licensed and bonded and shall at all times maintain any and all required licenses or other governmental permits required in connection with any weapons carried by Security Personnel and/or the performance of its duties under this Lease and shall at all times conduct themselves in a manner consistent with a first class office and life sciences building project, (b) a commercially reasonable background check shall be performed on all Security Personnel, and (c) all of the Security Personnel shall be union labor and comply with the Mission Bay Requirements and the Underlying Documents.

6.1.11 **Tenant's Security System**. Landlord hereby agrees that Tenant shall have the right to install a card key security system ("**Tenant's Security System**") in the Premises and Stairwells on the floors of the Premises and to connect such system to Landlord's access-control system for the Project; provided that Tenant shall work with Landlord to connect Landlord's existing access card keys for the Project to Tenant's Security System, or, if such

connection is not possible, shall provide Landlord with a reasonable number of card keys for Landlord's access to the Buildings and/or the Premises pursuant to the terms of this Lease. Tenant's Security System shall by subject to Landlord's prior review and approval (not to be unreasonably withheld), and the installation thereof shall be deemed an Alteration and shall be performed pursuant to Article 8 of this Lease, below or shall be installed as an Improvement pursuant to the Work Letter. In addition, Tenant shall coordinate the selection, installation and operation of Tenant's Security System with Landlord in order to ensure that Tenant's Security System is compatible with the Building Systems and permits Landlord to identify any persons entering and exiting any Buildings, and Tenant shall not be entitled to install and/or operate the Tenant's Security System if Tenant's Security System does not comply with the foregoing. Tenant shall be solely responsible, at Tenant's sole cost and expense, for the installation, monitoring, operation and removal of Tenant's Security System.

6.1.12 **Access**. Subject to Applicable Laws and the other provisions of this Lease, and except in the event of an emergency, Tenant shall have access to the above utilities and the Buildings, the Premises and the Common Areas, other than common areas requiring access with a Building engineer, the Parking Facilities and freight elevator, if any, twenty-four (24) hours per day, seven (7) days per week, every day of the year; provided, however, that Tenant shall pay Landlord's reasonable out-of-pocket costs that are incurred if Tenant uses the loading dock, mailroom and other limited-access areas of the Buildings during other than normal Building Hours.

6.1.13 **Emergency Generator**. The Base Building has one (1) non-exclusive emergency generator serving the North Complex, the Tenant's pro rata share of which shall be available, on a non-exclusive basis, for connection to Tenant's standby equipment and systems (each, a "**Generator**"). All connections (cables, cable trays, etc.) (the "**Generator Facilities**") from such Generator to the Premises shall be located in areas approved by Landlord, in its sole discretion, and shall comply with Applicable Laws. Commencing on the date that Tenant first connects the Generator Facilities to a Generator, as reasonably determined by Landlord, Tenant shall reimburse Landlord within thirty (30) days of request, as Additional Rent, Tenant's pro rata share (based on Tenant's use of such Generator and use of such Generator by other parties, as reasonably determined by Landlord based on the respective connections to such Generator (not the respective rentable square footage of any space leased in the Project by such users)), of all costs and expenses incurred by Landlord as a result of or in connection with operation, use, repairs, and maintenance of such Generator, including costs for fuel, and depreciation (as reasonably determined by Landlord). Tenant acknowledges that Landlord shall not be liable for any damage that may occur with respect to a Generator.

6.1.14 **Mailroom**. Tenant shall have no access rights to any of the other tenant's mailrooms located in the Complex. Tenant shall have reasonable access rights to the USPS mailroom serving the entire Complex. Tenant shall be solely responsible for collecting deliveries from the loading dock in the North Tower (such loading dock access shall be subject to Section 6.1.7 above).

6.2 **Interruption of Use**. Tenant agrees that Landlord shall not be liable for damages, by abatement of Rent or otherwise (except as specifically set forth in this Section 6.2 below), for failure to furnish or delay in furnishing any service (including telephone and telecommunication services and Generator service), or for any diminution in the quality or quantity thereof, when such failure or delay or diminution is occasioned, in whole or in part, by breakage, repairs, replacements, or improvements, by any strike, lockout or other labor trouble, by inability to secure electricity, gas, water, or other fuel at the Buildings or Project after reasonable effort to do so, by any riot or other dangerous condition, emergency, accident or casualty whatsoever (other than the gross negligence or willful misconduct of Landlord, its employees or agents), by act or default of Tenant or other parties, or by any other cause; and such failures or delays or diminution shall, except if caused by the gross negligence or willful misconduct of Landlord, its employees or agents, never be deemed to constitute an eviction or disturbance of Tenant's use and possession of the Premises or relieve Tenant from paying Rent (except as specifically set forth in this Section 6.2 of this Lease) or performing any of its obligations under this Lease. Notwithstanding anything to the contrary contained in the foregoing, in the event that there shall be an interruption, curtailment or suspension of any service required to be provided by Landlord pursuant to Section 6.1 (and no reasonably equivalent alternative service or supply is provided by Landlord) that shall materially interfere with Tenant's use and enjoyment of a material portion of the Premises, and Tenant actually ceases to use the affected portion of the Premises (any such event, a "**Service Interruption**"), and if (i) such Service Interruption shall continue for six (6) consecutive business days following receipt by Landlord of written notice from Tenant describing such Service Interruption (the "**Service Interruption Notice**"), and (ii) such Service Interruption shall not have been caused, in whole or in part, by reasons beyond Landlord's reasonable control or by an act or omission in violation of this Lease by any Tenant Party or by any negligence of Tenant any Tenant

Parties, (a Service Interruption that satisfies the foregoing conditions being referred to hereinafter as a "**Material Service Interruption**") then, as liquidated damages and Tenant's sole remedy at law or equity, Tenant shall be entitled to an equitable abatement of Base Rent and Tenant's Share of Direct Expenses, based on the nature and duration of the Material Service Interruption, the area of the Premises affected, and the then current Rent amounts, for the period that shall begin on the commencement of such Material Service Interruption and that shall end on the day such Material Service Interruption shall cease. To the extent a Material Service Interruption is caused by an event covered by Articles 11 or 13 of this Lease, then Tenant's right to abate rent shall be governed by the terms of such Article 11 or 13, as applicable, and the provisions of this paragraph shall not apply.

6.3 **Use of Shafts and Utility Connections**. Landlord shall have reasonable access, and shall be entitled to allow other tenants of the Buildings, if any, reasonable access, through existing Building shafts to other portions of the Buildings (including the roof, mechanical floors and tenant spaces (including the Premises)), or to utility connections outside the Buildings, for the installation, repair, and maintenance of ducts, pipes, connections, and equipment for cables, conduits, transmitters, receivers, and other office, computer, communications and word and data processing equipment and facilities, including any technological devices not yet developed, whether similar or dissimilar to the foregoing, which may hereafter become necessary or desirable for any permitted use of the Project; provided, however, that to the extent such shafts or utility connections are located within the Premises, such access shall not materially and unreasonably interfere with Tenant's occupancy of the Premises (Landlord's efforts in such regard will include, where reasonably possible, limiting the performance of any such work which might be disruptive to weekends or the evening and the cleaning of any work area prior to the commencement of the next business day). To the extent that Landlord installs, maintains, uses, repairs or replaces pipes, cables, ductwork, conduits, utility lines, and/or wires through hung ceiling space, exterior perimeter walls and column space, adjacent to and in demising partitions and columns, in or beneath the floor slab or above, below, or through the Premises, then in the course of making any such installation or repair: (x) Landlord shall not reduce Tenant's usable space, except to a de minimus extent, if the same are not installed behind existing walls or ceilings; (y) Landlord shall box in any of the same installed adjacent to existing walls with construction materials substantially similar to those existing in the affected area(s) of the Premises; and (z) Landlord shall repair all damage caused by the same and restore such area(s) of the Premises to substantially the condition existing immediately prior to such work. The terms of this Section 6.3 shall be subject to the terms of Section 29.32 below.

6.4 **Supplemental HVAC**. Subject to Landlord's prior consent, which consent shall not be unreasonably withheld, conditioned or delayed, Tenant shall have the right to install a supplemental HVAC equipment serving all or any portion of the Premises ("**Supplemental HVAC Equipment**"). Any Supplemental HVAC Equipment shall be installed pursuant to the terms of Article 8 or the Work Letter, if installed as part of the initial Improvements, and shall be deemed an Alteration (or Improvement, as applicable) for purposes of this Lease; provided, however, it shall be deemed reasonable for Landlord to withhold its approval to the extent any such installation would void the warranties of any Building systems or equipment, interfere with other tenant's systems or equipment, or materially interfere with, or materially increase the cost of, Landlord's maintenance or operation of the Project, unless Tenant agrees to pay for such increased costs, or if any such installation would violate Applicable Laws or the Mission Bay Requirements or the Underlying Documents (as that term is defined in Section 24.4 below). Tenant shall bear all costs of the equipment, and all costs of installation and removal thereof.

7. REPAIRS

7.1 **Landlord's Repair Obligations**. Landlord shall at all times during the Lease Term maintain in good condition and operating order and in a manner reasonably commensurate with the maintenance standards of owners of Comparable Buildings, the structural portions of the Buildings, including, without limitation, the foundation, exterior walls, the structural portions of the floors (including the floor slabs), ceilings, roof, columns, beams, shafts, stairs, stairwells, escalators, elevators, base building restrooms and all Common Areas (collectively, the "**Building Structure**"), and the Base Building mechanical, electrical, life safety, plumbing, sprinkler, security and HVAC systems installed or furnished by Landlord (collectively, the "**Building Systems**"); provided, however, if any repairs to the foregoing are required due to the negligence or willful misconduct of Tenant, Landlord shall nevertheless make such repairs at Tenant's expense, or, if covered by Landlord's insurance, Tenant shall only be obligated to pay any deductible in connection therewith. In addition, Landlord shall use commercially reasonable efforts, at all times during the Lease Term, to cause the Building Systems to perform in accordance with the design specifications for such equipment. Except as specifically set forth in this Lease to the contrary, Tenant shall not be required to repair the

Building Structure and/or the Building Systems, except to the extent required because of Tenant's use of the Premises for other than the Permitted Use; provided, however, that Landlord shall nevertheless make such repairs at Tenant's expense, or, if covered by Landlord's insurance, Tenant shall only be obligated to pay any deductible in connection therewith.

7.2 **Tenant's Repair Obligations**. Tenant shall, at Tenant's own expense, keep the Premises, including all improvements, fixtures, furnishings, and systems and equipment within the Premises, and any of Tenant's improvements, property or equipment located outside of the Premises if permitted by Landlord in its sole discretion (such items located outside of the Premises, if any, are, collectively, "**Tenant's Off-Premises Equipment**"), in good order, repair and condition at all times during the Lease Term. In addition, Tenant shall, at Tenant's own expense, [but under the reasonable supervision and subject to the prior reasonable approval of Landlord to the extent (i) the cost of such repairs are reasonably expected to exceed $25,000.00, (ii) such repairs will affect the Building Structure, Building Systems or equipment, or (iii) such repairs may disturb any other tenants or occupants of the Building], and within any reasonable period of time specified by Landlord, promptly and adequately repair all damage to the Premises and replace or repair all damaged, broken, or worn fixtures and appurtenances, except for damage caused by ordinary wear and tear and casualty; provided however, that if Tenant fails to make such repairs within applicable notice and cure periods, Landlord may, but need not, make such repairs and replacements, and Tenant shall pay Landlord the cost thereof, including a percentage of the cost thereof sufficient to reimburse Landlord for all overhead, general conditions and other costs or expenses arising from Landlord's involvement with such repairs and replacements plus a management fee of [***] of such cost within twenty (20) days after being billed for same. Without limitation, Tenant shall be responsible for electrical, plumbing, heating, ventilating and air-conditioning systems and other utility services either located within the Premises or serving solely the Premises and located outside of the Premises from the Building connection point to the Premises (but only to the extent serving Tenant exclusively) (e.g., any Supplemental HVAC Equipment), and Tenant shall secure, pay for, and keep in force contracts with appropriate and reputable service companies reasonably approved by Landlord providing for the regular maintenance of such systems. Subject to the terms of Article 27 below, Landlord may, but shall not be required to, enter the Premises at all reasonable times and upon reasonable prior notice to make such repairs, alterations, improvements or additions to the Premises or to the Project or to any equipment located in the Premises as Landlord shall desire or deem necessary or as Landlord may be required to do by governmental or quasi-governmental authority or court order or decree. Tenant hereby waives and releases its right to make repairs at Landlord's expense under Sections 1941 and 1942 of the California Civil Code or under any similar law, statute or ordinance now or hereafter in effect. Tenant's obligation hereunder shall include maintenance and repair of all telecommunications wire and cabling with the Building's network cabling exclusively serving the Premises.

7.3 **Tenant/Landlord Maintenance Responsibility Matrix**. To clarify the respective obligations of Tenant and Landlord with respect to maintenance and repair under this Lease, the matrix attached hereto as **Exhibit 7.3** sets forth the respective obligations of Tenant and Landlord with respect to the mechanical systems of the Building and other Building Systems and Tenant installed systems identified therein.

8. ADDITIONS AND ALTERATIONS

8.1 **Landlord's Consent to Alterations**. Tenant may not make any improvements, alterations, additions or changes to the Premises or any mechanical, plumbing, HVAC facilities or other utility or Building systems pertaining to the Premises (collectively, the "**Alterations**") without first procuring the prior written consent of Landlord to such Alterations, which consent shall be requested by Tenant not less than twenty (20) business days prior to the commencement thereof. Landlord shall not unreasonably withhold or delay its consent to any proposed nonstructural Alterations, provided that such Alterations (1) are not visible from the outside of the Building, (2) do not affect the use of or require access to any part of the Building other than the Premises, (3) do not do not violate any certificate of occupancy for the Building or any other permits or licenses relating to the Project, (4) do not adversely affect any service required to be furnished to Tenant or to any other tenant or occupant of the Building, (5) do not affect any Building systems or Common Areas, (6) do not reduce the value or utility of the Building, (7) do not consist of painting the underside or top of the structure slab, and (8) otherwise comply with the Rules and Regulations and this Article 8. Notwithstanding the foregoing, Tenant shall be permitted to make Alterations following ten (10) business days' notice to Landlord, but without Landlord's prior consent, to the extent that such Alterations (i) are purely cosmetic in nature (such as painting, carpeting and the like), (ii) do not affect the Building Structure, Building systems or equipment, (iii) don not require a building or construction permit, (iv) are not visible from the exterior of the Building, (v) do not consist of painting the underside or top of the structure slab, and (vi) cost less than $175,000.00 for a particular job of

work. For the sake of clarity, the construction of the initial improvements to the Premises shall be governed by the terms of the Tenant Work Letter and not the terms of this Article 8

Prior to commencing any Alterations affecting air distribution or disbursement from MEP or other systems serving Tenant or the Building, including without limitation the installation of Tenant's exhaust systems, Tenant shall provide Landlord with a third party report from a consultant, and in a form reasonably acceptable to Landlord, showing that such work will not adversely affect the ventilation systems or air quality of the Building (or of any other tenant in the Building) and shall, upon completion of such work, provide Landlord with a certification reasonably satisfactory to Landlord from such consultant confirming that no such adverse effects have resulted from such work.

8.2 **Manner of Construction**. Landlord may impose, as a condition of its consent to any and all Alterations or repairs of the Premises or about the Premises, such requirements as Landlord in its reasonable discretion may deem desirable, including, but not limited to, the requirement that Tenant utilize for such purposes only contractors, subcontractors, materials, mechanics and materialmen selected by Tenant and approved by Landlord (which approval shall not be unreasonably withheld, conditioned or delayed) and the requirement that upon Landlord's request at the time Landlord approves said Alterations (subject to the terms of Section 8.5 below), Tenant shall, at Tenant's expense, remove such Alterations upon the expiration or any early termination of the Lease Term. Tenant shall construct such Alterations and perform such repairs in a good and workmanlike manner, in conformance with any and all Applicable Laws and, where required by Applicable Law, pursuant to a valid building permit, issued by the City, all in conformance with Landlord's construction rules and regulations. In the event Tenant performs any Alterations in the Premises which require or give rise to governmentally required changes to the "**Base Building**," as that term is defined below, then Landlord shall, at Tenant's expense, make such changes to the Base Building. The "**Base Building**" shall mean the Building Structure, the Building Systems, including the Building Systems on the floor or floors on which the Premises is located as well as the Common Areas. In performing the work of any such Alterations, Tenant shall have the work performed in such manner so as not to obstruct access to the Project or any portion thereof, by any other tenant of the Project, and so as not to obstruct the business of Landlord or other tenants in the Project. Tenant shall not use (and upon notice from Landlord shall cease using) contractors, services, workmen, labor, materials or equipment that, in Landlord's reasonable judgment, would disturb labor harmony with the workforce or trades engaged in performing other work, labor or services in or about the Building or the Common Areas. Upon completion of any Alterations (or repairs), Tenant agrees to cause a Notice of Completion to be recorded in the office of the Recorder of the County in which the Project is located in accordance with Section 8182 of the Civil Code of the State of California or any successor statute, and shall deliver to Landlord final lien waivers from all contractors, subcontractors, design professionals, service providers, suppliers and materialmen who performed such work and whose labor, supplies or services give rise to a lien under California law. In addition to Tenant's obligations under Article 9 of this Lease, upon completion of any Alterations, Tenant shall deliver to the Project management office a reproducible copy of the "**as built**" drawings of the Alterations in CAD format as well as copies of all permits, approvals and other documents issued by any governmental agency in connection with the Alterations, if applicable.

8.3 **Payment for Improvements**. If Tenant orders any work directly from Landlord, Tenant shall pay to Landlord a percentage of the cost thereof sufficient to reimburse Landlord for all overhead, general conditions and other costs or expenses arising from Landlord's involvement with such repairs and replacements plus a management fee of [***] of such cost. If Tenant does not order any work directly from Landlord, Tenant shall reimburse Landlord for Landlord's reasonable, actual, out-of-pocket costs and expenses actually incurred in connection with Landlord's review of any proposed Alterations. If payment is made directly to contractors, Tenant shall, at Tenant's cost, comply with Landlord's requirements for final lien releases and waivers in connection with Tenant's payment for work to contractors. For purposes of determining the cost of an Alteration, work done in phases or stages shall be considered part of the same Alteration, and any Alteration shall be deemed to include all trades and materials involved in accomplishing a particular result.

(i) **Construction Insurance**. In addition to the requirements of Article 10 of this Lease, in the event that Tenant makes any Alterations, prior to the commencement of such Alterations, Tenant shall provide Landlord with evidence that Tenant or Tenant's general contractor carries "**Builder's All Risk**" insurance in an amount approved by Landlord covering the construction of such Alterations, and such other insurance as Landlord may reasonably require, it being understood and agreed that all of such Alterations shall be insured by Tenant pursuant to Article 10 of this Lease immediately upon completion thereof. In connection with any Alterations, Tenant shall cause any architect and engineer to carry professional liability insurance with limits of not less than $2,000,000 per claim and in the annual aggregate covering professional services performed by the respective party, and such coverage

must be maintained for the greatest period under which a claim may be properly asserted under the applicable statute of limitations or repose. In addition, Tenant's contractors and subcontractors shall be required to carry Commercial General Liability Insurance in an amount approved by Landlord and otherwise in accordance with the requirements of Article 10 of this Lease and such general liability insurance shall name the Landlord Parties (as defined below) as additional insureds. Landlord may, in its discretion, require Tenant to obtain and record a statutory form of lien bond, or obtain performance and payment bonds, or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien-free completion of such Alterations and naming Landlord as a co-obligee, in each case in form and substance reasonably satisfactory to Landlord (to the extent that the cost of the work shall exceed $100,000). In addition, Tenant's contractors and subcontractors shall be required to carry workers compensation insurance with a waiver of subrogation in favor of Landlord Parties.

8.4 **Landlord's Property**. All Alterations, improvements, fixtures, equipment and/or appurtenances which may be installed or placed in or about the Premises, from time to time, shall be at the sole cost of Tenant and shall be and become the property of Landlord [other than Tenant's trade fixtures and moveable equipment paid for solely by Tenant and capable of being removed without damage to the Premises (or, if damage is likely to occur, that Tenant will be able to repair and fully restore] and remain in place at the Premises following the expiration or earlier termination of this Lease. Notwithstanding the foregoing to the contrary, if requested by Tenant when procuring Landlord's consent to any Alterations in accordance with Section 8.1 above, Landlord will, by written notice to Tenant give Tenant notice as to whether Landlord will (or reserves the right to) require Tenant, at Tenant's expense, to remove any Alterations and/or improvements and/or systems within the Premises (excluding the Tenant Improvements) and to repair any damage to the Premises and Building caused by such removal and return the affected portion of the Premises to a building standard tenant improved condition as determined by Landlord. If Tenant fails to complete any such removal and/or to repair any damage caused by the removal of any Alterations and/or systems and equipment in the Premises and return the affected portion of the Premises to a building standard tenant improved condition as reasonably determined by Landlord, Landlord may do so and may charge the actual and reasonable cost thereof to Tenant. Tenant hereby protects, defends, indemnifies and holds Landlord harmless from any liability, cost, obligation, expense or claim of lien in any manner relating to the installation, placement, removal or financing of any such Alterations, improvements, fixtures and/or equipment in, on or about the Premises (except to the extent resulting from the gross negligence or willful misconduct of Landlord or any of the Landlord Parties), which obligations of Tenant shall survive the expiration or earlier termination of this Lease. Notwithstanding anything to the contrary in this Lease, Tenant shall not be required to remove any of the Tenant Improvements upon the expiration or earlier termination of this Lease.

9. COVENANT AGAINST LIENS

Tenant shall keep the Project, the Building and Premises free from any liens or encumbrances arising out of the work performed, materials or services furnished or obligations incurred by or on behalf of Tenant (which expressly excludes the Landlord Work), and shall protect, defend, indemnify and hold Landlord harmless from and against any claims, liabilities, judgments or costs (including, without limitation, reasonable attorneys' fees and costs) arising out of same or in connection therewith. Tenant shall give Landlord notice at least fifteen (15) days prior to the commencement of any work, services or obligations related to the Premises giving rise to any such liens or encumbrances (or such additional time as may be necessary under Applicable Laws) to afford Landlord the opportunity of posting and recording appropriate notices of non-responsibility (to the extent applicable pursuant to then Applicable Laws). Tenant shall remove any such lien or encumbrance by statutory lien bond or otherwise within ten (10) business days after written notice by Landlord, and if Tenant shall fail to do so, Landlord may pay the amount necessary to remove such lien or encumbrance, without being responsible for investigating the validity thereof. The amount so paid all be deemed Additional Rent under this Lease payable within thirty (30) days after demand, without limitation as to other remedies available to Landlord under this Lease. Nothing contained in this Lease shall authorize Tenant to do any act which shall subject Landlord's title to the Project, Buildings or Premises to any liens or encumbrances whether claimed by operation of law or express or implied contract.

10. INSURANCE

10.1 **Indemnification and Waiver**. Except to the extent arising from the negligence or willful misconduct of Landlord or any Landlord Parties (defined below) but subject to this Section 10.1, to the maximum extent permitted pursuant to Applicable Laws, Tenant hereby assumes all risk of damage to property or injury to persons in, upon or about the Premises, the Bicycle Storage Area and any of Tenant's Off-Premises Equipment from any cause whatsoever

(including, but not limited to, any personal injuries resulting from a slip and fall in, upon or about the Premises) and agrees that, to the extent permitted pursuant to Applicable Laws, Landlord, its lenders, partners, subpartners and their respective officers, agents, servants, employees, and independent contractors (collectively, "**Landlord Parties**") shall not be liable for, and are hereby released from any responsibility for, any damage either to person or property or resulting from the loss of use thereof, which damage is sustained by Tenant or by other persons claiming through Tenant, except to the extent resulting from the gross negligence or willful misconduct of Landlord or any of the Landlord Parties. Tenant shall indemnify, defend, protect, and hold harmless the Landlord Parties from any and all loss, cost, damage, injury, expense and liability (including without limitation court costs and reasonable attorneys' fees) during the Lease Term, or any period of Tenant's occupancy of the Premises prior to the commencement or after the expiration of the Lease Term, incurred in connection with or arising from (i) any cause in, on or about the Premises, the Bicycle Storage Area or Tenant's Off-Premises Equipment (including, but not limited to, a slip and fall), provided that the terms of the foregoing indemnity shall not apply to the extent of any gross negligence or willful misconduct of Landlord or any of the Landlord Parties, (ii) any negligent acts or omissions of Tenant or of any person claiming by, through or under Tenant, or of the contractors, agents, servants, employees, invitees, guests or licensees of Tenant or any such person, in, on or about the Project (including without limitation on account of Tenant's use of the Bicycle Storage Area and any of Tenant's Off-Premises Equipment/Special Systems), or (iii) any breach of the terms of this Lease by Tenant, either prior to, during, or after the expiration of the Lease Term. Should Landlord be named as a defendant in any suit brought against Tenant for which Tenant's indemnity obligation is applicable, Tenant shall pay to Landlord its reasonable and actual out-of-pocket costs and expenses incurred in such suit, including without limitation, its actual professional fees such as appraisers', accountants' and attorneys' fees. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease. Subject to this Section 10.1, Landlord hereby indemnifies and agrees to defend, save and hold Tenant and its partners, subpartners and their respective officers, agents, servants, employees, and independent contractors harmless from and against any and all claims for injury or death to persons or damage to property to the extent resulting from the negligent acts or omissions of Landlord or any Landlord Parties. Should Tenant be named as a defendant in any suit brought against Landlord for which Landlord's indemnity obligation is applicable, Landlord shall pay to Tenant its reasonable and actual out-of-pocket costs and expenses incurred in such suit, including without limitation, its actual professional fees such as appraisers', accountants' and attorneys' fees. Notwithstanding anything to the contrary set forth in this Lease, either party's agreement to indemnify the other party as set forth in this Section 10.1 shall be ineffective to the extent the matters for which the indemnitor agreed to indemnify the indemnitee are covered by insurance required to be carried by the indemnitee pursuant to this Lease (or would have been covered had the indemnitee carried the insurance required). Further, Tenant's agreement to indemnify Landlord and Landlord's agreement to indemnify Tenant pursuant to this Section 10.1 are not intended to and shall not relieve any insurance carrier of its obligations under policies required to be carried pursuant to the provisions of this Lease, to the extent such policies cover, or if carried, would have covered the matters, subject to the parties' respective indemnification obligations; nor shall they supersede any inconsistent agreement of the parties set forth in any other provision of this Lease. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease with respect to any claims or liability arising in connection with any event occurring prior to such expiration or termination.

10.2 **Tenant's Compliance With Landlord's Property Insurance**. Tenant shall, at Tenant's expense, comply with all insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises for any purpose other than the Permitted Use causes any increase in the premium for such insurance policies then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body.

10.3 **Tenant's Insurance**. Tenant shall maintain the following coverages in the following amounts:

10.3.1 Commercial General Liability Insurance on an ISO CG 00 01 occurrence form covering the insured against claims of bodily injury, personal and advertising injury and property damage (including loss of use thereof) arising out of Tenant's operations, products/completed operations, and contractual liability including a Broad Form endorsement covering the insuring provisions of this Lease and the performance by Tenant of the indemnity agreements set forth in Section 10.1 of this Lease (including products and completed operations coverage) for limits of liability of not less than those set forth below, which may be accomplished by any combination of primary and excess layers, provided the umbrella sits excess to the underlying commercial generally liability, automobile liability, and employer's liability insurance. Such insurance shall be written on an "occurrence" basis. Landlord and any other

party the Landlord so specifies that has a material financial interest in the Project, including Landlord's managing agent, ground lessor and/or lender, if any, shall be named as additional insureds as their interests may appear using Insurance Service Organization's form CG2011 or a comparable form approved by Landlord. The coverage shall also be extended to include damage caused by heat, smoke or fumes from a hostile fire. The policy shall not contain any intra-insured exclusions as between insured persons or organizations. Limits of liability insurance shall not be less than the following (provided, however, such limits may be achieved through the use of an umbrella/excess policy):

Bodily Injury and Property Damage Liability	$11,000,000 each occurrence $11,000,000 annual aggregate
Personal Injury and Advertising Liability	$11,000,000 each occurrence $11,000,000 annual aggregate 0% Insured's participation
Tenant Legal Liability/Damage to Rented Premises Liability	$10,000,000

10.3.2 Property Insurance covering (i) all office furniture, business and trade fixtures, office equipment, free-standing cabinet work, movable partitions, merchandise and all other items of Tenant's property on the Premises installed by, for, or at the expense of Tenant, and (ii) the Tenant Improvements described in **Exhibit 1.1.1-2** and any other tenant improvements that exist in the Premises (excluding the Base Building) as of the Lease Commencement Date (the "**Original Improvements**"). Such insurance shall be written on a Special Form basis, for the full replacement cost value (subject to reasonable deductible amounts) new, without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include coverage for (a) all perils included in the CP 10 30 04 02 Coverage Special Form, (b) water damage from any cause whatsoever, including, but not limited to, sprinkler leakage, bursting, leaking or stoppage of any pipes, explosion, and backup or overflow from sewers or drains, (c) terrorism (to the extent such terrorism insurance is available as a result of the Terrorism Risk Insurance Act of 2002 (Pub. L. 107-297, 116 Stat. 2322), the Terrorism Risk Insurance Program Reauthorization Act of 2005 (Pub. l. 109-144), and the Terrorism Risk Insurance Program Reauthorization Act of 2007 (Pub. L. 110-160, 121 Stat. 183), any successor statute or regulation, or is otherwise available at commercially reasonable rates) and (d) earthquake insurance. Such insurance shall be written on an "**all risks**" of physical loss or damage basis, for the full replacement cost value (subject to reasonable deductible amounts) new without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include coverage for damage or other loss caused by fire or other peril including, but not limited to, vandalism and malicious mischief, theft, water damage of any type, including sprinkler leakage, bursting or stoppage of pipes, and explosion. Notwithstanding the foregoing, Tenant may elect to self-insure terrorism and earthquake insurance required in this Section 10.3.1 and self-insurance shall not reduce the coverage amounts required to be maintained by Tenant hereunder and any self-insured amount shall be deemed to contain all of the terms and conditions applicable to the insurance required in this Lease, including, without limitation, full waiver of subrogation in favor of Landlord.

10.3.3 Business Income Interruption for one (1) year plus Extra Expense insurance in such amounts as will reimburse Tenant for actual direct or indirect loss of earnings and continuing expenses, including rent, attributable to the risks outlined in Section 10.3.2 above with a three hundred and sixty-five (365) day extended period of indemnity.

10.3.4 Worker's Compensation and Employer's Liability with limits not less than $1,000,000 each accident; $1,000,000 disease – each employee; and $1,000,000 disease policy limit with minimum limits of not less than $1,000,000 each accident/employee/disease or other similar insurance pursuant to all applicable state and local statutes and regulations. The policy will include a waiver of subrogation in favor of the Landlord Parties.

10.3.5 Environmental/Pollution Liability Insurance. Tenant shall procure and maintain during the Lease Term and for no fewer than three (3) years thereafter, a stand-alone (covering pollution conditions at and migrating from the Project and/or the Project) pollution legal liability insurance policy covering all environmental risks of Tenant's business for claims relating to clean-up, bodily injury, and property damage, with limits of not less than Ten Million Dollars ($10,000,000.00) per claim and Ten Million Dollars ($10,000,000.00) in the aggregate, with

respect to environmental contamination and pollution caused or made worse by Tenant. Such coverage shall have no exclusions for medical, special or biohazardous waste, mold, microbial matter, bacteria, viruses, fungi, infectious disease, or for any materials, solutions, solid, liquid or gas and/or particles expected to be handled and/or generated by Tenant Parties in the course of Tenant's operations and occupancy of the Premises. Such policy shall include (i) full terrorism coverage (whether considered certified or non-certified acts), (ii) coverage for any underground storage tanks and/or above-ground storage tanks, where applicable, and (iii) coverage for radioactive materials if such materials are part of Tenant's operations; and (iv) that this Lease and the indemnification requirements herein are included and scheduled as a lease contract on the pollution legal liability policy. In the event of any environmental/pollution condition arising from Tenant's occupancy or operations at the Premises, Tenant shall immediately notify Landlord. Tenant's environmental/pollution liability insurance shall be maintained for a period not less than ten (10) years after expiration of this Agreement or such greater time provided by the statute of limitation and/or repose.

10.3.6 Commercial automobile liability insurance covering all Owned (if any), Hired, or Non- owned vehicles with limits not less than $1,000,000 combined single limit for bodily injury and property damage.

10.3.7 Intentionally Omitted.

10.3.8 Contractor and Vendor Insurance. In addition to the insurance Tenant is required to maintain under this Lease, if Tenant hires or brings a contractor or vendor onto the Premises or Building to perform or provide any services or products, Tenant shall have a written agreement with vendor whereby vendor will be required to carry Commercial General Liability insurance (subject to minimum limits of $1,000,000 per occurrence, $2,000,000 in the general aggregate), $2,000,000 products completed operations, and the same insurance coverages required of Tenant herein for Auto (if applicable) and Worker's Compensation and Employer's Liability insurance; provided, however, Landlord reserves the right to require greater coverage limitations for contractors pursuant to Section 8.4 above. Tenant shall cause written agreement to require each vendor to provide true and complete copies of all insurance policies and endorsements to Tenant promptly after Tenant's request, and Tenant shall deliver the same to Landlord prior to entry onto the Premises by such vendors. Tenant shall also require that such vendors' insurance will meet same additional terms as required of Tenant herein with regards to adding Additional Insureds as additional insureds.

Landlord makes no representation that the limits or forms of coverage of insurance specified herein are adequate to cover Tenant's property, business operations or obligations under this Lease.

10.4 **Form of Policies**. The minimum limits of policies of insurance required of Tenant under this Lease shall in no event limit the liability of Tenant under this Lease. Landlord, its subsidiaries and affiliates, Landlord's property and/or development manager and any other party Landlord so specifies, shall be named as an additional insured under the policies listed in Sections 10.3.1, 10.3.2 and 10.3.3 using Insurance Service Organization's form CG2011 or a comparable form approved by Landlord. All insurance policies required to be maintained by Tenant shall (i) cover the liability assumed by Tenant under this Lease, including, but not limited to, Tenant's obligations under Section 10.1 of this Lease; (ii) be issued by an insurance company having a rating of not less than A:VIII in Best's Insurance Guide or which is otherwise acceptable to Landlord and licensed to do business in the State of California; (iii) be primary insurance as to all claims thereunder and provide that any insurance carried by Landlord is excess and is non-contributing with any insurance required of Tenant; (iv) be in form and content reasonably acceptable to Landlord (Tenant shall provide full and complete copies of any policies that Landlord reasonably requests); and (v) provide that said insurer shall endeavor to provide written notice to Landlord and any mortgagee of Landlord, to the extent such names are furnished to Tenant prior to the cancellation of such policy. Tenant shall deliver said policy or policies or certificates thereof to Landlord on or before the earlier to occur of (A) the Lease Commencement Date, and (B) the date upon which Tenant is first provided access to the Premises, and at least ten (10) days before the expiration dates thereof. In the event Tenant shall fail to procure such insurance, or to deliver such policies or certificate within ten (10) days after written notice from Landlord, Landlord may, at its option, procure such policies for the account of Tenant, and the cost thereof shall be paid to Landlord within five (5) days after delivery to Tenant of bills therefor.

10.5 **Subrogation**. Landlord and Tenant intend that their respective property loss risks shall be borne by reasonable insurance carriers to the extent above provided, and Landlord and Tenant hereby agree to look solely to, and seek recovery only from, their respective insurance carriers in the event of a property loss to the extent that such coverage is agreed to be provided hereunder. The parties each hereby waive all rights and claims against each other for such losses and waive all rights of subrogation of their respective insurers, provided such waiver of subrogation

shall not affect the right of the insured to recover thereunder. The parties agree that their respective insurance policies specify now or shall specify that the waiver of subrogation shall not affect the right of the insured to recover thereunder. Tenant will cause all subtenants and licensees of the Premises claiming by, under, or through Tenant to execute and deliver to Landlord a waiver of claims similar to the waiver in this Section 10.5 and to obtain such waiver of subrogation rights endorsements. If either party hereto fails to maintain the waivers set forth in items (i) and (ii) above, the party not maintaining the requisite waivers shall indemnify, defend, protect, and hold harmless the other party for, from and against any and all Losses arising out of, resulting from, or relating to, such failure.

10.6 **Additional Insurance Obligations**. Tenant shall carry and maintain during the entire Lease Term, at Tenant's sole cost and expense, increased amounts of insurance and such additional coverages as Landlord may reasonably require; provided, however, that (a) in no event shall such new or increased amounts or types of insurance exceed that required of comparable tenants by landlords of the Comparable Buildings and (b) Landlord shall not have the right to require that Tenant adjust its insurance coverage more than once in any twenty-four (24) month period, and not during the initial twenty-four (24) months of the Lease Term.

10.7 **Landlord's Fire and Casualty Insurance**. Landlord shall insure the Buildings during the Lease Term against loss or damage due to fire and other casualties covered within the classification of fire and extended coverage, vandalism coverage and malicious mischief, sprinkler leakage, water damage and special extended coverage. Such coverage shall be in such amounts, from such companies, and on such other terms and conditions, as Landlord may from time to time reasonably determine. Landlord shall also carry rental loss insurance. Additionally, at the option of Landlord, such insurance coverage may include the risks of earthquakes and/or flood damage and additional hazards, a rental loss endorsement and one or more loss payee endorsements in favor of the holders of any mortgages or deeds of trust encumbering the interest of Landlord in the Project or the ground or underlying lessors of the Project, or any portion thereof. Notwithstanding the foregoing provisions of this Section 10.7, the coverage and amounts of insurance carried by Landlord in connection with the Buildings shall, at a minimum, be comparable to the coverage and amounts of insurance which are carried by reasonably prudent landlords of Comparable Buildings (provided that in no event shall Landlord be required to carry earthquake insurance). Tenant shall, at Tenant's expense, promptly following notice, comply with all insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises causes any increase in the premium for such insurance policies then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body.

11. DAMAGE AND DESTRUCTION

11.1 **Repair of Damage to Premises by Landlord**. Tenant shall promptly notify Landlord of any damage to the Premises resulting from fire or any other casualty. If the Premises or any Common Areas serving or providing access to the Premises shall be damaged by fire or other casualty, Landlord will, as soon as reasonably possible following the date of the damage, deliver to Tenant an estimate of the time necessary to repair the damage in question such that the Premises may be used by and accessible to Tenant and the Buildings and Common Areas operable in a manner consistent with the operation prior to such damage; such notice will be based upon the review and opinions of Landlord's architect and contractor ("**Landlord's Completion Notice**"). Landlord shall promptly and diligently, subject to reasonable delays for insurance adjustment or other matters beyond Landlord's reasonable control, and subject to all other terms of this Article 11, restore such Common Areas and the Premises to substantially the same condition as existed prior to the casualty, except for modifications required by zoning and building codes and other laws or by the holder of a mortgage on the Building or Project or any other modifications to the Common Areas deemed desirable by Landlord, which are consistent with the character of the Project, provided that access to the Premises shall not be materially impaired. Upon the occurrence of any damage to the Premises, upon notice (the "**Landlord Repair Notice**") to Tenant from Landlord delivered on or before the date that is ninety (90) days after the date of the damage, Tenant shall assign to Landlord (or to any party designated by Landlord) all insurance proceeds payable to Tenant under Tenant's insurance required under Section 10.3.2(ii) of this Lease, and Landlord shall repair any injury or damage to the Improvements and the Original Improvements and shall return such Improvements and Original Improvements to their original condition (any such work will be competitively bid by Landlord to ensure that Landlord receives commercially reasonable pricing for the performance of such work so that, to the extent reasonably possible, the cost of such work does not unnecessarily exceed the proceeds of Tenant's insurance); provided that if the cost of such repair by Landlord exceeds the amount of insurance proceeds received by Landlord from Tenant's insurance carrier, as assigned by Tenant, the portion of the cost of such repairs which is not so covered by Tenant's

insurance proceeds shall be paid by Tenant to Landlord prior to Landlord's commencement of repair of the damage. In the event that Landlord does not deliver the Landlord Repair Notice within ninety (90) days following the date the casualty becomes known to Landlord, Tenant shall, at its sole cost and expense, repair any injury or damage to the Improvements and the Original Improvements installed in the Premises and shall return such Improvements and Original Improvements to their original condition, or an alternate condition described by Tenant (but subject to Landlord's prior written approval). Whether or not Landlord delivers a Landlord Repair Notice, prior to the commencement of construction, Tenant shall submit to Landlord, for Landlord's review and approval, all plans, specifications and working drawings relating thereto (it being acknowledged that the cost to prepare such plans may be paid for out of the applicable insurance proceeds received by Tenant), and Landlord shall select the contractors to perform such improvement work. Landlord shall not be liable for any inconvenience or annoyance to Tenant or its visitors, or injury to Tenant's business resulting in any way from such damage or the repair thereof; provided however, that if such fire or other casualty shall have damaged the Premises or Common Areas necessary to Tenant's occupancy, and the Premises are not occupied by Tenant as a result thereof, then during the time and to the extent the Premises are unfit for occupancy, the Rent shall be abated in proportion to the ratio that the amount of rentable square feet of the Premises which is unfit for occupancy for the Permitted Use bears to the total rentable square feet of the Premises; provided, further, however, that if the damage or destruction is due to the negligence or willful misconduct of Tenant or any of its agents, employees, contractors, invitees or guests, Tenant shall be responsible for any reasonable, applicable insurance deductible (which shall be payable to Landlord upon demand, not to materially exceed the levels of deductibles for such insurance then maintained by owners of Comparable Buildings). In the event that Landlord shall not deliver the Landlord Repair Notice, Tenant's right to rent abatement pursuant to the preceding sentence shall terminate as of the date which is reasonably determined by Landlord to be the date Tenant should have completed repairs to the Premises assuming Tenant used reasonable due diligence in connection therewith.

11.2 **Landlord's Option to Repair**. Notwithstanding the terms of Section 11.1 of this Lease, Landlord may elect not to rebuild and/or restore the Premises, Building and/or Project, and instead terminate this Lease, by notifying Tenant in writing of such termination within ninety (90) days after the date of discovery of the damage, such notice to include a termination date giving Tenant ninety (90) days to vacate the Premises, but Landlord may so elect only if the Building or Project shall be damaged by fire or other casualty or cause, whether or not the Premises are affected, and one or more of the following conditions is present: (i) in Landlord's reasonable judgment, repairs cannot reasonably be completed within eighteen (18) months after the date of discovery of the damage (when such repairs are made without the payment of overtime or other premiums); (ii) the holder of any mortgage on the Building or Project or ground lessor with respect to the Building or Project shall require that the insurance proceeds or any portion thereof be used to retire the mortgage debt, or shall terminate the ground lease, as the case may be; (iii) more than One Million Dollars ($1,000,000.00) of the cost of repair of such damage is not fully covered by Landlord's insurance policies (unless such shortfall is a result of Landlord's failure to maintain the insurance that Landlord is required to maintain pursuant to Section 10.7 below); (iv) Landlord decides to rebuild the Building or Common Areas so that they will be substantially different structurally or architecturally; (v) the damage occurs during the last twelve (12) months of the Lease Term; provided, however, that if such fire or other casualty shall have damaged the Premises or a portion thereof or Common Areas necessary to Tenant's occupancy and as a result of such damage the Premises is unfit for occupancy, and provided that Landlord does not elect to terminate this Lease pursuant to Landlord's termination right as provided above, and either (a) the repairs cannot, in the reasonable opinion of Landlord's contractor, as set forth in Landlord's Completion Notice, be completed within eighteen (18) months after being commenced, or (b) the damage occurs during the last twelve (12) months of the Lease Term and will reasonably require in excess of ninety (90) days to repair, Tenant may elect, no earlier than sixty (60) days after Tenant's receipt of the Landlord's Completion Notice and not later than ninety (90) days after the date of Tenant's receipt of the Landlord's Completion Notice, to terminate this Lease by written notice to Landlord effective as of the date specified in the notice, which date shall not be less than thirty (30) days nor more than sixty (60) days after the date such notice is given by Tenant. In addition, if such restoration is not substantially complete on or before the later of (i) the date that occurs eighteen (18) months after the date of discovery of the damage, and (ii) the date that occurs ninety (90) days after the expiration of the estimated period of time to substantially complete such restoration, as set forth in Landlord's Completion Notice (the "**Outside Restoration Date**"), then Tenant shall have the additional right during the first ten (10) business days of each calendar month following the Outside Restoration Date until such repairs are complete, to terminate this Lease by delivery of written notice to Landlord (the "**Damage Termination Notice**"), which termination shall be effective on a date specified by Tenant in such Damage Termination Notice (the "**Damage Termination Date**"), which Damage Termination Date shall not be less than ten (10) business days, nor greater than thirty (30) days, following the date such Damage Termination Notice was delivered to Landlord. In the event this Lease is terminated in accordance with

the terms of this Section 11.2, Tenant shall assign to Landlord (or to any party designated by Landlord) all insurance proceeds payable to Tenant under Tenant's insurance required under subsections (ii) and (iii) of Section 10.3.2 of this Lease.

11.3 **Waiver of Statutory Provisions**. The provisions of this Lease, including this Article 11, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, the Building or the Project, and any statute or regulation of the State of California, including, without limitation, Sections 1932(2) and 1933(4) of the California Civil Code, with respect to any rights or obligations concerning damage or destruction in the absence of an express agreement between the parties, and any other statute or regulation, now or hereafter in effect, shall have no application to this Lease or any damage or destruction to all or any part of the Premises, the Building or the Project.

12. NONWAIVER

No provision of this Lease shall be deemed waived by either party hereto unless expressly waived in a writing signed thereby. The waiver by either party hereto of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of same or any other term, covenant or condition herein contained. The subsequent acceptance of Rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by Tenant of any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular Rent so accepted, regardless of Landlord's knowledge of such preceding breach at the time of acceptance of such Rent. No acceptance of a lesser amount than the Rent herein stipulated shall be deemed a waiver of Landlord's right to receive the full amount due, nor shall any endorsement or statement on any check or payment or any letter accompanying such check or payment be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the full amount due. No receipt of monies by Landlord from Tenant after the termination of this Lease shall in any way alter the length of the Lease Term or of Tenant's right of possession hereunder, or after the giving of any notice shall reinstate, continue or extend the Lease Term or affect any notice given Tenant prior to the receipt of such monies, it being agreed that after the service of notice or the commencement of a suit, or after final judgment for possession of the Premises, Landlord may receive and collect any Rent due, and the payment of said Rent shall not waive or affect said notice, suit or judgment. No payment of Rent by Tenant after a breach by Landlord shall be deemed a waiver of any breach by Landlord.

13. CONDEMNATION

If the whole or substantially all of the Premises, Building or Project shall be taken by power of eminent domain or condemned by any competent authority for any public or quasi-public use or purpose, or if all reasonable access to the Building is so taken or condemned, or if Landlord shall grant a deed or other instrument in lieu of such taking by eminent domain or condemnation, Landlord shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority; provided, however, that Landlord shall only have the right to terminate this Lease as provided above if Landlord terminates the leases of all other tenants in the Building, if any, similarly affected by the taking and provided further that to the extent that the Premises is not adversely affected by such taking and Landlord continues to operate the Building as office building and/or life sciences building, Landlord may not terminate this Lease. If more than twenty-five percent (25%) of the rentable square feet of the Premises is taken, or if access to the Premises is substantially impaired, in each case for a period in excess of one hundred eighty (180) days, Tenant shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority. Tenant shall not because of such taking assert any claim against Landlord or the authority for any compensation because of such taking and Landlord shall be entitled to the entire award or payment in connection therewith, except that Tenant shall have the right to file any separate claim available to Tenant for any taking of Tenant's personal property and fixtures belonging to Tenant and removable by Tenant upon expiration of the Lease Term pursuant to the terms of this Lease, and for moving expenses, so long as such claims do not diminish the award available to Landlord, its ground lessor with respect to the Building or Project or its mortgagee, and such claim is payable separately to Tenant. All Rent shall be apportioned as of the date of such termination. If any part of the Premises shall be taken, and this Lease shall not be so terminated, the Rent shall be proportionately abated. Notwithstanding anything to the contrary contained in this Article 13, in the event of a temporary taking of all or any portion of the Premises for a period of twelve (12) months or less, and provided that such temporary taking does not materially preclude or unreasonably diminish Tenant's ability to conduct business from the Premises, then this Lease shall not terminate but the Base Rent and Tenant's Share of Direct Expenses shall be abated for the period of such taking in proportion to the ratio that the amount of rentable square feet of the Premises taken bears to the total rentable

square feet of the Premises. Tenant hereby waives any and all rights it might otherwise have pursuant to Section 1265.130 of The California Code of Civil Procedure. Landlord shall be entitled to receive the entire award made in connection with any such temporary taking, provided, however, that Tenant shall be entitled to a share of the award for any loss of fixtures and improvements and for moving and other reasonable expenses that do not otherwise reduce Landlord's recovery. If this Lease does not terminate on account of any such eminent domain or condemnation proceeding, then Landlord shall, to the extent practicable, restore the affected area of the Premises, Building or Project. In no event shall Landlord have any obligation to undertake restoration on account of any condemnation or eminent domain proceeding except to the extent of the award actually received by Landlord. Notwithstanding anything to the contrary contained in this Article 13, in the event of a temporary taking of all or any portion of the Premises for a period of twelve (12) months or less, then this Lease shall not terminate but the Base Rent and the Additional Rent shall be abated for the period of such taking in proportion to the ratio that the amount of rentable square feet of the Premises taken bears to the total rentable square feet of the Premises. Landlord shall be entitled to receive the entire award made in connection with any such temporary taking.

14. ASSIGNMENT AND SUBLETTING

14.1 **Transfers**. Tenant shall not, without the prior written consent of Landlord (except in connection with a Permitted Transfer [as that term is defined in Section 14.8 below]), assign, mortgage, pledge, hypothecate, encumber, or permit any lien to attach to, or otherwise transfer, this Lease or any interest hereunder, permit any assignment, or other transfer of this Lease or any interest hereunder by operation of law, sublet the Premises or any part thereof, or enter into any license or concession agreements or otherwise permit the occupancy or use of the Premises or any part thereof by any persons other than Tenant and its employees and contractors (all of the foregoing are hereinafter sometimes referred to collectively as "**Transfers**" and any person to whom any Transfer is made or sought to be made is hereinafter sometimes referred to as a "**Transferee**"). If Tenant desires Landlord's consent to any Transfer, Tenant shall notify Landlord in writing, which notice (the "**Transfer Notice**") shall include (i) the proposed effective date of the Transfer, which shall not be less than fifteen (15) days nor more than two hundred seventy (270) days after the date of delivery of the Transfer Notice, (ii) a description of the portion of the Premises to be transferred (the "**Subject Space**"), (iii) all of the terms of the proposed Transfer and the consideration therefor, including calculation of the "**Transfer Premium**", as that term is defined in Section 14.3 below, in connection with such Transfer, the name and address of the proposed Transferee, and a copy of all existing executed and/or proposed documentation pertaining to the proposed Transfer, (iv) current financial statements of the proposed Transferee certified by an officer, partner or owner thereof, business credit and personal references and history of the proposed Transferee, (v) any other information reasonably required by Landlord which will enable Landlord to determine the financial responsibility, character, and reputation of the proposed Transferee, nature of such Transferee's business and proposed use of the Subject Space, which information is requested within five (5) business days following Tenant's submission to Landlord of the items described in clauses (i), (ii), (iii), (iv) and (vi) of this Section 14.1, and (vi) an executed estoppel certificate from Tenant in the form attached hereto as **Exhibit 17**. Any Transfer made without Landlord's prior written consent shall, at Landlord's option, be null, void and of no effect, and shall, at Landlord's option, constitute a default by Tenant under this Lease. Whether or not Landlord consents to any proposed Transfer, Tenant shall pay Landlord's reasonable review and processing fees, as well as any reasonable professional fees (including, without limitation, attorneys', accountants', architects', engineers' and consultants' fees) incurred by Landlord, not to exceed $5,000 in total, within thirty (30) days after written request by Landlord.

14.2 **Landlord's Consent**. Landlord shall not unreasonably withhold, condition or delay its consent to any proposed sublet of the Subject Space or assignment of this Lease on the terms specified in the Transfer Notice and shall grant or withhold such consent within fifteen (15) days following the date upon which Landlord receives a "complete" Transfer Notice from Tenant (i.e., a Transfer Notice that includes all documents and information required pursuant to Section 14.1 of this Lease).). If Landlord fails to respond within such fifteen (15) day period, Tenant may send a written "reminder notice". If Landlord fails to respond to such request within five (5) Business Days after delivery of the "reminder notice", then such nonresponse shall be deemed Landlord's approval of such Transfer request. Without limitation as to other reasonable grounds for withholding consent, the parties hereby agree that it shall be reasonable under this Lease and under any Applicable Law for Landlord to withhold consent to any proposed sublet or assignment where one or more of the following apply:

14.2.1 The Transferee is, in Landlord's commercially reasonable business judgment, of a character or reputation or engaged in a business which is not consistent with the quality of the Building or the Project;

14.2.2 The Transferee intends to use the Subject Space for purposes which are not permitted under this Lease;

14.2.3 The Transferee is either a governmental agency or instrumentality thereof;

14.2.4 The Transferee is a Tax-Exempt Entity (as defined in **Exhibit 4.4.3** attached hereto), unless such Transferee, at no cost to Landlord, complies with and satisfies all of the applicable Mission Bay Requirements relating to a Transfer to a Tax-Exempt Entity as set forth in **Exhibit 4.4.3** attached hereto, to the extent that Landlord continues to be subject to such requirements at the time of such Transfer;

14.2.5 The Transferee is not, in Landlord's commercially reasonable business judgment, a party of reasonable financial worth and/or financial stability in light of the responsibilities to be undertaken in connection with the Transfer on the date consent is requested;

14.2.6 The proposed Transfer would cause a violation of another lease for space in the Project, or would give an occupant of the Project a right to cancel its lease; or

14.2.7 Either the proposed Transferee, or any person or entity which directly or indirectly, controls, is controlled by, or is under common control with, the proposed Transferee, is actively negotiating with Landlord or has negotiated with Landlord during the four (4) month period immediately preceding the date Landlord receives the Transfer Notice, to lease space in the Project and there is space in the Project then available, or will be available timely, for such Transferee within the Project.

14.2.8 In Landlord's reasonable determination, the sub-rent, additional rent or other amounts received or accrued by Tenant from subleasing, assigning or otherwise Transferring all or any portion of the Premises is based on the income or profits of any person, or the assignment or sublease could cause any portion of the amounts received by Landlord pursuant to this Lease to fail to qualify as "rents from real property" within the meaning of section 856(d) of the Internal Revenue Code of 1986, as amended (the "**Code**"), or any similar or successor provision thereto or which would cause any other income of Landlord to fail to qualify as income described in section 856(c)(2) of the Code.

If Landlord consents to any Transfer pursuant to the terms of this Section 14.2 (and does not exercise any recapture rights Landlord may have under Section 14.4 of this Lease), Tenant may within six (6) months after Landlord's consent, but not later than the expiration of said six-month period, enter into such Transfer of the Premises or portion thereof, upon substantially the same terms and conditions as are set forth in the Transfer Notice furnished by Tenant to Landlord pursuant to Section 14.1 of this Lease, provided that if there are any changes in the terms and conditions from those specified in the Transfer Notice (i) such that Landlord would initially have been entitled to refuse its consent to such Transfer under this Section 14.2, Tenant shall again submit the Transfer to Landlord for its approval and other action under this Article 14 (including Landlord's right of recapture, if any, under Section 14.4 of this Lease). Notwithstanding anything to the contrary in this Lease, if Tenant or any proposed Transferee claims that Landlord has withheld or delayed its consent in violation of this Section 14.2 or otherwise has breached its obligations under this Article 14, their sole remedies shall be a suit for contract damages (other than damages for injury to, or interference with, Tenant's business including, without limitation, loss of profits, however occurring) or declaratory judgment and an injunction for the relief sought without any monetary damages, and Tenant hereby waives the provisions of Section 1995.310 of the California Civil Code, or any successor statute, and all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all Applicable Laws, on behalf of the proposed Transferee. Tenant shall indemnify, defend and hold harmless Landlord from any and all Losses, causes of action and proceedings involving any third party or parties (including without limitation Tenant's proposed subtenant or assignee) who claim they were damaged by Landlord's wrongful withholding or conditioning of Landlord's consent.

14.3 **Transfer Premium**. If Landlord consents to a Transfer constituting an assignment of the Lease or a sublease of the Premises, as a condition thereto which the parties hereby agree is reasonable, Tenant shall pay to Landlord fifty percent (50%) of any "**Transfer Premium**", as that term is defined in this Section 14.3, received by Tenant from such Transferee (other than any Permitted Transferee). "**Transfer Premium**" shall mean all rent, additional rent or other consideration received by such Transferee in connection with the Transfer in excess of the Rent and Additional Rent payable by Tenant under this Lease during the term of the Transfer on a per rentable square

foot basis if less than all of the Premises is transferred, after deducting the reasonable third party expenses incurred by Tenant for (i) any design and construction costs incurred on account of changes, alterations and improvements to the Premises in connection with the Transfer, (ii) any free base rent and tenant improvement allowances reasonably provided to the Transferee in connection with the Transfer (provided that such free rent and tenant improvement allowances shall be deducted only to the extent the same is included in the calculation of total consideration payable by such Transferee), (iii) any brokerage commissions and marketing costs in connection with the Transfer, and (iv) legal fees and disbursements reasonably incurred in connection with the Transfer (collectively, "**Tenant's Subleasing Costs**"). "**Transfer Premium**" shall also include, but not be limited to, any lump sum payment, key money, bonus money or other cash consideration paid by Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to Transferee or for assets, fixtures, inventory, equipment, or furniture (other than Tenant Improvements and Alterations) transferred by Tenant to Transferee in connection with such Transfer. For purposes of calculating any such effective rent all such concessions shall be amortized on a straight-line basis over the relevant term. The determination of the amount of Landlord's applicable share of the Transfer Premium shall be made on a monthly basis as rent or other consideration is received by Tenant under the Transfer. No Transfer Premium shall be payable in connection with any Permitted Transfer.

14.4 **Landlord's Option as to Subject Space**. Notwithstanding anything to the contrary contained in this Article 14, in the event Tenant contemplates a Transfer involving either (1) more than two (2) full floors of the Premises for a term that is either (i) more than five (5) years, or (ii) extends into any portion of the final three (3) years of the Lease Term, or (2) at least one (1) full floor at any time within the final three (3) years of the Lease Term, Tenant shall give Landlord notice (the "**Intention to Transfer Notice**") of such contemplated Transfer (whether or not the contemplated Transferee or the terms of such contemplated Transfer have been determined). The Intention to Transfer Notice shall specify the portion of and amount of rentable square feet of the Premises which Tenant intends to Transfer (the "**Contemplated Transfer Space**"), the contemplated date of commencement of the Contemplated Transfer (the "**Contemplated Effective Date**"), and the contemplated length of the term of such contemplated Transfer, and shall specify that such Intention to Transfer Notice is delivered to Landlord pursuant to this Section 14.4 in order to allow Landlord to elect to recapture the Contemplated Transfer Space. Thereafter, Landlord shall have the option, by giving written notice to Tenant (a "**Recapture Notice**") within thirty (30) days after receipt of any Intention to Transfer Notice, to recapture the Contemplated Transfer Space. Such recapture shall cancel and terminate this Lease with respect to such Contemplated Transfer Space as of the Contemplated Effective Date. In the event of a recapture by Landlord, if this Lease shall be canceled with respect to less than the entire Premises, the Rent reserved herein shall be prorated on the basis of the number of rentable square feet retained by Tenant in proportion to the number of rentable square feet contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon request of either party, the parties shall execute written confirmation of the same. If Landlord declines, or fails to elect in a timely manner to recapture the Contemplated Transfer Space under this Section 14.4, then, subject to the other terms of this Article 14, for a period of six (6) months (the "**Six-Month Period**") commencing on the last day of such thirty (30) day period, Landlord shall not have any right to recapture the Contemplated Transfer Space with respect to any Transfer made during the Six Month Period, provided that any such Transfer is substantially on the terms set forth in the Intention to Transfer Notice, and provided further that any such Transfer shall be subject to the remaining terms of this Article 14. If such a Transfer is not so consummated within the Six-Month Period (or if a Transfer is so consummated, then upon the expiration of the term of any Transfer of such Contemplated Transfer Space consummated within such Six-Month Period), Tenant shall again be required to submit a new Intention to Transfer Notice to Landlord with respect any contemplated Transfer of the Contemplated Transfer Space, as provided above in this Section 14.4. Notwithstanding the foregoing to the contrary, Tenant may, within ten (10) days following receipt of any Recapture Notice, rescind the Intention to Transfer Notice (and thereby negate the recapture of the Contemplated Transfer Space) to which it applies provided that Tenant does not proceed with the contemplated Transfer giving rise to the applicable Intention to Transfer Notice.

14.5 **Effect of Transfer**. If Landlord consents to a Transfer, (i) the terms and conditions of this Lease shall in no way be deemed to have been waived or modified, (ii) such consent shall not be deemed consent to any further Transfer by either Tenant or a Transferee, (iii) Tenant shall deliver to Landlord, promptly after execution, an original executed copy of all documentation pertaining to the Transfer in form reasonably acceptable to Landlord, (iv) Tenant shall furnish upon Landlord's request a complete statement, certified by an independent certified public accountant, or Tenant's chief financial officer, setting forth in detail the computation of any Transfer Premium Tenant has derived and shall derive from such Transfer, and (v) no Transfer relating to this Lease or agreement entered into with respect thereto, whether with or without Landlord's consent, shall relieve Tenant or any guarantor of the Lease from any

liability under this Lease, including, without limitation, in connection with the Subject Space. Landlord or its authorized representatives shall have the right at all reasonable times and upon reasonable prior notice to audit the books, records and papers of Tenant relating to any Transfer at Tenant's office, and shall have the right to make copies thereof. If the Transfer Premium respecting any Transfer shall be found understated, Tenant shall, within thirty (30) days after demand, pay the deficiency, and if understated by more than two percent (2%), Tenant shall pay Landlord's costs of such audit.

14.6 **Sublease/Transfer Restrictions**. Notwithstanding anything contained herein to the contrary and without limiting the generality of Section 14.1 above, Tenant shall not: (a) sublet all or part of the Premises or assign or otherwise Transfer this Lease on any basis such that the rental or other amounts to be paid by the subtenant or assignee thereunder would be based, in whole or in part, on the income or profits derived by the business activities of the subtenant or assignee; (b) sublet all or part of the Premises or assign this Lease to any person or entity in which, under Section 856(d)(2)(B) of the Code, Longfellow Atlantic REIT, Inc., a Delaware corporation (the "**Company**"), or any affiliate of the Company owns, directly or indirectly (by applying constructive ownership rules set forth in Section 856(d) (5) of the Code), a ten percent (10%) or greater interest; or (c) sublet all or part of the Premises or assign this Lease in any other manner or otherwise derive any income which could cause any portion of the amounts received by Landlord pursuant hereto or any sublease to fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Code, or which could cause any other income received by Landlord to fail to qualify as income described in Section 856(c) (2) of the Code. The requirements of this Section 14.4 shall likewise apply to any further subleasing, assignment or other Transfer by any subtenant or assignee. All references herein to Section 856 of the Code also shall refer to any amendments thereof or successor provisions thereto.

14.7 **Occurrence of Default**. Any Transfer hereunder shall be subordinate and subject to the provisions of this Lease, and if this Lease shall be terminated during the term of any Transfer, Landlord shall have the right to (and each sublease shall provide Landlord with the ability to): (i) treat such Transfer as cancelled and repossess the Subject Space by any lawful means, or (ii) require that such Transferee attorn to and recognize Landlord as its landlord under any such Transfer. If Tenant shall be in default under this Lease beyond any applicable notice and cure periods, Landlord is hereby irrevocably authorized, as Tenant's agent and attorney-in-fact, to direct any Transferee to make all payments under or in connection with the Transfer directly to Landlord (which Landlord shall apply towards Tenant's obligations under this Lease) until such default is cured. Such Transferee shall rely on any representation by Landlord that Tenant is in default hereunder, without any need for confirmation thereof by Tenant. Upon any assignment, the assignee shall assume in writing all obligations and covenants of Tenant thereafter to be performed or observed under this Lease. No collection or acceptance of rent by Landlord from any Transferee shall be deemed a waiver of any provision of this Article 14 or the approval of any Transferee or a release of Tenant from any obligation under this Lease, whether theretofore or thereafter accruing. In no event shall Landlord's enforcement of any provision of this Lease against any Transferee be deemed a waiver of Landlord's right to enforce any term of this Lease against Tenant or any other person. If Tenant's obligations hereunder have been guaranteed, Landlord's consent to any Transfer shall not be effective unless the guarantor also consents to such Transfer.

14.8 **Non-Transfers**. Notwithstanding anything to the contrary contained in this Article 14, (i) an assignment or subletting of all or a portion of the Premises to an affiliate of Tenant (an entity which is controlled by, controls, or is under common control with, Tenant), (ii) an assignment of the Premises to an entity which acquires all or substantially all of the assets or beneficial interests (partnership, stock or other) of Tenant, (iii) an assignment of the Premises to an entity which is the resulting entity of a merger or consolidation of Tenant (or a transaction where Tenant is the surviving corporation of the merger), or (iv) or any other transfer of Tenant's stock, on a nationally- recognized stock exchange (any of the foregoing, a "**Permitted Transferee**"), shall not be deemed a Transfer under this Article 14, provided that (A) except in the case of clause (i) above, Tenant notifies Landlord of any such assignment or sublease and promptly supplies Landlord with any documents or information requested by Landlord regarding such assignment or sublease or such affiliate, (B) such assignment or sublease is not a subterfuge by Tenant to avoid its obligations under this Lease, (C) with respect to clause (i), such Permitted Transferee shall be of a character and reputation consistent with the quality of the Building, and (D) with respect to an assignment to a Permitted Transferee or a Transfer pursuant to clauses (i), (ii) or (iii) above, the resulting Tenant under this Lease shall have a tangible net worth (not including goodwill as an asset) computed in accordance with generally accepted accounting principles ("**Net Worth**") at least equal to the Net Worth of Tenant on the day that is [three (3)] months prior to the effective date of such assignment or sublease. An assignee of Tenant's entire interest that is also a Permitted Transferee may also be known as a "**Permitted Assignee**". "**Control**", as used in this Section 14.8, shall mean the ownership,

directly or indirectly, of at least fifty-one percent (51%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of at least fifty-one percent (51%) of the voting interest in, any person or entity and the ability to direct the day-to-day affairs of such person or entity. No such permitted assignment or subletting or other Transfer permitted with or without Landlord's consent pursuant to this Article 14 shall serve to release Tenant from any of its obligations under this Lease. Landlord acknowledges that, as of the date hereof, Tenant's stock is traded on a public exchange (NASDAQ: VIR). For the avoidance of doubt, so long as Tenant's stock is traded on a public exchange, no sale, buy-back, split or other transfer whatsoever of Tenant's stock shall be deemed a "Transfer" under this Lease.

15. SURRENDER OF PREMISES; OWNERSHIP AND REMOVAL OF TRADE FIXTURES

15.1 **Surrender of Premises**. No act or thing done by Landlord or any agent or employee of Landlord during the Lease Term shall be deemed to constitute an acceptance by Landlord of a surrender of the Premises unless such intent is specifically acknowledged in writing by Landlord. The delivery of keys to the Premises to Landlord or any agent or employee of Landlord shall not constitute a surrender of the Premises or effect a termination of this Lease, whether or not the keys are thereafter retained by Landlord, and notwithstanding such delivery Tenant shall be entitled to the return of such keys at any reasonable time upon request until this Lease shall have been properly terminated. The voluntary or other surrender of this Lease by Tenant, whether accepted by Landlord or not, or a mutual termination hereof, shall not work a merger, and at the option of Landlord shall operate as an assignment to Landlord of all subleases or subtenancies affecting the Premises or terminate any or all such sublessees or subtenancies.

15.2 **Removal of Tenant Property by Tenant**. Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, subject to the provisions of this Article 15, quit and surrender possession of the Premises to Landlord in as good order and condition as when Tenant took possession and as thereafter improved by Landlord and/or Tenant, reasonable wear and tear, casualty and repairs which are specifically made the responsibility of Landlord hereunder excepted. Upon such expiration or termination, Tenant shall, without expense to Landlord, remove or cause to be removed from the Premises all Alterations that Tenant is required to remove in accordance with Section 8.3 of this Lease, any debris and rubbish, and such items of furniture, equipment, free- standing cabinet work, movable partitions and other articles of personal property, including all Lines, owned by Tenant or installed or placed by Tenant at its expense in the Premises, and such similar articles of any other persons claiming under Tenant (collectively, "**Tenant's Property**"), as Landlord may, in its sole discretion, require to be removed (provided that Tenant, in its sole discretion, may remove all of Tenant's personal property and trade fixtures, at any time, regardless of any such election by Landlord), and Tenant shall repair at its own expense all damage to the Premises and Building resulting from such removal. Tenant's personal property includes only those items that are not built into the Premises and that have not been constructed or installed by Landlord.

15.3 **Environmental Assessment**. Prior to the expiration of the Lease (or within thirty (30) days after any earlier termination), Tenant shall clean and otherwise decommission all interior surfaces (including floors, walls, ceilings, and counters), piping, supply lines, waste lines and plumbing in or serving the Premises, and all exhaust or other ductwork in or serving the Premises, in each case that has carried, released or otherwise been exposed to any Hazardous Materials due to Tenant's use or occupancy of the Premises, and shall otherwise clean the Premises so as to permit the Environmental Assessment called for by this Section 15.3 to be issued. Prior to the expiration of this Lease (or within thirty (30) days after any earlier termination), Tenant, at Tenant's expense, shall obtain for Landlord a report (an "**Environmental Assessment**") addressed to Landlord (and, at Tenant's election, Tenant) by a reputable licensed environmental engineer or industrial hygienist that is designated by Tenant and acceptable to Landlord in Landlord's reasonable discretion, which report shall be based on the environmental engineer's inspection of the Premises and shall state, to Landlord's reasonable satisfaction, that (a) the Hazardous Materials described in the first sentence of this paragraph, to the extent, if any, existing prior to such decommissioning, have been removed in accordance with Applicable Laws; (b) all Hazardous Materials described in the first sentence of this paragraph, if any, have been removed in accordance with Applicable Laws from the interior surfaces of the Premises (including floors, walls, ceilings, and counters), piping, supply lines, waste lines and plumbing, and all such exhaust or other ductwork in the Premises, may be reused by a subsequent tenant or disposed of in compliance with Applicable Laws without incurring special costs or undertaking special procedures for demolition, disposal, investigation, assessment, cleaning or removal of such Hazardous Materials and without giving notice in connection with such Hazardous Materials; and (a) the Premises may be reoccupied for office, research and development, or laboratory use, demolished or renovated without incurring special costs or undertaking special procedures for disposal, investigation, assessment, cleaning or

removal of Hazardous Materials described in the first sentence of this paragraph and without giving notice in connection with Hazardous Materials. Further, for purposes of clauses (b) and (c), "special costs" or "special procedures" shall mean costs or procedures, as the case may be, that would not be incurred but for the nature of the Hazardous Materials as Hazardous Materials instead of non-hazardous materials. The report shall also include reasonable detail concerning the clean-up measures taken, the clean-up locations, the tests run and the analytic results. Tenant shall submit to Landlord the identity of the applicable consultants and the scope of the proposed Environmental Assessment for Landlord's reasonable review and approval at least 30 days prior to commencing the work described therein or at least forty-five (45) days prior to the expiration of the Lease Term, whichever is earlier.

If Tenant fails to perform its obligations under this Section 15.3, without limiting any other right or remedy, Landlord may, on five (5) business days' prior written notice to Tenant perform such obligations at Tenant's expense if Tenant has not commenced to do so within said five day period, and Tenant shall within ten (10) days of written demand (together with supporting documentation) reimburse Landlord for all reasonable out-of-pocket costs and expenses incurred by Landlord in connection with such work. Tenant's obligations under this Section 15.3 shall survive the expiration or earlier termination of this Lease. In addition, at Landlord's election, Landlord may inspect the Premises and/or the Project for Hazardous Materials at Landlord's cost and expense within sixty (60) days of Tenant's surrender of the Premises at the expiration or earlier termination of this Lease. Tenant shall pay for all such costs and expenses incurred by Landlord in connection with such inspection if such inspection reveals that a release or threat of release of Hazardous Materials exists at the Project or Premises as a result of the acts or omission of Tenant, its officers, employees, contractors, and agents (except to the extent resulting from (i) Landlord's Hazardous Materials, or (ii) the acts or omissions of Landlord or Landlord's agents, employees or contractors).

16. HOLDING OVER

If Tenant holds over after the expiration of the Lease Term or earlier termination thereof, with the express written consent of Landlord, such tenancy shall be from month-to-month only and shall not constitute a renewal hereof or an extension for any further term. If Tenant holds over after the expiration of the Lease Term of earlier termination thereof, without the express written consent of Landlord, such tenancy shall be deemed to be a tenancy at sufferance only and shall not constitute a renewal hereof or an extension for any further term. In either case, Base Rent shall be payable at a daily rate equal to (i) one hundred fifty percent (150%) of the Base Rent applicable during the last rental period of the Lease Term for the first (1st) two (2) months of such holdover, and (ii) two hundred percent (200%) thereafter plus one hundred percent (100%) of all Additional Rent. Such month-to-month tenancy or tenancy by sufferance, as the case may be, shall be subject to every other applicable term, covenant and agreement contained herein. Nothing contained in this Article 16 shall be construed as consent by Landlord to any holding over by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or other termination of this Lease. The provisions of this Article 16 shall not be deemed to limit or constitute a waiver of any other rights or remedies of Landlord provided herein or at law. If Tenant fails to surrender the Premises upon the termination or expiration of this Lease, in addition to any other liabilities to Landlord accruing therefrom, Tenant shall protect, defend, indemnify and hold Landlord harmless from all loss, costs (including reasonable attorneys' fees) and liability resulting from such failure, including, without limiting the generality of the foregoing, any claims made by any succeeding tenant founded upon such failure to surrender and/or any lost profits and consequential or indirect damages to Landlord resulting therefrom. Tenant agrees that any proceedings necessary to recover possession of the Premises, whether before or after expiration of the Lease Term, shall be considered an action to enforce the terms of this Lease for purposes of the awarding of any attorney's fees in connection therewith.

17. ESTOPPEL CERTIFICATES

Within ten (10) business days following a request in writing by Landlord, Tenant shall execute, acknowledge and deliver to Landlord an estoppel certificate, which, as submitted by Landlord, shall be substantially in the form of **Exhibit 17** attached hereto (or such other commercially reasonable form as may be reasonably required by any prospective mortgagee or purchaser of the Project, or any portion thereof), indicating therein any exceptions thereto that may exist at that time, and shall also contain any other information reasonably requested by Landlord or Landlord's mortgagee or prospective mortgagee. Any such certificate may be relied upon by any prospective mortgagee or purchaser of all or any portion of the Project. Tenant shall execute and deliver whatever other commercially reasonable instruments may be reasonably required for such purposes. Failure of Tenant to timely execute, acknowledge and deliver such estoppel certificate or other instruments shall constitute an acceptance of the

Premises and an acknowledgment by Tenant that statements included in the estoppel certificate are true and correct, without exception. At any time during the Lease Term (but not more than twice per year, provided Tenant is not in default hereunder beyond applicable notice and cure periods), but only in the case of (i) a default of Tenant hereunder, (ii) a proposed sale or refinancing of the Project, or (iii) a proposed Permitted Transfer by Tenant, Landlord may require Tenant to provide Landlord with a current financial statement and financial statements of the two (2) years prior to the current financial statement year. Such statements shall be prepared in accordance with generally accepted accounting principles and, if such is the normal practice of Tenant, shall be audited by an independent certified public accountant. If no audited financial statement is prepared, such statement will be certified by the CFO or Treasurer of Tenant. Notwithstanding anything to the contrary contained in this Section 17, if Tenant is publicly traded on a nationally recognized stock exchange, Tenant will not be required to deliver to Landlord financial statements as and when those documents are publicly available.

18. SUBORDINATION

This Lease shall be subject and subordinate to all future ground or underlying leases of the Building or Project and to the lien of any mortgage, trust deed or other encumbrances now or hereafter in force against the Building or Project or any part thereof, if any, and to all renewals, extensions, modifications, consolidations and replacements thereof, and to all advances made or hereafter to be made upon the security of such mortgages or trust deeds, unless the holders of such mortgages, trust deeds or other encumbrances, or the lessors under such ground lease or underlying leases require in writing that this Lease be superior thereto; provided that, for so long as Tenant is not in default hereunder, Tenant's occupancy of the Premises shall not be disturbed. Tenant covenants and agrees that in the event any proceedings are brought for the foreclosure of any such mortgage or deed in lieu thereof (or if any ground lease is terminated), to attorn, without any deductions or set-offs whatsoever, to the lienholder or purchaser or any successors thereto upon any such foreclosure sale or deed in lieu thereof (or to the ground lessor), if so requested to do so by such purchaser or lienholder or ground lessor; provided that, for so long as Tenant is not in default hereunder, Tenant's occupancy of the Premises shall not be disturbed. Notwithstanding any other provision of this Lease to the contrary, no holder of any such mortgage, trustee deed or other encumbrance and no such ground lessor, shall be obligated to perform or liable in damages for failure to perform any of Landlord's obligations under this Lease unless and until such holder shall foreclose such mortgage, trust deed or other encumbrance, or the lessors under such ground lease or underlying leases otherwise acquire title to the Property, and then shall only be liable for Landlord's obligations arising or accruing after such foreclosure or acquisition of title, provided the foregoing shall not release any such holder or ground lessor from performing ongoing obligations of Landlord from and after the date of such foreclosure or acquisition of title, such as repair and maintenance obligations. No such holder shall ever be obligated to perform or be liable in damages for any of Landlord's obligations arising or accruing before such foreclosure or acquisition of title. Tenant shall, within ten (10) business days of request by Landlord, execute a commercially reasonable subordination, non-disturbance and attornment agreement as Landlord may reasonably deem necessary to evidence or confirm the subordination or superiority of this Lease to any such mortgages, trust deeds, ground leases or underlying leases. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of Tenant hereunder in the event of any foreclosure proceeding or sale.

Landlord's interest herein may be assigned as security at any time to any Mortgagee. Notwithstanding the foregoing or anything to the contrary herein, no Mortgagee succeeding to the interest of Landlord hereunder shall be (i) liable in any way to Tenant for any act or omission, neglect or default on the part of Landlord under this Lease, (ii) responsible for any monies owing by or on deposit with Landlord to the credit of Tenant (except to the extent any such deposit is actually received by such mortgagee or ground lessor), (iii) subject to any counterclaim or setoff which theretofore accrued to Tenant against Landlord, (iv) bound by any amendment or modification of this Lease subsequent to such mortgage, or by any previous prepayment of Rent for more than one (1) month, which was not approved in writing by the Mortgagee, (v) liable beyond such Mortgagee's interest in the Project, or (vi) responsible for the payment or performance of any work to be done by Landlord under this Lease to render the Premises ready for occupancy by Tenant or for the payment of any tenant improvements allowances. Nothing in clause (i), above, shall be deemed to relieve any Mortgagee succeeding to the interest of Landlord hereunder of its obligation to comply with the obligations of Landlord under this Lease from and after the date of such succession.

No Mortgagee shall, either by virtue of the Mortgage or any assignment of leases executed by Landlord for the benefit of such Mortgagee, be or become a mortgagee in possession or be or become subject to any liability or obligation under the Lease or otherwise until such Mortgagee shall have acquired the interest of Landlord in the

Property, by foreclosure or otherwise, or in fact have taken possession of the Property as a mortgagee in possession and then such liability or obligation of Mortgagee under the Lease shall extend only to those liability or obligations accruing subsequent to the date that such Mortgagee has acquired the interest of Landlord in the Premises, or in fact taken possession of the Property as a mortgagee in possession.

19. DEFAULTS; REMEDIES

19.1 **Events of Default**. The occurrence of any of the following shall constitute a default of this Lease by Tenant:

19.1.1 Any failure by Tenant to pay any Rent or any other charge required to be paid under this Lease, or any part thereof, when due and such failure shall continue for five (5) days after written notice of such failure is given to Tenant; or

19.1.2 Except where a specific time period is otherwise set forth for Tenant's performance in this Lease, in which event the failure to perform by Tenant within such time period shall be a default by Tenant under this Section 19.1.2, any failure by Tenant to observe or perform any other provision, covenant or condition of this Lease to be observed or performed by Tenant where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant; provided that if the nature of such default is such that the same cannot reasonably be cured within a thirty (30) day period, Tenant shall not be deemed to be in default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure such default; or

19.1.3 Abandonment of the Premises by Tenant pursuant to California Civil Code Section 1951.3; or

19.1.4 The failure by Tenant to observe or perform according to the provisions of Articles 5, 10, 14, 17 or 18 of this Lease where such failure continues for more than two (2) business days after written notice from Landlord; or

19.1.5 If a receiver, guardian, conservator, trustee in bankruptcy or similar officer shall be appointed by a court of competent jurisdiction to take charge of all or any part of Tenant's or any guarantor's property and such appointment is not discharged within ninety (90) days thereafter or if a petition including, without limitation, a petition for reorganization or arrangement is filed by Tenant or any guarantor under any bankruptcy law or is filed against Tenant or any guarantor and, in the case of a filing against Tenant only, the same shall not be dismissed within ninety (90) days from the date upon which it is filed.

The notice periods provided herein are in lieu of, and not in addition to, any notice periods provided by law.

19.2 **Remedies Upon Default**. Upon the occurrence of any event of default by Tenant beyond applicable notice and cure periods, Landlord shall have, in addition to any other remedies available to Landlord at law or in equity (all of which remedies shall be distinct, separate and cumulative), the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever. Tenant hereby waives, for Tenant and for all those claiming under Tenant, any and all rights now or hereafter existing to redeem by order or judgment of any court or by any legal process or writ, Tenant's right of occupancy of the Premises after any termination of this Lease.

19.2.1 Terminate this Lease (pursuant to Section 1951.2 of the California Civil Code), in which event Tenant shall, upon written notice, immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim or damages therefor; and Landlord may recover from Tenant the following:

(i) The worth at the time of award of the unpaid rent which has been earned at the time of such termination; plus

(ii) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iii) The worth at the time of award of the amount by which the unpaid rent for the balance of the Lease Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iv) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant ("**Costs of Reletting**"); notwithstanding the above, if Landlord relets the Premises for a term (the "**Relet Term**") that extends past the originally scheduled Lease Expiration Date, the Costs of Reletting which may be included in Landlord's damages shall be limited to a prorated portion of the Costs of Reletting, based on the percentage that the length of the originally scheduled Lease Term remaining on the date Landlord terminates this Lease or Tenant's right to possession bears to the length of the Relet Term. For example, if there are two (2) years left on the Lease Term at the time that Landlord terminates possession and, prior to the expiration of the two (2) year period, Landlord enters into a lease with a new tenant with a Relet Term of ten (10) years, then only twenty percent (20%) of the Costs of Reletting shall be included when determining Landlord's damages; and

(v) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

The term "**rent**" as used in this Section 19.2 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 19.2.1(i) and (ii), above, the "worth at the time of award" shall be computed by allowing interest at the rate set forth in Article 25 of this Lease, but in no case greater than the maximum amount of such interest permitted by law. As used in Section 19.2.1(iii) above, the "**worth at the time of award**" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%).

19.2.2 Landlord shall have the remedy described in California Civil Code Section 1951.4 (lessor may continue lease in effect after lessee's breach and abandonment and recover rent as it becomes due, if lessee has the right to sublet or assign, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease on account of any default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

19.2.3 Landlord shall at all times have the rights and remedies (which shall be cumulative with each other and cumulative and in addition to those rights and remedies available under this Section 19.2, or any law or other provision of this Lease), without prior demand or notice except as required by Applicable Law, to seek any declaratory, injunctive or other equitable relief, and specifically enforce this Lease, or restrain or enjoin a violation or breach of any provision hereof. The provisions of this Section 19.2.6 are not dependent upon the occurrence of a default.

19.2.4 Any obligation imposed by law upon Landlord to relet the Premises after any termination of the Lease shall be subject to the reasonable requirements of Landlord to lease to high quality tenants on such terms as Landlord may from time to time deem appropriate and to develop the Building in a harmonious manner with an appropriate mix of uses, tenants, floor areas and terms of tenancies, and the like, and Landlord shall not be obligated to relet the Premises to any party to whom Landlord or its affiliate may desire to lease other available space in the Building.

19.2.5 Nothing herein shall limit or prejudice the right of Landlord to prove and obtain in a proceeding for bankruptcy, insolvency, arrangement or reorganization, by reason of the termination, an amount equal to the maximum allowed by a statute of law in effect at the time when, and governing the proceedings in which, the

damages are to be proved, whether or not the amount is greater to, equal to, or less than the amount of the loss or damage which Landlord has suffered.

19.3 **Subleases of Tenant**. Whether or not Landlord elects to terminate this Lease on account of any events of default by Tenant, as set forth in this Article 19, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. In the event of Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

19.4 **Efforts to Relet**. No re-entry or repossession, repairs, maintenance, changes, alterations and additions, reletting, appointment of a receiver to protect Landlord's interests hereunder, or any other action or omission by Landlord shall be construed as an election by Landlord to terminate this Lease or Tenant's right to possession, or to accept a surrender of the Premises, nor shall same operate to release Tenant in whole or in part from any of Tenant's obligations hereunder, unless express written notice of such intention is sent by Landlord to Tenant. Tenant hereby irrevocably waives any right otherwise available under any law to redeem or reinstate this Lease.

19.5 **Landlord Default**.

19.5.1 **General**. Notwithstanding anything to the contrary set forth in this Lease, Landlord shall not be in default in the performance of any obligation required to be performed by Landlord pursuant to this Lease unless Landlord fails to perform such obligation within thirty (30) days after the receipt of notice from Tenant specifying in detail Landlord's failure to perform; provided, however, if the nature of Landlord's obligation is such that more than thirty (30) days are required for its performance, then Landlord shall not be in default under this Lease if it shall commence such performance within such thirty (30) day period and thereafter diligently pursue the same to completion. Upon any such default by Landlord under this Lease, Tenant may, except as otherwise specifically provided in this Lease to the contrary, exercise any of its rights provided at law or in equity.

20. COVENANT OF QUIET ENJOYMENT

Landlord covenants that Tenant, on paying the Rent, charges for services and other payments herein reserved and on keeping, observing and performing all the other terms, covenants, conditions, provisions and agreements herein contained on the part of Tenant to be kept, observed and performed, shall, during the Lease Term, peaceably and quietly have, hold and enjoy the Premises subject to the terms, covenants, conditions, provisions and agreements hereof without interference by any persons lawfully claiming by or through Landlord. The foregoing covenant is in lieu of any other covenant express or implied.

21. SECURITY DEPOSIT

21.1 **Delivery of Letter of Credit.** Concurrently with Tenant's execution of this Lease, Tenant shall deposit with Landlord an unconditional, clean, irrevocable negotiable letter of credit (the "**L/C Security**") in the amount set forth in Section 9 of the Summary as security for the faithful performance by Tenant of all of its obligations under this Lease as follows:

(a) Tenant shall provide Landlord and maintain in full force and effect throughout the Term and until the date that is ninety (90) days after the Lease Expiration Date, an evergreen letter of credit substantially in the form of **Exhibit 21.1** issued by an issuer reasonably satisfactory to Landlord, in the amount set forth in Section 9 of the Summary. Silicon Valley Bank is hereby approved as an issuer of the L/C Security. If at any time during the Term (i) the financial condition of such issuer is reduced below a long term issuer credit rating from Standard and Poor's Professional Rating Service of BBB+ or a comparable rating from Moody's Professional Rating Service or Landlord determines in its sole reasonable discretion that the financial condition of issuer has changed in any materially adverse way from the financial condition of such issuer as of the date of execution of this Lease (any of the foregoing, a "**Bank Credit Threat**") including, without limitation, if such issuer is declared insolvent or is placed into receivership or conservatorship by the Federal Deposit Insurance Corporation, or any successor or similar entity, if a trustee, receiver or liquidator is appointed for such issuer, if the credit rating of the long-term debt of the issuer of the letter of credit (according to Moody's, Standard & Poor's or similar national rating agency reasonably identified

by Landlord) is downgraded to a grade below investment grade, if the issuer enters into any supervisory agreement with any governmental authority or fails to meet any capital requirements imposed by applicable law, Landlord may require the L/C Security to be replaced by an L/C Security issued by a different issuer, in which event Tenant shall, within fifteen (15) business days after written notice from Landlord, deliver to Landlord a replacement L/C Security issued by a commercial bank or savings and loan association acceptable to Landlord in its sole reasonable discretion and that meets all other requirements of this Article. If Tenant has actual notice, or Landlord notifies Tenant at any time, that any issuer of the L/C Security has become insolvent or placed into FDIC receivership, then Tenant shall promptly deliver to Landlord (without the requirement of further notice from Landlord) substitute L/C Security issued by a commercial bank or savings and loan association acceptable to Landlord in its reasonable discretion and that meets all other requirements of this Article. As used herein with respect to the issuer of the L/C Security, "insolvent" shall mean the determination of insolvency as made by such issuer's primary bank regulator (i.e., the state bank supervisor for state-chartered banks; the OCC or OTS, respectively, for federally chartered banks or thrifts; or the Federal Reserve for its member banks).

(b) Landlord may draw upon the L/C Security, and hold and apply the proceeds for the payment of any Rent or any other sum in default, or to compensate Landlord for any other loss or damage that Landlord may suffer by reason of Tenant's default, if: (i) a default beyond applicable notice and cure periods exists (or would have existed with the giving of notice and passage of applicable cure periods, but only if transmittal of a default notice is stayed or barred by applicable bankruptcy or other similar law); (ii) as of the date sixty (60) days before any L/C Security expires Tenant has not delivered to Landlord an amendment or replacement for such L/C Security, reasonably satisfactory to Landlord, extending the expiry date to the date that is ninety (90) days after the then-current Lease Expiration Date; (iii) Tenant fails to pay any bank charges for Landlord's transfer of the L/C Security when due; (iv) the issuer of the L/C Security ceases, or announces that it will cease, to maintain an office in the city where Landlord may present drafts under the L/C Security (and fails to permit drawing upon the L/C Security by overnight courier or facsimile); (v) Tenant has filed a voluntary petition under the U.S. Bankruptcy Code or any state bankruptcy code (collectively, the "**Bankruptcy Code**"); or (vi) a Bank Credit Threat or Receivership (as such Term is defined in Section below) has occurred and Tenant has failed to comply with the requirements of either Section above or below, as applicable. This Section does not limit any other provisions of this Lease allowing Landlord to draw the L/C Security under specified circumstances. The use, application or retention of the L/C Security, or any portion thereof, by Landlord shall not prevent Landlord from exercising any other right or remedy provided by this Lease or by any Applicable Law, it being intended that Landlord shall not first be required to proceed against the L/C Security and shall not operate as a limitation on any recovery to which Landlord may otherwise be entitled. Tenant agrees not to interfere in any way with payment to Landlord of the proceeds of the L/C Security, either prior to or following a "draw" by Landlord of any portion of the L/C Security, regardless of whether any dispute exists between Tenant and Landlord as to Landlord's right to draw upon the L/C Security. No condition or term of this Lease shall be deemed to render the L/C Security conditional to justify the issuer of the L/C Security in failing to honor a drawing upon such L/C Security in a timely manner. Tenant agrees and acknowledges that (i) the L/C Security constitutes a separate and independent contract between Landlord and the issuer, (ii) Tenant is not a third party beneficiary of such contract, (iii) Tenant has no property interest whatsoever in the L/C Security or the proceeds thereof, and (iv) in the event Tenant becomes a debtor under any chapter of the Bankruptcy Code, neither Tenant, any trustee, nor Tenant's bankruptcy estate shall have any right to restrict or limit Landlord's claim and/or rights to the L/C Security and/or the proceeds thereof by application of Section 502(b)(6) of the U. S. Bankruptcy Code or otherwise. In the event of any such draw upon the L/C Security, Tenant shall within fifteen (15) business days thereafter provide Landlord with a replacement letter of credit, or amendment to the existing letter of credit increasing the amount of such letter of credit, in the amount of L/C Security, and in the form, required hereunder, and Tenant's failure to do so shall be a material breach of this Lease.

(c) If Landlord transfers its interest in the Premises, then Landlord shall transfer the L/C Security to the transferee of its interest and notify Tenant of such transfer, and Tenant shall at Tenant's expense, within fifteen (15) business days after receiving a request from Landlord, deliver (and, if the issuer requires, Landlord shall consent to) an amendment to the L/C Security naming Landlord's grantee as substitute beneficiary. If the required Security Deposit changes while L/C Security is in force, then Tenant shall deliver (and, if the issuer requires, Landlord shall consent to) a corresponding amendment to the L/C Security.

(d) If and to the extent Landlord is holding the proceeds of the L/C Security in cash from time to time, such cash shall be held by Landlord as security for the faithful performance by Tenant of all of the terms,

covenants and conditions of this Lease to be kept and performed by Tenant during the period commencing on the Execution Date and ending upon the expiration or termination of Tenant's obligations under this Lease. If Tenant defaults (beyond applicable notice and cure periods) with respect to any provision of this Lease, including any provision relating to the payment of Rent, then Landlord may (but shall not be required to) use, apply or retain all or any part of the Security Deposit for the payment of any Rent or any other sum in default, or to compensate Landlord for any other loss or damage that Landlord may suffer by reason of Tenant's default as provided in this Lease. The provisions of this Article shall survive the expiration or earlier termination of this Lease. In the event of bankruptcy or other debtor-creditor proceedings against Tenant, any cash security then being held by Landlord shall be deemed to be applied first to the payment of Rent and other charges due Landlord for all periods prior to the filing of such proceedings. Landlord shall deliver or credit to any purchaser of Landlord's interest in the Premises the funds then held hereunder by Landlord, and thereupon (and upon confirmation by the transferee of such funds, whether expressly or by written assumption of this Lease, generally) Landlord shall be discharged from any further liability with respect to such funds. This provision shall also apply to any subsequent transfers. If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, then the cash security, if any, or any balance thereof, shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within ninety (90) days after the expiration or earlier termination of this Lease. If and to the extent the security held by Landlord hereunder shall be in cash, Landlord shall hold such cash in an account at a banking organization selected by Landlord; provided, however, that Landlord shall not be required to maintain a separate account for the cash security but may intermingle it with other funds of Landlord. Landlord shall be entitled to all interest and/or dividends, if any, accruing on such cash security.

21.2 **Letter of Credit not a Security Deposit**. Landlord and Tenant acknowledge and agree that in no event or circumstance shall the L/C Security, the "security deposit" (as that term is defined in Section 21.3 below), if applicable, or any renewal thereof or any proceeds thereof, be (i) deemed to be or treated as a "security deposit" within the meaning of California Civil Code Section 1950.7, (ii) subject to the terms of such Section 1950.7, or (iii) intended to serve as a "security deposit" within the meaning of such Section 1950.7. The parties hereto (A) recite that the L/C Security and the Security Deposit (if applicable) are not intended to serve as a security deposit and such Section 1950.7 and any and all other laws, rules and regulations applicable to security deposits in the commercial context ("**Security Deposit Laws**") shall have no applicability or relevancy thereto and (B) waive any and all rights, duties and obligations either party may now or, in the future, will have relating to or arising from the Security Deposit Laws.

21.3 **Proceeds of Draw**. In the event Landlord draws down on the L/C Security pursuant to Section 21.1(b)(ii) and (vi) above, the proceeds of the L/C Security may be held by Landlord and applied by Landlord against any Rent payable by Tenant under this Lease that is not paid when due (subject to applicable notice and cure periods) and/or to pay for all losses and damages that Landlord has suffered or that Landlord reasonably estimates that it will suffer as a result of any breach or default by Tenant under this Lease. Any unused proceeds shall constitute the property of Landlord and need not be segregated from Landlord's other assets. Tenant hereby (i) agrees that (A) Tenant has no property interest whatsoever in the proceeds from any such draw, and (B) such proceeds shall not be deemed to be or treated as a "security deposit" under the Security Deposit Laws, and (ii) waives all rights, duties and obligations either party may now or, in the future, will have relating to or arising from the Security Deposit Laws. Landlord agrees that the amount of any proceeds of the L-C received by Landlord, and not (a) applied against any Rent payable by Tenant under this Lease that was not paid when due or (b) used to pay for any losses and/or damages suffered by Landlord (or reasonably estimated by Landlord that it will suffer) as a result of any breach or default by Tenant under this Lease (the "**Unused L/C Proceeds**"), shall be paid by Landlord to Tenant (x) upon receipt by Landlord of a replacement L/C Security in the required amount, which replacement L/C Security shall comply in all respects with the requirements of this Article 21, and (y) immediately after the LC Expiration Date; provided, however, that if prior to the LC Expiration Date a voluntary petition is filed by Tenant, or an involuntary petition is filed against Tenant by any of Tenant's creditors, under the Bankruptcy Code, then Landlord shall not be obligated to make such payment in the amount of the Unused L/C Proceeds until either all preference issues relating to payments under this Lease have been resolved in such bankruptcy or reorganization case or such bankruptcy or reorganization case has been dismissed.

21.4 **Issuing Bank Placed Into Receivership**. In the event the issuer is placed into receivership or conservatorship (any such event, a "**Receivership**") by the Federal Deposit Insurance Corporation or any successor or similar entity (the "**FDIC**"), then, effective as of the date such Receivership occurs, the L/C Security shall be deemed to not meet the requirements of this Article 21, and, within ten (10) business days following Landlord's notice to Tenant of such Receivership, Tenant shall replace the L/C Security with a substitute L/C Security from a different

issuer reasonably acceptable to Landlord and that complies in all respects with the requirements of this Article 21. If Landlord draws upon the L/C Security due to solely Tenant's failure to provide a substitute L/C Security due to a Bank Credit Threat or Receivership, such failure shall not constitute a default hereunder and Tenant shall thereafter have the right to provide a substitute L/C Security that satisfies the requirements of this Lease, in which case, Landlord shall concurrently refund the proceeds of the draw or the Security Deposit, as applicable. In connection with the foregoing, Tenant shall not be entitled to any interest on the Security Deposit, and Landlord's use of the proceeds of the L/C Security shall be subject to the terms and conditions of the Lease pertaining to Landlord's right to use the proceeds of the L/C Security.

21.5 **Reduction of L-C Amount**. Provided that Tenant has not previously been in default beyond all applicable notice and cure periods within the twenty-four (24) months immediately prior to the effective date of the reduction request and further if Tenant is not in default at the time of such request, upon written request by Tenant given at any time after the first day of the forty-ninth (49th) full calendar month of the Lease Term, the L/C Security amount shall be reduced to $3,805,770.64. The reduction of the L/C Security amount shall be effectuated by Tenant's delivery to Landlord of a certificate of amendment to the existing L/C Security, conforming in all respects to the requirements of this Article 21, in the amount of the applicable reduced L/C Security amount. If Tenant is allowed to reduce the L/C Security amount pursuant to the terms of this Section 21.5, then Landlord shall reasonably cooperate with Tenant in order to effectuate such reduction.

22. INTENTIONALLY OMITTED

23. SIGNS

23.1 **Signage**. Tenant shall not install any signage (including, without limitation, any signs identifying Tenant's name or advertising Tenant's merchandise or otherwise) in or about the Premises that is visible from the exterior of the Premises or in any other part of the Project except as expressly permitted in this Section 23.1 or Section 23.2 below. Subject to Landlord's prior written approval, in its reasonable discretion, and provided all signs are in keeping with the quality, design and style of the Building and Project, Tenant, at its sole cost and expense, may install one sign identifying Tenant at the entry to the Premises on each floor of the Premises, which identification signage shall be consistent with building standard signage as determined by Landlord. All permitted signs shall be maintained by Tenant at its expense in a first-class and safe condition and appearance. Upon the expiration or earlier termination of this Lease, Tenant shall remove all of its signs at Tenant's sole cost and expense. Tenant shall repair any damage to the Premises or Project, inside or outside, resulting from the erection, maintenance or removal of any signs. Tenant's signage must also comply with all Applicable Laws. All Building signage shall be subject to the existing rights of other tenants in the Building and any declaration of covenants for the Project.

23.2 **Full Floors**. Subject to Landlord's prior written approval, in its reasonable discretion, and provided all signs are in keeping with the quality, design and style of the Buildings and Project, (a) to the extent that the Premises includes any full floor(s) of any Building, Tenant, at its sole cost and expense, may install identification signage anywhere on such floor(s), and (b) to the extent that the Premises includes any partial floor(s) of any Building, Tenant, at its sole cost and expense, may install Building standard identification signage in the elevator lobby and at the entrance to the Premises on such floor(s). Subject to Landlord's consent, Tenant will be entitled to Building-standard identification signage in the elevator lobby or lobbies serving the Premises as well as in any ground floor Building lobby directory. Tenant shall be solely responsible, at Tenant's sole cost and expense, for the installation and removal of such signage. Tenant's signage in any ground floor Building Lobby will be limited 9" x 18" and will be the monochromatic/black and white lettering or logo for Tenant. Additionally, with the prior written consent of Landlord, and in compliance with the provisions of this Lease, Tenant may, at Tenant's sole cost and expense, install customized branding signage in the elevator lobby on the eighth (8th), ninth (9th), tenth (10th), eleventh (11th) and/or twelfth (12th) floor of the North Tower, provided that Tenant will be obligated to remove any such signage and repair any damage caused by the installation and/or removal of such signage at the expiration or sooner termination of this Lease.

23.3 **Prohibited Signage and Other Items**. Any signs, notices, logos, pictures, names or advertisements which are installed and are visible from the exterior of the Premises or in any other part of the Project and that have not been separately approved by Landlord may be removed without notice by Landlord at the sole expense of Tenant. Tenant may not install any signs on the exterior or roof of the Project or the Common Areas. Any signs, displays, window coverings, window lettering, or blinds (even if the same are located behind the Landlord-approved window coverings for the Building), or other items or Alterations visible from the exterior of the Premises or Building, shall

be subject to the prior approval of Landlord, in its sole discretion. Tenant shall not place or install any projections, antennae, aerials, or similar devices inside or outside of the Building, without the prior written approval of Landlord, subject to Tenant's rights pursuant to Section 23.2 above.

23.4 **Exterior Building Signage**. During the Lease Term for so long as Tenant or a Permitted Assignee occupies at least seventy percent (70%) of the Premises, Landlord shall not allow any Competitor of Tenant to have exterior Building signage on the North Tower above eyebrow signage height. As used herein, "Competitor of Tenant" means (i) a life science company that primarily focuses on an immunological approach to developing pharmaceuticals for treating and preventing serious infectious diseases and (ii) is identified by Tenant as a competitor of Tenant on the list of competitors delivered by Tenant to Landlord from time to time and then in effect as between Landlord and Tenant as contemplated by this Section 23.4. At any time following the execution and delivery of this Lease by Landlord and Tenant, Tenant may deliver to Landlord, in writing, an initial list of competitors containing no more than ten (10) companies, and such list will be valid (i.e., in full force and effect) for the ensuing twenty-four (24) months (which list of competitors, as updated from time to time in accordance with this Section 23.4, may be referred to as the "**Competitor List**"). Thereafter, Tenant may update the initial Competitor List and any subsequently updated Competitor List every twenty-our (24) months during the Lease Term. If Tenant either fails to deliver to Landlord (i) an initial Competitor List, (ii) an update to the initial Competitor List after twenty-four (24) months have elapsed, or (ii) an update of the then most recently updated Competitor List after twenty-four (24) months have elapsed, then Landlord may give to Tenant written notice requesting Tenant deliver to Landlord either the initial Competitor List or an updated Competitor List, as applicable, and Tenant shall thereafter have ten (10) business days to deliver to Landlord a Competitor List identifying no more than ten (10) companies, and such Competitors List shall be valid for the ensuing twenty-four (24) months. If Tenant fails to deliver to Landlord an initial Competitor List, Landlord may give to Tenant a second written notice reminding Tenant of the need to provide an initial Competitor List and if Tenant fails to provide such an initial Competitor List, then Landlord shall not be subject to any prohibition relating to exterior Building signage on the North Tower for the ensuing twenty-four (24) months; if Tenant fails to deliver to Landlord an updated Competitor List within the time period for Tenant's response, then the previous Competitor List will continue to remain valid for an additional, ensuing twenty-four (24) months. Notwithstanding anything to the contrary contained in this Section 23.4, Landlord shall (i) be entitled to grant any retail tenants the rights to install their standard building sign package, including eyebrow signage, blade signage and store front signage, on or about their premises, (ii) be entitled to grant any tenants monument signage rights, and (iii) have no responsibility or liability for any exterior Building signage in any way attributable to Dropbox.

24. COMPLIANCE WITH LAW

24.1 **By Tenant**. Tenant shall not do anything or suffer anything to be done by any Tenant Party in or about the Premises or the Project which will in any way conflict with any law, statute, ordinance or other federal, state or local governmental rule, regulation or requirement now in force or which may hereafter be enacted or promulgated (collectively, "**Applicable Laws**"). At its sole cost and expense, Tenant shall promptly comply with all such Applicable Laws which relate to (i) Tenant's use of the Premises, (ii) any Alterations made by Tenant to the Premises or the Tenant Improvements, or (iii) the Base Building, but as to the Base Building, only to the extent such obligations are triggered by Alterations or Tenant Improvements to the extent such Alterations are not normal and customary business office improvements in Comparable Buildings, or triggered by the Tenant Improvements to the extent such Tenant Improvements ae not normal and customary business office improvements, or triggered by Tenant's particular use of the Premises and Project as opposed to customary business office use. Tenant shall not, however, be responsible for the cost of complying with Applicable Laws to the extent that any such compliance is required as a result of the Base Building failing to comply with Applicable Laws in effect as of date the Building was substantially completed (i.e., 2018). Notwithstanding the foregoing terms of this Article 24 to the contrary, Tenant may defer such compliance with Applicable Laws while Tenant contests, in a court of proper jurisdiction, in good faith, the applicability of such Applicable Laws to the Premises or Tenant's specific use or occupancy of the Premises; provided, however, Tenant may only defer such compliance if such deferral shall not (a) prohibit Tenant from obtaining or maintaining a certificate of occupancy for the Premises, (b) prohibit Landlord from obtaining or maintaining a certificate of occupancy for the Building or any portion thereof, (c) unreasonably and materially affect the safety of the employees and/or invitees of Landlord or of any tenant in the Building (including Tenant), (d) create a significant health hazard for the employees and/or invitees of Landlord or of any tenant in the Building (including Tenant), (e) otherwise materially and adversely affect Tenant's use of or access to the Buildings or the Premises, or (f) impose material obligations, liability, fines, or penalties upon Landlord or any other tenant of the Building, or would materially and

adversely affect the use of or access to the Building by Landlord or other tenants or invitees of the Building. The judgment of any court of competent jurisdiction or the admission of Tenant in any judicial action, regardless of whether Landlord is a party thereto, that Tenant has violated any of said governmental measures, shall be conclusive of that fact as between Landlord and Tenant. Landlord shall comply with all Applicable Laws relating to the Common Areas of the Building, provided that compliance with such Applicable Laws is not the responsibility of Tenant under this Lease, and provided further that Landlord's failure to comply therewith would prohibit Tenant from obtaining or maintaining a certificate of occupancy for the Premises, or would unreasonably and materially affect the safety of Tenant's employees or create a significant health hazard for Tenant's employees, or would otherwise materially and adversely affect Tenant's use of or access to the Premises. Landlord shall be permitted to include in Operating Expenses any costs or expenses incurred by Landlord under this Article 24 to the extent not prohibited by the terms of Section 4.2.4 above.

24.2 **By Landlord**. Except as provided in the Tenant Work Letter, to the extent required in order for Tenant to obtain a Certificate of Occupancy to legally occupy the Premises for normal and customary office use, assuming normal and customary office occupancy density, or to the extent required in order for Tenant to pull a construction permit or to otherwise comply with the requirements of the applicable permitting authority, Landlord (rather than Tenant) shall comply with all Applicable Laws relating to the Base Building and Common Areas, except to the extent such compliance is triggered by (a) Tenant's particular use of the Premises for other than normal and customary business office use or (b) Tenant's construction of Alterations or Improvements in the Premises that are not normal and customary office improvements for Comparable Buildings in which case compliance with such Applicable Laws shall be the responsibility of Tenant under this Lease. Landlord shall be permitted to include in Operating Expenses any costs or expenses incurred by Landlord under this Article 24 to the extent not prohibited by the terms of Article 4 above.

24.3 **Certified Access Specialist**. For purposes of Section 1938 of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that neither the Premises, the Building nor the Common Areas have undergone inspection by a Certified Access Specialist (CASp). Pursuant to California Civil Code Section 1938, Tenant is hereby notified as follows: **"A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of any CASp inspection, the payment of the fee for the CASp inspection and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the premises."** If Tenant requests to perform a CASp inspection of the Premises, Tenant shall, at its cost, retain a CASp approved by Landlord (provided that Landlord may designate the CASp, at Landlord's option) to perform the inspection of the Premises at a time agreed upon by the parties. Tenant shall provide Landlord with a copy of any report or certificate issued by the CASp (the "**CASp Report**"). Landlord and Tenant agree that any modifications necessary to correct violations of construction-related accessibility standards identified in the CASp Report shall be the responsibility of Tenant. Tenant agrees to keep the information in the CASp Report confidential except as necessary for the Tenant to complete such modifications.

24.4 **Underlying Documents**. Tenant shall comply with all easements, licenses, operating agreements, declarations, restrictive covenants, or instruments pertaining to the sharing of costs by Landlord with respect to the Project, including, without limitation, any covenants, conditions and restrictions affecting the Project, and reciprocal easement agreements affecting the Project, any parking licenses, and any agreements with transit agencies affecting the Project (collectively, "**Underlying Documents**"), including, without limitation, (i) that certain Amended and Restated Declaration and Agreement of Covenants, Conditions and Restrictions for the UCSF Mission Bay Campus recorded July 19, 1999 in the Official Records as Instrument No. 99¬G622193-00, (ii) that certain Master Declaration of Covenants, Conditions, Restrictions and Reservation of Easements for Mission Bay Commercial, recorded January 16, 2001 in the Official Records as Instrument No. 2001-G889923-00, (iii) that certain Mission Bay South Owner Participation Agreement between the Redevelopment Agency of the City and County of San Francisco (the "**Redevelopment Agency**") and Catellus Development Corporation ("**CDC**") recorded December 3, 1998 in the Official Records as Instrument No. 98-G477258-00 (as amended, the "**OPA**"), (iv) that certain Redevelopment Plan for the Mission Bay South Redevelopment Project recorded November 18, 1998 in the Official Records as Instrument

No. 98-G470337-00 (the "**Redevelopment Plan**"), and (v) that certain Mission Bay South Redevelopment Plan Area Declaration of Restrictions recorded December 3, 1998 in the Official Records as Instrument No. 98-G477250-00. Additionally, Tenant acknowledges that the Project may be subject to future Underlying Documents, which Landlord, in Landlord's discretion, deems reasonably necessary or desirable, and Tenant agrees that this Lease shall be subject and subordinate to such Underlying Documents and Tenant shall promptly execute and acknowledge, within fifteen (15) business days of a request by Landlord, a "Recognition of Covenants, Conditions, and Restrictions," in a form substantially similar to that attached hereto as **Exhibit 24.4** agreeing to and acknowledging the applicable Underlying Document.

25. LATE CHARGES

If any installment of Rent or any other sum due from Tenant shall not be received by Landlord or Landlord's designee within five (5) business days after the date due, then Tenant shall pay to Landlord a late charge equal to five percent (5%) of the overdue amount plus any reasonable attorneys' fees incurred by Landlord by reason of Tenant's failure to pay Rent and/or other charges when due hereunder. Notwithstanding the foregoing, Landlord shall not charge Tenant a late charge for the first (1st) late payment in any twelve (12) month period unless Tenant fails to timely pay such amount within five (5) business days following notice from Landlord that such amount is past due. The late charge shall be deemed Additional Rent and the right to require it shall be in addition to all of Landlord's other rights and remedies hereunder or at law and shall not be construed as liquidated damages or as limiting Landlord's remedies in any manner. In addition to the late charge described above, any Rent or other amounts owing hereunder which are not paid within ten (10) days after the date they are due shall bear interest from the date when due until paid at a rate per annum equal to the lesser of (i) the annual "**Bank Prime Loan**" rate cited in the Federal Reserve Statistical Release Publication H.15, published on the first Tuesday of each calendar month (or such other comparable index as Landlord and Tenant shall reasonably agree upon if such rate ceases to be published) plus four (4) percentage points, and (ii) the highest rate permitted by Applicable Law.

26. LANDLORD'S RIGHT TO CURE DEFAULT; PAYMENTS BY TENANT

26.1 **Landlord's Cure**. All covenants and agreements to be kept or performed by Tenant under this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any reduction of Rent, except to the extent, if any, otherwise expressly provided herein. If Tenant shall fail to perform any obligation under this Lease, and such failure shall continue in excess of the time allowed under Section 19.1.2 above, unless a specific time period is otherwise stated in this Lease, Landlord may, but shall not be obligated to, make any such payment or perform any such act on Tenant's part without waiving its rights based upon any default of Tenant and without releasing Tenant from any obligations hereunder. Except as may be specifically provided to the contrary in this Lease, Tenant shall pay to Landlord, within five (5) days after delivery by Landlord to Tenant of statements therefor: (i) sums equal to expenditures reasonably made and obligations incurred by Landlord in connection with the remedying by Landlord of Tenant's defaults pursuant to the provisions of Section 26.1; (ii) sums equal to all losses, costs, liabilities, damages and expenses referred to in Article 10 of this Lease; and (iii) sums equal to all expenditures made and obligations incurred by Landlord in collecting or attempting to collect the Rent or in enforcing or attempting to enforce any rights of Landlord under this Lease or pursuant to law, including, without limitation, all reasonable legal fees and other amounts so expended. Tenant's obligations under this Section 26.1 shall survive the expiration or sooner termination of the Lease Term.

27. PROJECT CONTROL BY LANDLORD; ENTRY BY LANDLORD

27.1 **Project Control**. Landlord reserves full control over the Building and the Project to the extent not inconsistent with Tenant's enjoyment of the Premises as provided by this Lease. This reservation includes Landlord's right to subdivide the Project; convert the Building or Project to condominium units; change the size of the Project by selling all or a portion of the Project or adding real property and any improvements thereon to the Project; grant assessments and licenses to third parties; maintain or establish ownership of the Building separate from fee title to the Property; make additions to or reconstruct portions of the Building and the Project; install, use, maintain, repair, replace and relocate for service to the Premises and other parts of the Building or the Project pipes, ducts, conduits, wires and appurtenant fixtures, wherever located in the Premises, the Building or elsewhere at the Project; and alter or relocate any other Common Area or facility, including private drives, lobbies and entrances. Landlord's right pursuant to this Section 27.1, including without limitation the rights to construct, maintain, relocate, alter, improve, or adjust the Building or the Project shall be subject to the condition that (i) the exercise of any of such rights shall

not materially and adversely interfere with Tenant's use of the Premises or materially decrease the number of Tenant's parking spaces, (ii) Landlord shall provide reasonable prior notice to Tenant before exercising any such rights which may materially and adversely interfere with Tenant's use of the Premises, provided that such use of the Premises is in accordance with the Permitted Use, and (iii) Landlord shall use reasonable efforts to minimize to the extent possible any interference with Tenant's business, provided that such business is in accordance with the Permitted Use, including, when reasonable, scheduling such work after business hours or on weekends. Possession of areas of the Premises necessary for utilities, services, safety and operation of the Building is reserved to Landlord. Notwithstanding the foregoing, Landlord shall provide Tenant reasonable prior notice of required access to the Premises for such activities.

27.2 **Entry by Landlord**. Landlord reserves the right at all reasonable times and upon not less than three (3) days' prior notice to Tenant (except in the case of an emergency or with respect to regularly scheduled services) to enter the Premises to (i) inspect them; (ii) show the Premises to prospective purchasers, or to current or prospective mortgagees, ground or underlying lessors or insurers or, during the last nine (9) months of the Lease Term, to prospective tenants; (iii) post notices of non-responsibility (to the extent applicable pursuant to then Applicable Law); or (iv) alter, improve or repair the Premises or the Building, or for structural alterations, repairs or improvements to the Building or the Building's systems and equipment. Notwithstanding the foregoing, if Landlord desires to enter the Premises upon less than three (3) days' notice, Tenant shall use good faith, diligent efforts to accommodate Landlord's entry upon such shorter notice. Tenant shall additionally have the right to require that Landlord be accompanied by a representative of Tenant during any such entry as an escort for Landlord's personnel so long as Tenant makes a representative available at commercially reasonable times; provided, however, any entry into the BSL 3 laboratory area shall be restricted to persons (i) with proper training as to Tenant's applicable safety and security protocols, (ii) appropriate personal protective equipment as reasonably required by Tenant, and (iii) accompanied by a representative of Tenant as an escort for such persons (which representative Tenant shall make available at all commercially reasonable times). Provided that Landlord employs commercially reasonable efforts to minimize interference with the conduct of Tenant's business in connection with entries into the Premises, Landlord may make any such entries without creating a default by Landlord and shall take such reasonable steps as required to accomplish the stated purposes. In making any such entry, Landlord shall use commercially reasonable efforts to follow, and cause third parties making entry at the request of Landlord to follow, Tenant's safety and security protocols of which Landlord has prior notice. In an emergency, Landlord shall have the right to use any means that Landlord may deem proper to open the doors in and to the Premises. Landlord also shall have the right at any time, without the same constituting an actual or constructive eviction and without incurring any liability to Tenant therefor, to change the arrangement or location of entrances or passageways, doors and doorways, and corridors, elevators, stairs, toilets, or other public parts of the Building and to change the name, address, number or designation by which the Premises is commonly known, provided any such change does not (A) unreasonably reduce, interfere with or deprive Tenant of access to the Premises nor compromise the safety and security protocols applicable to the laboratory areas within the Premises, or (B) reduce the rentable area (except by a *de minimis* amount) of the Premises. Any entry into the Premises by Landlord in the manner hereinbefore described shall not be deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an actual or constructive eviction of Tenant from any portion of the Premises and the Base Rent (and any other item of Rent) shall under no circumstances abate while said repairs, alterations, improvements, additions or restorations are being made, by reason of loss or interruption of business of Tenant, or otherwise. If Tenant shall not be present when for any reason entry into the Premises shall be necessary or permissible, Landlord or Landlord's agents, representatives, contractors or employees may enter the same without rendering Landlord or such agents liable therefor if during such entry Landlord or Landlord's agents shall accord reasonable care under the circumstances to Tenant's Property, and without in any manner affecting this Lease. Tenant shall, at all times during the Term, be responsible for ensuring that Landlord has any and all keys, cards, codes or other means necessary to access the Premises.

28. TENANT PARKING

28.1 **Parking Passes**. During the Lease Term Landlord shall provide Tenant with parking passes for use by standard size automobiles in an amount equal to the number of parking passes set forth in Section 11 of the Summary, which parking passes shall pertain to the Project parking facility facilities (the "**Parking Facilities**"). All such parking shall be on a first-come, first-serve basis in common with others entitled to use the same. Tenant's continued right to use the parking passes is conditioned upon Tenant abiding by all rules and regulations which are prescribed from time to time for the orderly operation and use of the parking facility where the parking passes provide access (including

any sticker or other identification system established by Landlord and the prohibition of vehicle repair and maintenance activities in the parking facilities), and Tenant shall cooperate in seeing that any Tenant Parties and Tenant visitors also comply with such rules and regulations. Tenant's use of the parking passes for parking at the Project shall be at Tenant's sole risk and Tenant acknowledges and agrees that Landlord shall have no liability whatsoever for damage to the vehicles of Tenant, its employees and/or visitors, or for other personal injury or property damage or theft relating to or connected with the parking rights granted herein or any of Tenant's, its employees' and/or visitors' use of the parking facilities. Landlord shall have the right to assign its obligations under this Section 28 to an affiliate of Landlord or a third-party parking manager or operator, in which case Tenant shall make any payments due under this Section 28 directly to such other entity.

28.2 **Parking Pass Rates**. Tenant shall pay to Landlord for Parking Passes on a monthly basis the monthly parking rate charged by Landlord, which monthly rate for Parking Passes (the "**Parking Rate**") shall initially be equal to, and during the Lease Term shall not be less than, $345.00 per Parking Pass per month (the "**Parking Rate Floor**"). Subject to the Parking Rate Floor, the Parking Rate shall be adjusted annually to be consistent with the prevailing monthly parking rate for similar parking spaces then being charged by landlords in Mission Bay. In addition, Tenant shall be responsible for the full amount of any taxes imposed by any governmental authority in connection with the renting of such Parking Passes by Tenant for the use of the Parking Facilities by Tenant.

28.3 **Use of Parking Passes**. Tenant shall cooperate with Landlord to ensure that its employees comply with all reasonable rules and regulations which are prescribed from time to time for the orderly operation and use of the Parking Facilities, including any sticker or other identification system established by Landlord. Landlord specifically reserves the right to change the size, configuration, design, layout and all other aspects of the Parking Facilities at any time and Tenant acknowledges and agrees that Landlord may, without incurring any liability to Tenant and without any abatement of Rent under this Lease, from time to time, temporarily close-off or restrict access to the Parking Facilities for purposes of permitting or facilitating any such construction, alteration or improvements; provided, however, that Landlord will use reasonable efforts to provide Tenant with reasonable advance notice of any such anticipated temporary close-off or restriction in access to the Parking Facilities. Landlord may delegate its responsibilities hereunder to a parking operator in which case such parking operator shall have all the rights of control attributed hereby to the Landlord. The Parking Passes rented by Tenant pursuant to this Article 28 are provided to Tenant solely for use by Tenant's own personnel and such passes may not be transferred, assigned, subleased or otherwise alienated by Tenant, except in connection with a Transfer of the Premises pursuant to Article 14 of this Lease, without Landlord's prior approval. Tenant may validate visitor parking by such method or methods as the Landlord may establish, at the validation rate from time to time generally applicable to visitor parking. Tenant's use of the Parking Facilities are on a non-exclusive basis.

28.4 **Electrical Vehicle Charging**. At least ten (10) electrical vehicle charging stations in the Parking Facilities shall be available for non-exclusive use by Tenant on a first-come, first-served basis.

28.5 **Public Parking Use**. Landlord shall have the right to permit use (the "**Public Parking Use**") of the Parking Facilities by the general public (or for any other use). Landlord may accommodate the Public Parking Use through valet parking, tandem or stack parking, or any other parking program using parking personnel and/or systems and equipment; provided, however, in connection with the Public Parking Use, Landlord shall cooperate with Tenant to minimize interference with Tenant's use of the Parking Facilities, which may include developing a system to partially or totally segregate the areas designated for Public Parking Use in the Parking Facilities from the areas designated for use (the "**Project Parking Use**") by Tenant, other tenants or occupants of the Project, visitors of the Project, transient parkers of the Project, and Landlord and its affiliates and service providers for the Project (collectively, the "**Project Related Parkers**"). To account for the shared use of the Parking Facilities for the Public Parking Use and Project Parking Use, Landlord and Tenant agree that any incremental increase in (i) parking and security personnel costs and (ii) costs for parking access control equipment, which is directly attributable to the Public Parking Use shall be excluded from Operating Expenses.

28.6 **Storage Use**. [***].

29. MISCELLANEOUS PROVISIONS

29.1 **Terms; Captions**. The words "**Landlord**" and "**Tenant**" as used herein shall include the plural as well as the singular. The necessary grammatical changes required to make the provisions hereof apply either to corporations

or partnerships or individuals, men or women, as the case may require, shall in all cases be assumed as though in each case fully expressed. The captions of Articles and Sections are for convenience only and shall not be deemed to limit, construe, affect or alter the meaning of such Articles and Sections.

29.2 **Binding Effect**. Subject to all other provisions of this Lease, each of the covenants, conditions and provisions of this Lease shall extend to and shall, as the case may require, bind or inure to the benefit not only of Landlord and of Tenant, but also of their respective heirs, personal representatives, successors or assigns, provided this clause shall not permit any assignment by Tenant contrary to the provisions of Article 14 of this Lease.

29.3 **No Air Rights**. No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease. If at any time any windows of the Premises are temporarily darkened or the light or view therefrom is obstructed by reason of any repairs, improvements, maintenance or cleaning in or about the Project, the same shall be without liability to Landlord and without any reduction or diminution of Tenant's obligations under this Lease.

29.4 **Modification of Lease**. Should any current or prospective mortgagee or ground lessor for the Building or Project require a modification of this Lease, which modification will not cause an increased cost or expense to Tenant or in any other way materially and adversely change the rights and obligations of Tenant hereunder, then and in such event, Tenant agrees that this Lease may be so modified and agrees to execute whatever documents are reasonably required therefor and to deliver the same to Landlord within ten (10) business days following a request therefor.

29.5 **Transfer of Landlord's Interest**. Tenant acknowledges that Landlord has the right to transfer all or any portion of its interest in the Project or Building and in this Lease, and Tenant agrees that in the event of any such transfer, Landlord shall automatically be released from all liability under this Lease accruing from and after the date of such transfer, and Tenant agrees to look solely to such transferee for the performance of Landlord's obligations hereunder after the date of transfer and such transferee shall be deemed to have fully assumed and be liable for all obligations of this Lease to be performed by Landlord and Tenant shall attorn to such transferee.

29.6 **Prohibition Against Recording**. Neither this Lease, nor any memorandum thereof, affidavit or other writing with respect thereto, shall be recorded by Tenant or any one acting through, under or on behalf of Tenant.

29.7 **Landlord's Title**. Landlord's title is and always shall be paramount to the title of Tenant. Nothing herein contained shall empower Tenant to do any act which can, shall or may encumber the title of Landlord.

29.8 **Relationship of Parties**. Nothing contained in this Lease shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent, partnership, joint venturer or any association between Landlord and Tenant.

29.9 **Application of Payments**. Landlord shall have the right to apply payments received from Tenant pursuant to this Lease, regardless of Tenant's designation of such payments, to satisfy any obligations of Tenant hereunder, in such order and amounts as Landlord, in its sole discretion, may elect.

29.10 **Time of Essence**. Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

29.11 **Partial Invalidity**. If any term, provision or condition contained in this Lease shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, provision or condition to persons or circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and each and every other term, provision and condition of this Lease shall be valid and enforceable to the fullest extent possible permitted by law.

29.12 **No Warranty**. In executing and delivering this Lease, Tenant has not relied on any representations, including, but not limited to, any representation as to the amount of any item comprising Additional Rent or the amount of the Additional Rent in the aggregate or that Landlord is furnishing the same services to other tenants, at all, on the same level or on the same basis, or any warranty or any statement of Landlord which is not expressly set forth herein.

29.13 **Landlord Exculpation**. The liability of Landlord or the Landlord Parties to Tenant for any default by Landlord under this Lease or arising in connection herewith or with Landlord's operation, management, leasing, repair, renovation, alteration or any other matter relating to the Project or the Premises shall be limited solely and exclusively to an amount which is equal to the interest of Landlord in the Project. Neither Landlord, nor any of the Landlord Parties shall have any personal liability therefor, and Tenant hereby expressly waives and releases such personal liability on behalf of itself and all persons claiming by, through or under Tenant. The limitations of liability contained in this Section 29.13 shall inure to the benefit of Landlord's and the Landlord Parties' present and future partners, beneficiaries, officers, directors, trustees, shareholders, agents and employees, and their respective partners, heirs, successors and assigns. Under no circumstances shall any present or future partner of Landlord (if Landlord is a partnership), or trustee or beneficiary (if Landlord or any partner of Landlord is a trust), have any liability for the performance of Landlord's obligations under this Lease. Notwithstanding any contrary provision herein, neither Landlord nor the Landlord Parties shall be liable under any circumstances for consequential or indirect damages, including without limitation injury or damage to, or interference with, Tenant's business, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring.

29.14 **Entire Agreement**. It is understood and acknowledged that there are no oral agreements between the parties hereto affecting this Lease and this Lease constitutes the parties' entire agreement with respect to the leasing of the Premises and supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by Landlord to Tenant with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. None of the terms, covenants, conditions or provisions of this Lease can be modified, deleted or added to except in writing signed by the parties hereto.

29.15 **REIT.** Tenant acknowledges that the Company, an affiliate of Landlord, elects to be taxed as a real estate investment trust (a "**REIT**") under the Code. Tenant hereby agrees to modifications of this Lease required to retain or clarify the Company's status as a REIT, provided such modifications: (a) are reasonable, (b) do not adversely affect in a material manner Tenant's use of the Premises as herein permitted, and (c) do not increase the Base Rent, Additional Rent and other sums to be paid by Tenant or Tenant's other obligations pursuant to this Lease, or reduce any rights of Tenant under this Lease, then Landlord may submit to Tenant an amendment to this Lease incorporating such required modifications, and Tenant shall execute, acknowledge and deliver such amendment to Landlord within ten (10) days after Tenant's receipt thereof.

29.16 **Right to Lease**. Landlord reserves the absolute right to effect such other tenancies in the Project as Landlord in the exercise of its sole business judgment shall determine to best promote the interests of the Building or Project. Tenant does not rely on the fact, nor does Landlord represent, that any specific tenant or type or number of tenants shall, during the Lease Term, occupy any space in the Building or Project.

29.17 **Force Majeure**. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, acts of war, terrorist acts, governmental action or inaction, inability to obtain services, labor, or materials or reasonable substitutes therefor, governmental actions, civil commotions, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform, except with respect to the obligations imposed with regard to Rent and other charges to be paid by Tenant pursuant to this Lease (collectively, a "**Force Majeure**"), notwithstanding anything to the contrary contained in this Lease, shall excuse the performance of such party for a period equal to any such prevention, delay or stoppage and, therefore, if this Lease specifies a time period for performance of an obligation of either party, that time period shall be extended by the period of any delay in such party's performance caused by a Force Majeure.

29.18 **Notices**. All notices, demands, statements, designations, approvals or other communications (collectively, "**Notices**") given or required to be given by either party to the other hereunder or by law shall be in writing, shall be (A) sent by United States certified or registered mail, postage prepaid, return receipt requested ("**Mail**"), (B) delivered by a nationally recognized overnight courier, or (C) delivered personally. Any Notice shall be sent, transmitted, or delivered to Tenant or Landlord, as applicable, at the appropriate addresses set forth in Sections 12 and 13 of the Summary, or to such other address for either party as that party may designate in a Notice to the other. Any Notice will be deemed given (i) three (3) business days after the date it is posted if sent by Mail, (ii) the date the overnight courier delivery is made, or (iii) the date personal delivery is made (unless such delivery takes place after hours or on a holiday or weekend, in which event the Notice shall be deemed give on the next succeeding business

day. The party delivering Notice shall use commercially reasonable efforts to provide a courtesy copy of each such Notice to the receiving party via electronic mail.

29.19 **Waiver of Redemption by Tenant**. Tenant hereby waives, for Tenant and for all those claiming under Tenant, any and all rights now or hereafter existing to redeem by order or judgment of any court or by any legal process or writ, Tenant's right of occupancy of the Premises after any termination of this Lease.

29.20 **Joint and Several**. If there is more than one Tenant, the obligations imposed upon Tenant under this Lease shall be joint and several.

29.21 **Authority**. If Tenant is a corporation, trust or partnership, Tenant hereby represents and warrants that Tenant (a) is a duly formed and existing entity qualified to do business in the State of Delaware and is qualified as a foreign entity authorized to do business in the State of California and (b) has full right and authority to execute and deliver this Lease, and (c) each person signing on behalf of Tenant is authorized to do so.

29.22 **Attorneys' Fees**. In the event that either Landlord or Tenant should bring suit for the possession of the Premises, for the recovery of any sum due under this Lease, or because of the breach of any provision of this Lease or for any other relief against the other, then all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party therein shall be paid by the other party, which obligation on the part of the other party shall be deemed to have accrued on the date of the commencement of such action and shall be enforceable whether or not the action is prosecuted to judgment.

29.23 **Governing Law; WAIVER OF TRIAL BY JURY**. This Lease shall be construed and enforced in accordance with the laws of the State of California. Landlord and Tenant agree that any disputes arising in connection with this Lease (including but not limited to a determination of any and all of the issues in such dispute, whether of fact or of law) shall be resolved (and a decision shall be rendered) by way of a general reference as provided for in Part 2, Title 8, Chapter 6 (§§ 638 et. seq.) of the California Code of Civil Procedure, or any successor California statute governing resolution of disputes by a court appointed referee. Nothing within this Section 29.23 shall apply to an unlawful detainer action. LANDLORD AND TENANT EACH ACKNOWLEDGES THAT IT IS AWARE OF AND HAS HAD THE ADVICE OF COUNSEL OF ITS CHOICE WITH RESPECT TO ITS RIGHT TO TRIAL BY JURY, AND, TO THE EXTENT PERMITTED BY LAW, EACH PARTY DOES HEREBY EXPRESSLY AND KNOWINGLY WAIVE AND RELEASE ALL SUCH RIGHTS TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS LEASE. The waiver of trial by jury in the immediately preceding Section 29.23 is voluntary and intentionally made by Landlord and Tenant.

29.24 **Submission of Lease**. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of, option for or option to lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

29.25 **Brokers**. Landlord and Tenant hereby warrant to each other that they have had no dealings with any real estate broker or agent in connection with the negotiation of this Lease, excepting only the real estate brokers or agents specified in Section 13 of the Summary (the "**Brokers**"), and that they know of no other real estate broker or agent who is entitled to a commission in connection with this Lease. Each party agrees to indemnify and defend the other party against and hold the other party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party. The terms of this Section 29.24 shall survive the expiration or earlier termination of the Lease Term. Landlord shall pay a commission to the Brokers pursuant to a separate written agreement between Landlord and the Brokers.

29.26 **Independent Covenants**. This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent and not dependent and Tenant hereby expressly waives the benefit of any statute to the contrary; and, except as otherwise expressly provided for herein, Tenant agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to any setoff of the Rent or other amounts owing hereunder against Landlord.

29.27 **Project or Building Name, Address and Signage**. Landlord shall have the right at any time to change the name and/or address of the Project or Building and to install, affix and maintain any and all signs on the exterior and on the interior of the Project or Building as Landlord may, in Landlord's sole discretion, desire. Tenant shall not use the name of the Project or Building or use pictures or illustrations of the Project or Building in advertising or other publicity or for any purpose other than as the address of the business to be conducted by Tenant in the Premises, without the prior written consent of Landlord.

29.28 **Counterparts**. This Lease may be executed in counterparts with the same effect as if both parties hereto had executed the same document. Both counterparts shall be construed together and shall constitute a single lease. Delivery by fax or by electronic mail file attachment of any executed counterpart to this Lease will be deemed the equivalent of the delivery of the original executed instrument. This Lease may be executed in so-called "pdf" format and each party has the right to rely upon a pdf counterpart of this Sublease signed by the other party to the same extent as if such party had received an original counterpart. Counterparts may also be delivered via electronic signature complying with the U.S. federal ESIGN Act of 2000, (e.g., www.docusign.com or echosign, etc.) and any counterpart so delivered shall be deemed to have been duly and validly delivered, valid and effective for all purposes and binding upon the parties hereto.

29.29 **Confidentiality**. Tenant acknowledges that the content of this Lease and any related documents are confidential information. Tenant shall keep such confidential information strictly confidential and shall not disclose such confidential information to any person or entity other than Tenant's financial, legal, and space planning consultants, or its directors, officers, employees, attorneys, accountants, prospective lenders, prospective purchasers, brokers, underwriters, and current and potential partners or investors, or to the extent that disclosure is mandated by Applicable Laws, the Securities Exchange Commission, the rules of any public exchange upon which Tenant's shares are from time to time traded, or in connection with a stock or debt offering. Additionally, Tenant shall have the right to deliver a copy of this Lease to any proposed subtenant or assignee (with, in the case of a subtenant, economic terms redacted), provided such subtenant or assignee agrees to keep the contents hereof confidential. Notwithstanding the foregoing, the parties acknowledge that Landlord may use the name of Tenant without Tenant's consent (i) on the Building directory, and (ii) to the extent that Tenant is only referenced by name as a customer or tenant of Landlord, in investor presentations and earnings calls or earnings related releases, and in connection with the marketing efforts of Landlord or any real estate broker or agent on Landlord's behalf with respect to the proposed leasing, financing, sale or other conveyance of the Building, or any portion thereof. This provision shall survive the expiration or earlier termination of this Lease for one (1) year.

29.30 **Renovations**. It is specifically understood and agreed that Landlord has made no representation or warranty to Tenant and has no obligation and has made no promises to alter, remodel, improve, renovate, repair or decorate the Premises, Buildings, Project, or any part thereof and that no representations respecting the condition of the Premises, the Buildings, or Project have been made by Landlord to Tenant except as specifically set forth herein or in the Work Letter. However, Landlord may during the Lease Term renovate, improve, alter, or modify (collectively, the "**Renovations**") the Project and/or the Buildings, including without limitation, the Parking Facilities, Common Areas, Building Systems and/or Building Structure, which Renovations may include, without limitation, (i) modifying the Common Areas and tenant spaces to comply with Applicable Laws, including regulations relating to the physically disabled, seismic conditions, and Project safety and security, and (ii) installing new floor covering, lighting, and wall coverings in the Building Common Areas, and in connection with any Renovations, Landlord may, among other things, erect scaffolding or other necessary structures in the Project, limit or eliminate access to portions of the Project, including portions of the Common Areas, or perform work in the Project, which work may create noise, dust or leave debris in the Buildings. Landlord shall use commercially reasonable efforts to undertake and complete any Renovations in a manner which does not materially, adversely affect Tenant's use of or access to the Premises. Notwithstanding the foregoing, Tenant hereby agrees that such Renovations and Landlord's actions in connection with such Renovations shall in no way constitute a constructive eviction of Tenant nor entitle Tenant to any abatement of Rent. Landlord shall have no responsibility or for any reason be liable to Tenant for any direct or indirect injury to or interference with Tenant's business arising from the Renovations, nor shall Tenant be entitled to any compensation or damages from Landlord for loss of the use of the whole or any part of the Premises or of Tenant's personal property or improvements resulting from the Renovations or Landlord's actions in connection with such Renovations, or for any inconvenience or annoyance occasioned by such Renovations or Landlord's actions, provided that the foregoing shall not limit Landlord's liability, if any, pursuant to Applicable Law for personal injury and property damage to the extent caused by the gross negligence or willful misconduct of Landlord, its agents, employees or contractors.

29.31 **No Violation**. Tenant hereby warrants and represents that neither its execution of nor performance under this Lease shall cause Tenant to be in violation of any agreement, instrument, contract, law, rule or regulation by which Tenant is bound, and Tenant shall protect, defend, indemnify and hold Landlord harmless against any claims, demands, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable attorneys' fees and costs, arising from Tenant's breach of this warranty and representation.

29.32 **Communications and Computer Lines**. Tenant may install, maintain, replace, remove or use any communications or computer wires and cables serving the Premises (collectively, the "**Lines**") at the Building, provided that (i) Tenant shall obtain Landlord's prior written consent to the installation of any such Lines (such consent not to be unreasonably withheld), use an experienced and qualified contractor approved in writing by Landlord (such approval not to be unreasonably withheld), and comply with all of the other provisions of Articles 7 and 8 of this Lease, (ii) an acceptable amount of space for additional Lines shall be maintained for future occupants of the Project, as determined in Landlord's reasonable opinion, (iii) the Lines (including riser cables) shall be appropriately insulated to prevent excessive electromagnetic fields or radiation, and shall be surrounded by a protective conduit reasonably acceptable to Landlord, (iv) any Lines servicing the Premises shall comply with all Applicable Laws, (v) as a condition to permitting the installation of new Lines, Landlord may require that Tenant remove existing Lines located in or serving the Premises that will no longer be used by Tenant and repair any damage in connection with such removal, and (vi) Tenant shall pay all costs in connection therewith. Landlord reserves the right to require that Tenant remove any Lines located in or serving the Premises which are installed in violation of these provisions, or which are at any time in violation of any Applicable Laws or represent a dangerous or potentially dangerous condition. Upon the expiration of the Lease Term, or immediately following any earlier termination of this Lease, Tenant shall, at Tenant's sole cost and expense, remove all Lines installed by Tenant, and repair any damage caused by such removal.

29.33 **Transportation Management**. Tenant shall fully comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project and/or the Building, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. Such programs may include, without limitation: (i) restrictions on the number of peak-hour vehicle trips generated by Tenant; (ii) increased vehicle occupancy; (iii) implementation of an in-house ridesharing program and an employee transportation coordinator; (iv) working with employees and any Project, Building or area-wide ridesharing program manager; (v) instituting employer-sponsored incentives (financial or in-kind) to encourage employees to rideshare; and (vi) utilizing flexible work shifts for employees.

29.34 **Office and Communications Services**.

29.34.1 **The Provider**. Tenant shall be permitted to contract with an office and communications services concessionaire (the "**Provider**") selected by Tenant and subject to Landlord's reasonable approval (which may include, without limitation, cable or satellite television service).

29.34.2 **Other Terms**. Tenant acknowledges and agrees that: (i) Landlord has made no warranty or representation to Tenant with respect to the availability of any such services, or the quality, reliability or suitability thereof; (ii) Landlord shall have no responsibility or liability for the installation, alteration, repair, maintenance, furnishing, operation, adjustment or removal of any such services, equipment or facilities; and (iii) any contract or other agreement between Tenant and Provider shall be independent of this Lease, the obligations of Tenant hereunder, and the rights of Landlord hereunder, and, without limiting the foregoing, no default or failure of Provider with respect to any such services, equipment or facilities, or under any contract or agreement relating thereto, shall have any effect on this Lease or give to Tenant any offset or defense to the full and timely performance of its obligations hereunder, or entitle Tenant to any abatement of rent or additional rent or any other payment required to be made by Tenant hereunder, or constitute any accrual or constructive eviction of Tenant, or otherwise give rise to any other claim of any nature against Landlord.

29.35 **Development of the Project**.

29.35.1 **Subdivision**. Landlord reserves the right to further subdivide all or a portion of the Project. Tenant agrees to execute and deliver, upon demand by Landlord and in the form requested by Landlord, any additional documents needed to conform this Lease to the circumstances resulting from such subdivision.

29.35.2 **The Other Improvements**. If portions of the Project or property adjacent to the Project (collectively, the "**Other Improvements**") are owned by an entity other than Landlord, Landlord, at its option, may enter into an agreement with the owner or owners of any or all of the Other Improvements to provide (i) for reciprocal rights of access and/or use of the Project and the Other Improvements, (ii) for the common management, operation, maintenance, improvement and/or repair of all or any portion of the Project and the Other Improvements, (iii) for the allocation of a portion of the Direct Expenses to the Other Improvements and the operating expenses and taxes for the Other Improvements to the Project, and (iv) for the use or improvement of the Other Improvements and/or the Project in connection with the improvement, construction, and/or excavation of the Other Improvements and/or the Project. Nothing contained herein shall be deemed or construed to limit or otherwise affect Landlord's right to convey all or any portion of the Project or any other of Landlord's rights described in this Lease.

29.36 **Water Sensors**. In connection with any Tenant Improvements or Alterations to be installed in the Premises where water is utilized (such as sinks, pipes, faucets, water heaters, autoclaves, coffee machines, ice machines, water dispensers and water fountains), Tenant acknowledges and agrees that Landlord and Tenant will consider, as part of the Landlord approval process for the plans and specifications of any such Tenant Improvements or Alterations, whether to install "Water Sensors" in locations that may be reasonably expected to detect a leak occurring in the Premises. As used herein, "Water Sensors" are either web-enabled wireless water leak sensor devices designed to alert the Tenant on a twenty-four (24) hour seven (7) day per week basis if a water leak is occurring in the Premises (which water sensor device(s) located in the Premises shall be referred to herein as "**Web-Enabled Water Sensors**") or non web-enabled water leak sensor devices of a model and specifications to be approved by Landlord ("**Non Web-Enabled Water Sensors**"). To the extent Landlord and Tenant agree that Tenant will install such Water Sensors, Tenant shall, at Tenant's sole cost and expense, be responsible for installing the Water Sensors. If Tenant installs Non Web-Enabled Water Sensors that are determined by virtue of their performance to be deficient (i.e., fail to detect a water leak with the same or similar speed as the web enabled Water Sensors, or in any way fails to detect a water leak), then Tenant shall, upon Landlord's written demand, at Tenant's sole cost and expense, remove the Non Web-Enabled Water Sensors and install Web-Enabled Water Sensors in accordance with this Section 29.36. With respect to the installation of any such Water Sensors, Tenant shall use an experienced and qualified contractor reasonably approved by Landlord and comply with all of the other provisions of Article 8 of this Lease. Tenant shall, at Tenant's sole cost and expense, pursuant to Article 7 of this Lease keep any Water Sensors located in the Premises in good working order, repair and condition at all times during the Lease Term and comply with all of the other provisions of Article 7 of this Lease. Notwithstanding any provision to the contrary contained herein, Landlord has neither an obligation to monitor, repair or otherwise maintain the Water Sensors, nor an obligation to respond to any alerts it may receive from the Water Sensors or which may be generated from the Water Sensors. Upon the expiration of the Lease Term, or immediately following any earlier termination of this Lease, Tenant shall leave the Water Sensors in place together with all necessary user information such that the same may be used by a future occupant of the Premises (e.g., the Water Sensors shall be unblocked and ready for use by a third-party).

29.37 **Utility Billing Information**. In the event that Landlord permits Tenant to contract directly for the provision of electricity, gas and/or water services to the Premises with the third-party provider thereof, Tenant shall provide Landlord with a copy of each invoice received from the applicable utility provider promptly following Tenant's receipt thereof. Landlord may be required to disclose information concerning Tenant's energy usage at the Project to certain third parties, including, without limitation, prospective purchasers, lenders and tenants of the Project (the "**Tenant Energy Use Disclosure**"). Tenant hereby consents to all such Tenant Energy Use Disclosures, and Landlord shall use commercially reasonable efforts to notify Tenant of any Tenant Energy Use Disclosures made by Landlord. Further, Tenant hereby releases Landlord from any and all losses, costs, damages, expenses and liabilities relating to, arising out of and/or resulting from any Tenant Energy Use Disclosure. The terms of this Section 29.37 shall survive the expiration or earlier termination of this Lease.

29.38 **Green Cleaning/Recycling Program**. Tenant shall cooperate if and to the extent Landlord implements a green cleaning program and/or recycling or waste management program for the Project, and Tenant hereby agrees that the reasonable costs associated with any such green cleaning and/or recycling program shall be included in Operating Expenses.

29.39 **LEED Certification**. Landlord may, in Landlord's sole and absolute discretion, elect to apply to obtain or maintain a LEED certification for the Project (or portion thereof), or other applicable certification in connection with Landlord's sustainability practices for the Project (as such sustainability practices are to be determined by

Landlord, in its sole and absolute discretion, from time to time). In the event that Landlord elects to maintain the existing LEED certification for the Project, Tenant shall, at Tenant's sole cost and expense, promptly cooperate with the Landlord's efforts in connection therewith and provide Landlord with any documentation it may need in order to maintain the aforementioned certification (which cooperation may include, but shall not be limited to, Tenant complying with certain standards pertaining to the purchase of materials used in connection with any Alterations or improvements undertaken by the Tenant in the Project (other than with respect to laboratory areas), the sharing of documentation pertaining to any Alterations or improvements undertaken by Tenant in the Project with Landlord, and the sharing of Tenant's billing information pertaining to trash removal and recycling related to Tenant's operations in the Project).

29.40 **Approvals**. Whenever this Lease requires an approval, consent, determination, selection or judgment by either Landlord or Tenant, unless another standard is expressly set forth, such approval, consent, determination, selection or judgment and any conditions imposed thereby shall be reasonable and shall not be unreasonably withheld or delayed.

29.41 **Prohibited Persons; Foreign Corrupt Practices Act and Anti-Money Laundering**. Neither (i) Tenant nor any of its officers, directors or managers, or (ii) to Tenant's knowledge, any of Tenant's affiliates, nor any of their respective members, partners, other equity holders (excluding any holders of any publicly traded stock or other equity interests of Tenant, if any), officers, directors or managers is, nor prior to or during the Lease Term, will they become a person or entity with whom U.S. persons or entities are restricted from doing business under (a) the Patriot Act (as defined below), (b) any other requirements contained in the rules and regulations of the Office of Foreign Assets Control, Department of the Treasury ("**OFAC**") (including any "blocked" person or entity listed in the Annex to Executive Order Nos. 12947, 13099 and 13224 and any modifications thereto or thereof or any other person or entity named on OFAC's Specially Designated Blocked Persons List) or (c) any other U.S. statute, Executive Order (including the September 24, 2001, Executive Order Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit or Support Terrorism) or other governmental action (collectively, "**Prohibited Persons**"). Tenant is not entering into this Lease, directly or indirectly, in violation of any laws relating to drug trafficking, money laundering or predicate crimes to money laundering. As used herein, "**Patriot Act**" shall mean the USA Patriot Act of 2001, 107 Public Law 56 (October 26, 2001) and all other statutes, orders, rules and regulations of the U.S. government and its various executive departments, agencies and offices interpreting and implementing the Patriot Act.

IN WITNESS WHEREOF, Landlord and Tenant have caused this Lease to be executed the day and date first above written as a sealed California instrument.

LANDLORD:

KRE EXCHANGE OWNER LLC,
a Delaware limited liability company

By: /s/ Daniel Rudin

Name: Daniel Rudin

Its: Authorized Signatory

TENANT:

VIR BIOTECHNOLGY, INC.,
a Delaware corporation

By: /s/ Howard Horn

Name: Howard Horn

Its: CFO

By: /s/ George Scangos

Name: George Scangos

Its: CEO

EXHIBIT 1.1.1-1

PREMISES

Floors 8, 9, 10, 11 and 12 of the North Tower comprising 133,896 rentable square feet.

EXHIBIT 1.1.1-2

TENANT WORK LETTER

THIS TENANT WORK LETTER (this "**Work Letter**") is attached to and made a part of that certain Lease (the "**Lease**") between KRE EXCHANGE OWNER LLC, a Delaware limited liability company ("**Landlord**"), and VIR BIOTECHNOLOGY, INC., a Delaware corporation ("**Tenant**"). All capitalized terms used but not defined herein shall have the respective meanings given such terms in the Lease. This Work Letter sets forth the terms and conditions relating to the construction of Tenant's Improvements (defined below) in the Premises.

SECTION 2

BASE BUILDING

Subject to the terms and conditions of this Work Letter, Tenant hereby accepts the base, shell and core (i) of the Premises and (ii) of the floor(s) of the Building on which the Premises are located (collectively, the "**Base Building**"), in its current "AS IS" condition existing as of the date of the Lease and the Lease Commencement Date. Tenant shall be entitled to an improvement allowance in the maximum aggregate amount of Two Million Three Hundred Forty-Three Thousand, One Hundred Eighty Dollars ($2,343,180.00) (i.e., $17.50 per rentable square foot of the Premises) (the "**Base Building Improvement Allowance**") to be used by Tenant solely to pay for the construction of certain improvements to the Base Building as are more particularly identified in Attachment 1 to this Work Letter (which required improvements are referred to here as the "**Base Building Improvement Additions**") . Subject to Landlord's obligation to pay to Tenant the Base Building Improvement Allowance in accordance with the terms and conditions of this Work Letter, Tenant shall be solely liable for all soft and hard costs associated with the Base Building Improvement Additions. Except for the Base Building Improvement Allowance and the Tenant Improvement Allowance set forth below, Landlord shall not be obligated to make or pay for any alterations or improvements to the Premises or the Building.

For the sake of clarity, the base building condition of the Base Building to be delivered by Landlord to Tenant on the Lease Commencement Date is identified in the matrix (outlining existing base building conditions of the Base Building, including, inter alia, power, emergency power, lab exhaust, lab air supply and office air supply) attached hereto as Attachment 2 to this Work Letter (the "**Base Building Delivery Condition**"). Tenant acknowledges and agrees that Attachment 1 identifies conditions that are the Tenant's responsibility to install (and, as such, are expressly not included in Attachment 2 as being included in the Base Building Delivery Condition), subject to reimbursement to the extent of the Base Building Improvement Allowance.

Landlord acknowledges that certain of Tenant's laboratory improvements to a portion of the Premises require additional emergency power, and Landlord commits to work cooperatively with Tenant and its consultants to identify one or more solutions for Tenant's additional power needs; provided, however, the cost of designing and installing the Base Building infrastructure (in excess of the portion of the Base Building Improvement Allowance attributable to Tenant's additional power needs) to achieve the availability of additional power capacity to the Premises shall be borne solely by Tenant (i.e., the cost of all upgrades, alterations and/or additions beyond those described in the Base Building Delivery Condition shall be paid solely by Tenant).

SECTION 3

ALLOWANCE; TENANT IMPROVEMENTS

3.1 Allowance. In addition to the Base Building Improvement Allowance, Tenant shall be entitled to a one-time allowance in an amount not to exceed $36,151,920.00 with respect to the Premises in the aggregate (the "**Tenant Improvement Allowance**" and together with the Base Building Improvement Allowance, the "**Allowance**"), for the costs relating to the design, permitting and construction of the Improvements to be constructed by Tenant that are to be permanently affixed in the Premises (as applicable, the "**Tenant Improvements**"). In clarification of the foregoing, Tenant acknowledges and agrees that the Tenant Improvement Allowance will be used to pay for the cost of Tenant Improvements to the tenth (10^{th}), eleventh (11^{th}) and twelfth (12^{th}) floors (i.e., which floors are the lab floors), and in no event will Landlord be obligated to make disbursements pursuant to this Work Letter for an applicable portion of

the Premises in an amount that exceeds the amount of the Tenant Improvement Allowance applicable to such portion of the Premises; provided, however, Tenant may use up to $1,000,000.00 of the Tenant Improvement Allowance for improvements to the non-lab floors. Notwithstanding anything to the contrary set forth herein, no portion of the Allowance shall be disbursed by Landlord after twenty-four (24) months after the Lease Commencement Date; and any portion, if any, of the Allowance that is not disbursed by Landlord on or before such date shall revert to Landlord and Tenant shall have no rights thereto.

3.2 Disbursement of the Allowance.

(a) Allowance Items. Except as otherwise set forth in this Work Letter, the Allowance shall be disbursed by Landlord only for the following items and costs (collectively the "**Allowance Items**"):

(i) Payment of the fees of the Architect, Contractor, Tenant Agents and the Building Consultants (as those terms are defined below);

(ii) The payment of plan check, permit and license fees relating to the construction of the Tenant Improvements;

(iii) The cost of construction of the Tenant Improvements, including, without limitation, after hours charges, testing and inspection costs, trash removal costs, and contractors' fees and general conditions;

(iv) The cost of any changes to the Building, any portion of the Premises or any building systems serving any portion of the Premises when such changes are required by the Construction Drawings, such cost to include all architectural and/or engineering fees and expenses incurred in connection therewith;

(v) The cost of any changes to the Construction Drawings or Tenant Improvements required by applicable building codes (collectively, the "**Code**");

(vi) The fees of Tenant's project manager (if any) up to a maximum sum of $250,000.00;

(vii) The costs of Landlord's charges and fees (Section 2.6) and Landlord's Management Fee (defined below); and

(viii) Sales and use taxes and Title 24 fees.

For the sake of clarity, Tenant acknowledges and agrees that Tenant and Tenant's Agents will accept sole responsibility for ADA and building code compliance for all improvements designed by Tenant's Agents; provided, however, Landlord accepts responsibility for ADA and building code compliance for the Base Building of the Building and exterior areas (including path of travel from the public street to the entry of the Premises) limited to the existing conditions. If Tenant's use of the Premises or any Base Building Improvement Additions triggers a change in path of travel, Tenant shall be responsible for any ADA and building code compliance triggered by such change in path of travel.

(b) Disbursement of Allowance. During the construction of the applicable portion of the Base Building Improvement Additions and the Tenant Improvements, Landlord shall make monthly disbursements of the Base Building Improvement Allowance and the Tenant Improvement Allowance, as applicable, to reimburse Tenant for Allowance Items with respect to such Tenant Improvements and shall authorize the release of funds as follows, and otherwise in accordance with such disbursement procedures as Landlord shall reasonably require from time to time.

(i) Progress Payment Disbursements.

(A) On or before the fifth (5th) day of each calendar month during the construction of the Tenant Improvements in the applicable portion of the Premises (or such other date as Landlord may designate), Tenant shall deliver to Landlord with respect to such Tenant Improvements: (A) a request for payment from Contractor (defined below) approved by Tenant, in the form of an AIA G702/G703 application for payment (or comparable forms

reasonably approved by Landlord), showing the schedule, by trade, of percentage of completion of the applicable Tenant Improvements, detailing the portion of the work completed and the portion not completed (each, a "**Payment Request**"); (B) invoices from all of Tenant's Agents (defined below) for labor rendered and materials delivered to the Premises; (C) executed conditional mechanic's lien releases from all of Tenant's Agents who have lien rights with respect to the subject Payment Request (along with unconditional mechanics' lien releases with respect to payments made pursuant to Tenant's prior submission hereunder) in compliance with all applicable laws as reasonably determined by Landlord, including without limitation all applicable provisions of California Civil Code Sections 8132 - 8138; (D) a copy of the check(s) or online banking records which Tenant issued to pay the requested sums to Tenant's Agents; and (E) all other information reasonably requested by Landlord (collectively, the "**Payment Request Supporting Documentation**").

(B) Within forty-five (45) days after Tenant's delivery to Landlord of all Payment Request Supporting Documentation, Landlord shall deliver a check to Tenant made payable to Tenant (or, at Landlord's election, by wire transfer of immediately available funds) in payment of the lesser of: (x) the amount so requested by Tenant in its Payment Request, less a ten percent (10%) retention (the aggregate amount of such retentions to be known as the "**Final Retention**"), and (y) the balance of any remaining available portion of the applicable Allowance (not including the Final Retention), provided that if Landlord, in good faith, disputes any item in a Payment Request based on non-compliance of any work with the Approved Working Drawings (defined below) or due to any substandard work or for any other reason, and delivers a written objection to such item setting forth with reasonable particularity Landlord's reasons for its dispute (a "**Draw Dispute Notice**"), Landlord may deduct the amount of such disputed item from the payment. Landlord and Tenant shall, in good faith, endeavor to diligently resolve any such dispute. Landlord's payment of such amounts shall not be deemed Landlord's approval or acceptance of the work furnished or materials supplied as set forth in Tenant's Payment Request. Disbursements of soft costs and costs not to be paid through the Contractor shall be made based upon submittal by Tenant of satisfactory documentation for the same concurrently with Tenant's submittal of its Payment Request, and payment shall be made no later than forty-five (45) days after submittal of such documentation, provided that in no event will Landlord be obligated to pay any amounts in excess of the applicable Allowance.

(ii) Final Disbursement. Subject to the provisions of this Work Letter, following the final completion of construction of the Tenant Improvements in the applicable portion of the Premises, Landlord shall deliver to Tenant a check made payable to Tenant (or, at Landlord's election, by wire transfer of immediately available funds) in the amount of the Final Retention for such portion of the Premises, provided that (A) Tenant delivers to Landlord for the entirety of the Tenant Improvements in such portion of the Premises properly executed unconditional mechanics' lien releases from all of Tenant's Agents in compliance with all applicable laws, as reasonably determined by Landlord, including without limitation compliance with all applicable provisions of California Civil Code Sections 8132 - 8138; (B) Landlord has determined that no substandard work exists which adversely affects the mechanical, electrical, plumbing, heating, ventilating and air conditioning, life-safety or other systems of the Building or any portion of the Premises), the curtain wall of the Building or the structure or exterior appearance of the Building; (C) Architect delivers to Landlord a certificate, in a form reasonably acceptable to Landlord, certifying that the construction of such Tenant Improvements has been substantially completed in accordance with the Approved Working Drawings; (D) Tenant supplies Landlord with evidence that all governmental approvals required for Tenant to legally occupy such portion of the Premises have been obtained; and (E) Tenant has fulfilled its Completion Obligations (defined below) and has otherwise complied with Landlord's standard "close-out" requirements regarding city approvals, closeout tasks, closeout documentation regarding the general contractor, financial close-out matters, and Tenant's vendors, and as set forth in the tenant improvement guidelines (the "**Tenant Improvement Guidelines**") to be provided to Tenant by Landlord. Disbursements of soft costs and costs not to be paid through Contractor shall be made based upon submittal by Tenant of satisfactory documentation for the same, and payment shall be made concurrently with payment of the Final Retention, provided that in no event will Landlord be obligated to pay any amounts in excess of the applicable Allowance.

(c) Standard Tenant Improvement Package. Landlord has established specifications for the Building standard components to be used in the construction of the Tenant Improvements in the Premises (collectively, the "**Building Standards**"), which Building Standards have been provided to Tenant by Landlord. The quality of the Tenant Improvements shall be equal to or of greater quality than the quality of the Building Standards.

(b) Exhaust Shaft Reopening. The parties acknowledge that in connection with the initial construction of the Building, Dropbox caused an exhaust shaft that ran between the 11th floor and the roof of the North Tower to be filled and taken out of service. Landlord has agreed to allow Tenant's Contractor (defined below) to undertake the work of restoring that shaft to a useable condition (as part of the Base Building Improvement Allowance, specifically # 9 in Attachment 1). Tenant has provided Landlord with the plans and specifications for such work and the Contractor's estimate of the cost thereof, and Landlord has previously approved the same. Tenant shall include the cost of such work in the Payment Request submitted to Landlord following the completion of such work.

(c) Mechanical Shaft Space. Landlord desires to install mechanical shaft space between the 8th, 9th and 10th floors of the North Tower in the two (2) locations depicted in Attachment 3 attached hereto (the "**Mechanical Shafts**"). Tenant will allow Landlord to install and pay for such Mechanical Shafts per a mutually agreed upon work schedule plan established between Landlord and Tenant. Landlord, at its sole cost and expense (in addition to and not as part of the Allowance), will relocate the existing conference rooms on floors 8, 9 and 10 to a mutually agreeable location to facilitate the installation of the Mechanical Shafts, which location has been designated pursuant to plans previously approved by Landlord and Tenant. If the installation of the Mechanical Shafts is not completed by Tenant's occupancy of such floors, then Landlord will use commercially reasonably efforts to complete the work during Tenant's nonregular business hours in order to minimize impacts to the conduct of Tenant's business operations within the Premises.

(d) Standby Power. Tenant acknowledges and accepts that Landlord will provide to it an allocation of 570 kVA of standby electrical power for the Premises. Tenant's use of such standby power must not exceed its allocated share of such standby power. If Tenant's consumption of the standby power regularly exceeds 98% of its allocated share (i.e., such 98% threshold being 558.6 kVA) for the Premises, then Tenant shall, at its sole expense, shed load on the standby power system to ensure that its usage will remain below such allocated capacity. As used herein, "shedding load" may consist of disconnecting equipment from the standby system, timing the use of equipment for non-peak hours, recircuiting to a power system with available capacity and other appropriate actions to reduce peak usage of standby electrical power. Tenant acknowledges and agrees that it shall be solely responsible for monitoring and managing at all times its consumption level of standby power; Landlord shall have no liability whatsoever for Tenant's excess use of standby power (including, without limitation, any shortfall or lack of available standby power in excess of Tenant's allocated share). Actual electrical consumption is metered and monitored through Landlord's building automation system (BAS), and Landlord will allow Tenant read-only access to Tenant's actual electrical usage data in order to facilitate Tenant's monitoring and managing of its consumption levels of standby power.

(e) Emergency Power. Tenant acknowledges and accepts that Landlord will provide to it an allocation of 35 kVA of emergency electrical power for the Premises. Tenant's use of emergency power shall be limited to Life Safety code-related functions. Tenant acknowledges and agrees that it shall be solely responsible for monitoring and managing at all times its connected load to such emergency power system; Landlord shall have no liability whatsoever for Tenant's excess use of emergency power (including, without limitation, any shortfall or lack of available emergency power in excess of Tenant's allocated share). If Tenant's connected load to such emergency power exceeds its allocated share for the Premises, then Tenant shall, at its sole expense, shed load on the emergency power system to ensure that its usage will be below such allocated capacity.

SECTION 4

CONSTRUCTION DRAWINGS

4.1 Selection of Architect; Construction Drawings. Tenant has retained DGA (the "**Architect**"), in connection with the Tenant Improvements. Tenant has retained the engineering consultants listed below (the

"**Building Consultants**") to prepare all plans and engineering working drawings and perform all work relating to mechanical, electrical and plumbing ("**MEP**"), HVAC/Air Balancing, life-safety, structural, sprinkler, and riser work:

Structural:	Forell Elsesser Engineers
MEP:	Affiliated Engineers, Inc. (AEI)
Life Safety:	Seimens
Sprinkler:	BHP
Air Balancing:	Southland Industries
Riser Management:	Sasco/LANlogic
Life Safety	Siemens
Riser Management	Metro Electric

If Tenant desires to changes any of the Building Consultants, Tenant shall obtain Landlord's prior approval. not to be unreasonably withheld, conditioned or delayed. The Space Plan and the Working Drawings (as defined below) to be prepared by Architect and the Building Consultants hereunder shall be known collectively as the "**Construction Drawings**." All Construction Drawings shall comply with the drawing format and specifications as set forth in the Tenant Improvement Guidelines and shall be subject to Landlord's approval (as approved pursuant to Sections 3.2 and 3.3 below, the "**Approved Working Drawings**"). All MEP drawings must be fully engineered and cannot be prepared on a "design-build" basis. Tenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the base building plans, and Tenant and Architect will be solely responsible for the same, and Landlord shall have no responsibility in connection therewith. Landlord's review of the Construction Drawings shall be for its sole purpose and shall not obligate Landlord to review the same, for quality, design, Code compliance or other like matters. Accordingly, notwithstanding that any Construction Drawings are reviewed by Landlord or its space planner, architect, engineers and consultants, and notwithstanding any advice or assistance that may be rendered to Tenant by Landlord or Landlord's space planner, architect, engineers, and consultants, Landlord shall have no liability whatsoever in connection therewith and shall not be responsible for any omissions or errors contained in the Construction Drawings or the Approved Working Drawings, and Tenant's waiver and indemnity set forth in the Lease shall specifically apply to the Construction Drawings and the Approved Working Drawings.

4.2 Space Plan. Tenant shall supply Landlord for Landlord's (and Landlord's) review and approval four (4) hard copies and one (1) electronic copy of its space plan for the applicable portion of the Premises signed by Tenant (the "**Space Plan**") before any architectural working drawings or engineering drawings therefor have been commenced. The Space Plan shall include a layout and designation of all offices, rooms and other partitioning, laboratory improvements, if applicable, the intended use thereof, and equipment to be contained therein. Landlord may request clarification or more specific drawings for special use items not included in the Space Plan. Landlord shall advise Tenant within ten (10) business days after Landlord's receipt of the Space Plan (or, if applicable, such additional information requested by Landlord pursuant to the provisions of the immediately preceding sentence) if the same is approved or is unsatisfactory or incomplete in any respect. If Tenant is so advised, Tenant shall promptly cause the Space Plan to be revised to correct any deficiencies or other matters Landlord may reasonably require. If Landlord fails to respond within such ten (10) Business Day period, Tenant shall deliver Landlord an additional notice requesting approval and if Landlord thereafter fails to respond within three (3) business days of receipt of such additional notice, Landlord will be deemed to have approved such Space Plan.

4.3 Working Drawings. After the Space Plan has been approved (or deemed approved) by Landlord (and Tenant), Tenant shall supply the Architect and the Building Consultants with a complete listing of standard and non-standard equipment and specifications, including, without limitation, B.T.U. calculations, electrical requirements and special electrical receptacle requirements for the applicable portion of the Premises, to enable the Architect and the Building Consultants to complete the Working Drawings (as defined below). Tenant shall cause the Architect and the

Building Consultants to promptly complete the architectural and engineering drawings for such portion of the Premises, and Architect shall compile a fully coordinated set of architectural, structural, mechanical, electrical and plumbing working drawings in a form which is complete (i.e., fully supported with calculations and other back up as requested by Landlord and sufficient to allow subcontractors to bid on the work and to submit to the City and County of San Francisco Department of Building Inspection to obtain all applicable permits) (collectively, the "**Working Drawings**") and shall submit four (4) hard copies and one (1) electronic copy signed by Tenant to Landlord for Landlord's (and Landlord's) review and approval. Landlord shall advise Tenant within ten (10) business days after Landlord's receipt of the Working Drawings if Landlord, in good faith, determines that the same are approved or are unsatisfactory or incomplete. If Tenant is advised that the Working Drawings are unsatisfactory or are incomplete, Tenant shall promptly revise the Working Drawings to correct any deficiencies or other matters Landlord may reasonably require. The ten (10) Business Day period shall only commence when the Working Drawings are complete and fully supported with calculations and other back up as requested by Landlord. If Landlord fails to respond within such ten (10) Business Day period, Tenant shall deliver Landlord an additional notice requesting approval and if Landlord thereafter fails to respond within five (5) business days of receipt of such additional notice, Landlord will be deemed to have approved such Working Drawings. After approval (or deemed approval) by Landlord of the Working Drawings, Tenant shall submit the same to the appropriate municipal authorities for all applicable building permits. Tenant hereby agrees that neither Landlord nor Landlord's consultants shall be responsible for obtaining any building permit or for obtaining interim or final signoffs on such permits and that obtaining the same shall be Tenant's responsibility; provided that Landlord shall cooperate with Tenant in executing permit applications and other ministerial acts reasonably necessary to enable Tenant to obtain any such permit or sign-off. In no event shall Tenant commence any construction work in any portion the Premises prior to Landlord's written approval of the Construction Drawings therefor and prior to the date that all required governmental permits are obtained and copies of all such permits are provided to Landlord.

4.4 Change Orders. Once approved by Landlord, no material change in the Working Drawings may be made without the prior written approval of Landlord; provided however, if the proposed change does not materially affect the Building Structure, Building Systems or equipment or otherwise materially affect the Base Building and the cost implications of any such change will be borne one hundred percent (100%) by Tenant, Landlord agrees that it will not unreasonably withhold consent to such change. In the event Tenant desires to make any such change, Tenant shall deliver notice of the same to Landlord, setting forth in detail the change Tenant desires to make to such Working Drawings. Landlord shall, within seven (7) business days of receipt of such notice, either (i) approve the proposed change, or (ii) disapprove the proposed change and deliver a notice to Tenant specifying in reasonably sufficient detail the reasons for Landlord's disapproval.

4.5 Landlord's Approval. Landlord's approval of any matter under this Work Letter may be withheld if Landlord determines that the same would violate any provision of the Lease or this Work Letter or would adversely affect the mechanical, electrical, plumbing, heating, ventilating and air conditioning, life-safety or other systems of the Building or any portion of the Building (including the Premises, the curtain wall of the Building or the structure or exterior appearance of the Building). Landlord and Tenant acknowledge and agree that, prior to their mutual execution and delivery of the Lease, Tenant has been working with Dropbox and Landlord, as master landlord, to process plans for the construction of alterations to the subleased premises to accomplish a build out of the subleased premises, and in connection with that process, Landlord has thus far provided to Tenant the approvals identified on Attachment 4 attached hereto (collectively, the "**Existing Approvals**"). Other than the Existing Approvals, Tenant acknowledges and agrees that it must comply with the process described in this Work Letter in connection with obtaining future approvals.

4.6 Landlord's Costs. Tenant shall be responsible for payment of the reasonable out-of-pocket fees incurred by, and the reasonable out-of-pocket cost of documents and materials supplied by, Landlord and Landlord's consultants in connection with the preparation and review of the Construction Drawings and otherwise relating to the construction of the Tenant Improvements, not to exceed $15,000.00.

SECTION 5

CONSTRUCTION OF THE TENANT IMPROVEMENTS

5.1 Tenant's Selection of Contractors.

(a) The Contractor. A general contractor selected by Tenant and approved in writing by Landlord shall be retained by Tenant to construct the Tenant Improvements ("**Contractor**"). Tenant has selected, and Landlord has approved, XL Construction

(b) Tenant's Agents. All subcontractors, laborers, materialmen, and suppliers used by Tenant (such subcontractors, laborers, materialmen, and suppliers, and the Contractor to be known collectively as "**Tenant's Agents**") must be approved in writing by Landlord, such approval not to be unreasonably withheld, conditioned or delayed (Landlord will approve or disapprove Tenant's Agents within ten (10) business days following Tenant's written request, and failure to respond within this period shall be deemed approval of the same), provided that Landlord will require Tenant to retain the Building Consultants. All of Tenant's Agents shall be licensed in the State of California, capable of being bonded and shall use only union labor.

5.2 Construction of Tenant Improvements by Tenant's Agents.

(a) Construction Contract; Cost Budget; Over-Allowance Payments. Landlord acknowledges that prior to the date of this Lease it has received and approved a copy of Tenant's executed construction contract and general conditions with Contractor (the "**Contract**"). Prior to the commencement of the construction of any portion of the Tenant Improvements, Tenant shall provide Landlord with a schedule of values consisting of a detailed breakdown, by trade, of the final costs to be incurred or which have been incurred, in connection with the design and construction of such Tenant Improvements, which costs form the basis for the amount of the Contract (the "**Anticipated Costs**"). Landlord and Tenant shall determine the amount equal to the difference between (i) the amount of such Anticipated Costs, and (ii) the amount of the Allowance applicable to such portion of the Premises (less any portion thereof already disbursed by Landlord, or in the process of being disbursed by Landlord, on or before the commencement of construction of such portion of the Tenant Improvements) (such difference, if any, being the "**Anticipated Over-Allowance Amount**"). As of the date of this Lease, the Anticipated Over-Allowance Amount is projected to be $__. Tenant shall pay a percentage of each amount requested by the Contractor or otherwise to be disbursed under this Work Letter, which percentage (the "**Percentage**") shall be equal to the Anticipated Over- Allowance Amount divided by the amount of the applicable Allowance, and such payments by Tenant (the "**Over- Allowance Payments**") shall be a condition to Landlord's obligation to pay any amounts from the Allowance (the "**Improvement Allowance Payments**"). Tenant shall advise Landlord from time to time as such Anticipated Costs are further refined or determined or the costs relating to the design and construction of the applicable Tenant Improvements otherwise change, and the Anticipated Over-Allowance Amount and Over-Allowance Payments shall be adjusted such that the applicable Improvement Allowance Payments by Landlord and applicable the Over- Allowance Payments by Tenant shall accurately reflect the then-current amount of the Anticipated Costs for the applicable Tenant Improvements.

(b) Construction Requirements.

(i) Landlord's General Conditions for Tenant's Agents and Tenant Initial Improvement Work. Construction of the Tenant Improvements shall comply with the following: (A) the Tenant Improvements shall be constructed in strict accordance with the Approved Working Drawings and Landlord's (and Landlord's) construction guidelines; (B) Tenant's Agents shall submit schedules of all work relating to the Tenant Improvements to Landlord and Landlord shall, within five (5) business days of receipt thereof, inform Tenant's Agents of any changes which are necessary thereto, and Tenant's Agents shall adhere to such corrected schedule; and (C) Tenant shall abide by Landlord's construction rules for the Project and all other rules reasonably made by Landlord and Landlord's Building manager with respect to the use of freight, loading dock and service elevators, any required shutdown of utilities (including life safety systems), storage of materials, coordination with other contractors working in any portion of the Building, and any other matter in connection with this Work Letter, including, without limitation, the construction of the Tenant Improvements. Tenant shall pay to Landlord a fee for Landlord's design review, processing of Payment Requests, coordination of the Tenant Improvements with Landlord, and general oversight (the "**Management Fee**") with respect to the Tenant Improvements in an amount equal to Nine Hundred Sixty-Two

Thousand Three Hundred Seventy Seven and 50/100 Dollars ($962,377.50) (i.e., 2.5% of the Tenant Improvement Allowance and the Base Building Improvement Allowance); the Management Fee shall be deducted from the applicable portion of the Allowance on a pro rata basis with each disbursement of such portion of the Allowance.

(ii) Indemnity. Tenant's indemnity of Landlord as set forth in the Lease shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to any act or omission of Tenant or Tenant's Agents, or anyone directly or indirectly employed by any of them, or in connection with Tenant's nonpayment of any amount arising out of the Tenant Improvements and/or Landlord's disapproval of all or any portion of any request for payment. Such indemnity by Tenant, as set forth in the Lease, shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to Landlord's performance of any ministerial acts reasonably necessary (A) to permit Tenant to complete the Tenant Improvements, and (B) to enable Tenant to obtain any building permit or certificate of occupancy for any portion of the Premises. The foregoing indemnity shall not apply to claims caused by the gross negligence or willful misconduct of Landlord, Landlord or its or their members, partners, shareholders, officers, directors, agents, employees and/or contractors, or to the failure of Landlord to disburse the Allowance as and when required hereunder.

(iii) Requirements of Tenant's Agents. Each of Tenant's Agents shall warrant that the portion of the Tenant Improvements for which it is responsible shall be free from any defects in workmanship and materials, that the materials and equipment used will be new and of good quality (unless expressly specified otherwise in the contract documents), and that the work will conform to the requirements of the contract documents. The foregoing warranties are in addition to any other warranties with respect to the work that may be required by the contract documents. Further, and without limiting the foregoing warranties, each of Tenant's Agents shall agree to be responsible for the replacement or repair, without additional charge, of all defects in the work performed or furnished under its contract that become apparent during the one (1) year period following substantial completion of the Tenant Improvements. The correction of such work shall include, without additional charge, all additional expenses and damages incurred in connection with the removal or replacement of all or any part of the Tenant Improvements, and/or the Building and/or common areas that are damaged or disturbed as a result of the defective work or any replacement or repair work. All of the warranties and agreements described herein shall be contained in the Contract and each subcontract and shall be written such that they inure to the benefit of Landlord, Landlord and Tenant, as their respective interests may appear, and can be directly enforced by either. Tenant covenants to give to Landlord and/or Landlord any assignment or other assurances as may be necessary to affect such right of direct enforcement.

(c) Insurance Requirements.

(i) General Coverages. All of Tenant's Agents shall carry worker's compensation insurance covering all of their respective employees, and shall also carry public liability insurance, including property damage, all with limits, in form and with companies as are required to be carried by Landlord as set forth in the Lease (provided that the limits of liability to be carried by Tenant's Agents and Contractor shall be in amounts as may be required by Landlord).

(ii) Special Coverages. During construction of any portion of the Tenant Improvements, Tenant shall carry "Builder's All Risk" insurance in an amount approved by Landlord covering the construction of the Tenant Improvements (at Tenant's option, Tenant shall cause Contractor to carry such Builder's All Risk insurance), and such other insurance as Landlord or Landlord may reasonably require, it being understood and agreed that the Tenant Improvements shall be insured by Tenant pursuant to the Lease immediately upon completion thereof. Such insurance shall be in amounts and shall include such customary extended coverage endorsements as may be reasonably required by Landlord and/or Landlord, and shall be in form and with companies as are required to be carried by Tenant as set forth in the Lease. During construction of any portion of the Tenant Improvements, Tenant shall cause any architect and engineer to carry professional liability insurance with limits of not less than $2,000,000 per claim and in the annual aggregate covering professional services performed by the respective party, and such coverage must be maintained for the greatest period under which a claim may be properly asserted under the applicable statute of limitations or repose.

(iii) General Terms. Certificates for all insurance carried pursuant to this Section 3.2(c) shall be delivered to Landlord before the commencement of construction of the Tenant Improvements and before the Contractor's equipment is moved onto the site. Tenant shall immediately notify Landlord in the event any policy of insurance carried by Tenant is cancelled or the coverage materially changed. Tenant's Contractor and subcontractors

shall maintain all of the foregoing insurance coverage in force until the Tenant Improvements are fully completed and accepted by Landlord, except for any Products and Completed Operation Coverage insurance required by Landlord, which is to be maintained for ten (10) years following completion of the work and acceptance by Landlord and Tenant, where applicable. All policies carried under this Section 3.2(c) (other than Workers' Compensation coverage) shall insure Landlord, Landlord and Tenant, as their interests may appear. All insurance, except Workers' Compensation, maintained by Tenant's Agents shall preclude subrogation claims by the insurer against anyone insured thereunder, as evidenced by an endorsement or policy excerpt. Such insurance shall provide that it is primary insurance with respect to the Tenant Improvements and that any other insurance maintained by Landlord or Landlord is excess and noncontributing with the insurance required hereunder. The requirements for the foregoing insurance shall not derogate from the provisions for indemnification of Landlord by Tenant under the Lease or this Work Letter.

(d) Governmental Compliance. The Tenant Improvements shall comply in all respects with the following: (i) the Code and other federal, state, city and/or quasigovernmental laws, codes, ordinances and regulations, as each may apply according to the rulings of the controlling public official, agent or other person or entity; (ii) applicable standards of the American Insurance Association (formerly, the National Board of Fire Underwriters) and the National Electrical Code; and (iii) building material manufacturer's specifications.

(e) Inspection by Landlord. Landlord shall have the right to inspect the Tenant Improvements at all times, provided however, that Landlord's failure to inspect the Tenant Improvements shall in no event constitute a waiver of any of Landlord's rights hereunder nor shall Landlord's inspection of the Tenant Improvements constitute Landlord's approval of the same. Should Landlord disapprove any portion of the Tenant Improvements, Landlord shall notify Tenant in writing of such disapproval and shall specify the items disapproved. Any defects or deviations in, and/or disapproval by Landlord of, the Tenant Improvements shall be rectified by Tenant at no expense to Landlord, provided however, that in the event Landlord determines that a defect or deviation exists or disapproves of any matter in connection with any portion of the Tenant Improvements and such defect, deviation or matter might adversely affect the mechanical, electrical, plumbing, heating, ventilating and air conditioning or life-safety systems of the Building or any portion of the Premises or the structure or exterior appearance of the Building, Landlord may take such action as Landlord deems necessary, at Tenant's expense and without incurring any liability on Landlord's part, to correct any such defect, deviation and/or matter, including, without limitation, causing the cessation of performance of the construction of the Tenant Improvements until such time as the defect, deviation and/or matter is corrected to Landlord's satisfaction.

(f) Meetings. Tenant shall hold periodic meetings at a reasonable time with the Architect and the Contractor regarding the progress of the preparation of the Construction Drawings and the construction of the Tenant Improvements, and Landlord shall receive prior written notice of, and Landlord and/or its agents (and Landlord and/or its agents) shall have the right to attend, all such meetings, and, upon Landlord's request, certain of Tenant's Agents shall attend such meetings. In addition, minutes shall be taken at all such meetings, and Landlord and Landlord will be included in the distribution list for such minutes. One such meeting each month shall include the review of Contractor's current request for payment.

5.2 Notice of Completion; Copy of Record Set of Plans. Within thirty (30) days after completion of construction of any portion of the Tenant Improvements, Tenant shall cause a Notice of Completion to be recorded in the office of the Recorder of San Francisco County in accordance with Section 8182 of the California Civil Code or any successor statute, shall furnish a copy thereof to Landlord upon such recordation, and shall timely give all notices required pursuant to Section 8188 or 8190 of the California Civil Code or any successor statutes. If Tenant fails to do so, Landlord may execute and file such Notice of Completion and give such notices on behalf of Tenant as Tenant's agent for such purpose, at Tenant's sole cost and expense. Within thirty (30) days following the completion of construction of any portion of the Tenant Improvements, (i) Tenant shall cause the Architect and Contractor (A) to update the Approved Working Drawings as necessary to reflect all changes made to the Approved Working Drawings during the course of construction, (B) to certify to the best of their knowledge that the updated drawings are true and correct, which certification shall survive the expiration or termination of the Lease, and (C) to deliver to Landlord such updated drawings in accordance with Landlord's then-current CAD Format Requirements, and (ii) Tenant shall deliver to Landlord a copy of all warranties, guaranties, and operating manuals and information relating to the improvements, equipment, and systems in the Premises as Landlord may require.

SECTION 6

MISCELLANEOUS

(a) Tenant's Representative. Tenant has designated Larry Matarazzi (larry@vir.bio) as its sole representative with respect to the matters set forth in this Work Letter, until further notice to Landlord, who shall have full authority and responsibility to act on behalf of Tenant as required in this Work Letter.

(b) Landlord's Representative. Landlord has designated Eric Giles (egiles@lfrep.com) its sole representative with respect to the matters set forth in this Work Letter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of Landlord as required in this Work Letter.

(c) Tenant's Default. Notwithstanding any provision to the contrary contained in the Lease, if a Default by Tenant under the Lease (including, without limitation, this Work Letter) has occurred at any time on or before the substantial completion of the Tenant Improvements, then (i) in addition to all other rights and remedies granted to Landlord pursuant to the Lease, Landlord shall have the right to withhold payment of all or any portion of the Allowance, and (ii) all other obligations of Landlord under the terms of this Work Letter shall be forgiven until such time as such default is cured pursuant to the terms of the Lease.

Attachment 1

Base Building Improvement Additions

CONSTRUCTION

Bio - 1800 Owens Lab TI

Base Building Infrastructure Adds

rev. 6.14.2021

	Scope / Description	ROM Cost	Notes
1	Elevator Pressurization Fans	$ 169,600.00	New supply fans utilizing existing relief vent openings. The base building did not provide this infrastructure, which is required for high rise lab buildings to meet the updated smoke control and San Francisco city requirements
2	Added Fan Coil Units	$ 109,969.00	Added fan coil units to supplement DMPK lab areas due to lack of cooling water capacity.
3	Domestic Hot Water - InstaHots	$ 18,500.00	Domestic hot water only provided at restrooms.
4	Domestic Cold Water - Booster Pump	$ 10,000.00	Added domestic cold water booster pump due to pressure at L12 not sufficient to supply emergency showers and equipment.
5	Industrial Cold Water	$ 15,000.00	Base building only provides domestic cold water stub outs on each floor. Backflow preventer needs to be added on each floor.
6	Industrial Hot Water	$ 63,500.00	Base building only provides domestic cold water stub outs on each floor. Industrial water heater needs to be added.
7	Negative Air Requirements During Construction	$ 79,400.00	The base building is not allowing the tenant to use the building exhaust fans to provide negative air to the construction spaces. Instead, temporary slab openings, duct, and negative air machines are required on each floor to exhaust air thru the roof during construction.
8	New Supply Air Shafts	$ 226,200.00	In a typical lab C&S, the mechanical shafts and mains would already be built to serve all floors. This cost is for demo of the existing slab and supply and install duct and shaft walls only. FSDs and FA connections are not included (Assumed to be part of TI)
9	New Exhaust Air Shafts	$ 284,400.00	In a typical lab C&S, the mechanical shafts and mains would already be built to serve all floors. This cost is for demo of the existing slab and supply and install duct and shaft walls only. FSDs and FA connections are not included (Assumed to be part of TI)
10	Added Sprinkler Riser for L-Occupancy	$ 195,000.00	The base building Maximum Allowable Quantity (MAQ) of Hazardous Materials for floors above Level 5 driving the need for additional sprinkler coverage.
11	Cooling Capacity Insufficiencies - HVAC	$ 868,700.00	Added boiler, modify AHU to 100% OSA, added air cooled VRF system. Typical labs use roughly 1.6-1.7 cfm/SF. The base building is only providing 1.1-1.2 cfm/SF (2/3 of which is recirc). That means the building is providing approxmiately 0.5 cfm/SF below the typical lab space in the Bay Area. Also, the base building drawings show the condenser water system only serving sector 1 and note that the system provides 20 tons per floor. Longfellow has requested the team to assume this system will also serve sector 2, reducing the capacity to 13 tons per floor.
12	Cooling Capacity Insufficiencies - Plumbing	$ 71,400.00	Condensate water for VRF fan coils, 3" NG for new boiler. This work is required to accommodate HVAC modifications described in item #10 above.
13	Electrical Capacity & Discrepancies	$ 161,311.00	In a typical lab C&S, separate bus risers would exist for standby and normal power. This building has one bus riser that is connected to the generator, so everything plugged into that bus riser takes capacity from the generator, even loads that would normally not otherwise need standby power (like the 9th floor office space). To reserve emergency capacity on the generator for other tenants we are taking normal power from the roof substation to feed the 9th floor. To do this we're required to upgrade the roof substation by adding transformer fans. As a separate issue, note that the roof emergency electrical distribution record drawing incorrectly shows the lab exhaust fans much smaller than they are with six fans going from 15 HP each to 60 HP each. As a result, the base building system as designed now with NO added loads does not appear to work/meet code. We understand he landlord is working on an approach to fix this issue and provide our team with a place to connect our project's emergency loads. The difference between emergency power and standby power is a code-driven one. Standby power is at the tenants discretion (refrigerators, freezers, IT loads, etc) while emergency power is required by code (ventilation for lab spaces and smoke control pressurization).
14	Refeed UPS Panels	$ 32,477.00	This is due to building UPS being removed by DBX
15	Hazardous Materials Test & Report	$ 15,588.00	A "Zero Hazard" report is typically available from the building owner to ensure no hazardous materials, such as lead or asbestos, were used in the construction of this building or previous tenant buildouts. The building owner did not have this information/report available so this project is required to perform our own survey.
16	Roof Patching for Haz Materials Testing	$ 8,750.00	Costs to repair the roof after samples were taken of existing roof material to create the report mentioned in item 15 above.
	TOTAL	**$ 2,329,795.00**	

Attachment 2

Base Building Delivery Condition

EXCHANGE - SECTOR 1
1800 OWENS STREET
SAN FRANCISCO, CA

	Landlord	Tenant	Notes
STRUCTURAL			
11" mild steel reinforced concrete slabs on levels 2- 12 with live load capacity of 125 psf non-reducible for slab (Except for parking floors)	x		
Roof within mechanical penthouses 150 psf live load. Non-mechanical roof area live load capacity of 20 psf	x		
Structural enhancements for specific Tenant load requirements		x	
Post-tensioned concrete flat slab at parking garage decks	x		
Upgrade structural reinforcing for Tenant's vibration limitations		x	
Floor to floor dimension of 14'-10" on floors 2 – 6. Floors 7 – 12, 13'-0"	x		
Structural framing dunnage above roof for Base Building equipment including LL provided AHU's & Efs	x		
Structural framing dunnage above roof for Tenant equipment subject to Landlord review and approval		x	The mechanical roofs were designed for 50 psf LL + 100 psf mechanical loads.
Miscellaneous metals items and/or concrete pads for Base Building equipment	x		
Miscellaneous metals items and/or concrete pads for Tenant equipment		x	
Vibration Criteria: 8,000 micro inches per second	x		
ROOFING			
Single ply asphalt roofing system with rigid insulation with 20 year warranty	x		
Roofing penetrations for Base Building equipment/systems including LL provided AHU's & Efs	x		
Roofing penetrations for approved Tenant equipment/systems, required to be installed by Base Building roofing subcontractor		x	
Walkway pads to Base Building equipment	x		
Walkway pads to Tenant equipment		x	
Roofing alterations due to Tenant changes installed by Base Building roofing subcontractor		x	
Roof patching by licensed and manufacturer certified roofing contractor for all penetrations made as part of the tenant investigation or work on the roof(s)		x	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to complete this work at Tenant's sole cost & responsibility
EXTERIOR			
Building exterior envelope	x		
Base Building entrances	x		
Loading dock overhead door	x		
Screen enclosure for Base Building rooftop equipment incl. LL provided AHU's and Efs	x		
ARCHITECTURAL			

Approved demolition of previous improvements in tenant premises to accommodate tenant plan		X	
Accessible main entrance.	X		
Egress corridors on multi-tenant floors	X		
First floor finished lobby	X		
Core area toilet rooms.	X		
Bicycle storage adjacent to building lobby.	X		
4- passenger elevators; 2000 lbs. 1- passenger/freight elevator; 4500 lbs; 1 - freight elevator, 4500 lbs	X		
Painted metal railings in all stairways	X		
Code required interior signage for all Base Building rooms	X		
Janitor's closets in core areas	X		
Doors, frames, and hardware at common areas	X		
Loading dock area accessible from Tenant Premises	X		
Covered loading dock enclosure for weather protection	X		
Furnish and install Building Standard window treatment including blocking in Tenant areas.		X	
Window sills as applicable in Tenant areas		X	
Drywall and finishes at inside face of exterior walls (fire-rated)		X	
Drywall and finishes at inside face of exterior walls (non fire-rated)		X	
Finishes at Tenant side of core partitions		X	
Tenant Premises HVAC and Plumbing Rooms		X	
Electrical closets within Tenant Premises		X	
Telldata rooms for interconnection with Tenant tel/data		X	
Tenant kitchen areas		X	
Approved modifications to core areas to accommodate Tenant requirements		X	
Partitions, ceilings, flooring, painting, finishes, doors, frames, hardware, millwork, casework, and build-out		X	
Code compliant chemical and waste storage rooms in tenant premises		X	
Fixed or movable casework/millwork		X	
Laboratory Equipment including, but not limited to, biosafety cabinets, autoclaves, glasswashers, biorectors.		X	
Chemical Fume Hoods, bench fume hood, lab casework		X	
Shaft enclosures for Base Building systems' risers	X		Base building electrical, plumbing, lab waste as required by code
Shaft enclosures for Tenant MEP risers within allocated space in or out of tenant premises		X	Fire rating to comply with occupancy type in which building and respective floors are permitted
All interior signage for Tenant Premises		X	

Building hazardous material inspection and report to certify that building is free of lead, Asbestos or other materials hazardous to the occupants or workers. Report shall be made available to Landlord for its use in the future. All costs associated with report shall be borne by Tenant		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord for inspection and report at Tenant's sole cost and responsibility
FIRE PROTECTION			
Combination sprinkler/standpipe system with fire department valves and based on ordinary hazard group 2 occupancy	X		
Modifications to the sprinkler system including design, permitting, piping, risers, fire pump and all control wiring to accommodate tenant desire to change the use of its premises to "L" Occupancy		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Fire service and double-check valve assembly	X		
Fire pump, controller, test header	X		
Alarm check valve and Siamese connection	X		
Floor control valve assemblies and test drains	X		
Sprinkler coverage to all core areas	X		
Distribution piping with upright heads within Tenant areas	X		
Flow switches, tamper switches, pressure switches	X		
Modification of sprinkler piping and head layout to suit tenant build-out and tenant hazard index		X	
Specialty fire protection systems, ie, pre-action type, FM-200, etc.		X	
Fireproofing required to provide 1hr fire rating to accommodate control areas for "B" occupancy	X		One control area per floor
Fireproofing, smokeproofing and fire rating inside and outside of tenant premises to accommodate "L" occupancy		X	
PLUMBING			
Domestic sanitary waste piping for Base Building riser	X		
Domestic sanitary waste piping for tenant use		X	
Storm system connection and roof drainage system	X		
Natural gas service to building for Base Building	X		
Tenant gas service including meter and distribution piping for Tenant services for pro rata allocation service		X	
Domestic cold-water service to building and domestic cold-water booster pump system (floors T-12)	X		
Domestic cold water booster to building to service requirements for tenant premises including for emergency showers including all piping and insulation and installation per code		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Potable risers with valve/cap connections at each floor for Tenant use	X		
Backflow preventer(s) for connection by tenant for Water supply to tenant premises including all piping and insulation and installation per code		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Potable cold-water distribution to Base Building equipment and building common areas	X		
Base Building toilet/janitor core including cold water, hot water, waste and vent systems	X		
Tenant premises point of use hot water source (instahot or equivalent) required for tenant program including power and control wiring, piping and insulation and installation per code		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Potable and non-potable distribution piping from Base Building risers to Tenant areas		X	
Distribution piping from wet columns		X	

Tenant premises domestic hot water industrial water heaters including power and control wiring, piping and insulation and installation per code		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Lab waste and vent risers with cap connections on each floor for Tenant use	X		
Lab waste distribution system from lab waste risers		X	
Lab waste treatment or pH neutralization system	X		
Lab waste Monitoring sampling pit on lab waste piping prior to connection to sanitary sewer	X		One exterior manhole with a neutralization tank and sampling port that serves Sections 1 & 2 and there is one exterior manhole with a neutralization tank and sampling port that serves Sections 3 & 4.
Lab waste monitoring port for tenant discharge in tenant premises before tie into house lab waste stack		X	
Lab vent distribution system from lab vent risers		X	
Tenant potable and non-potable hot water equipment and distribution system		X	
Air compressor system and riser		X	
Compressed air distribution from riser		X	
Vacuum pump system and riser		X	
Vacuum distribution from riser		X	
RO equipment system and riser		X	
RO distribution from riser		X	
Gas cylinders and distribution system (ie: nitrogen co2, argon, etc.)		X	
Tempered hot water heater and riser piping for eyewash/shower unit. System shall have valve/cap connection for tenant use.		X	
Tenant tempered water eyewash/showers and distribution piping		X	
MECHANICAL / HVAC			
MEP systems designed for target ratio of 50:50 lab to office area. B-Occupancy. Air handlers AH-1A, AH-1B installed with ductwork and with vertical shafts extending from roof to down to second floor ceiling, stubbed and capped at each floor level.	X		AH-1A and 1B provide an allocation of VAV system air volume at 16,813 cfm for floors 2 -3 each; 18,838 cfm for floors 4-6 each; and 15,623 cfm for floors 7-12 each
Air handler AH-1C installed on roof. Fire rated shafts and floor openings to be provided by tenant	X	X	AH-1C provides air volume of 7,081 cfm for floors 2-3 each; 8,003 cfm for floors 4-6 each; and 7,812 cfm for floors 7-12 each all at 100% outdoor air. The shafts and floor openings for the riser from AH-1C has been filled in and will need to be re-opened and re-constructed with fire ratings to comply with the occupancy type in which the building and the respective floors are permitted, to the desirable floors to utilize the outdoor air capacity.
Air Handler AH-1C Supply air ductwork sized to accommodate all floors served by unit in the building and designed to accommodate future tie-ins without shutdown		**X**	**Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system after opening and reconstructing the shafts and ductwork from the ceiling of the 9th floor to the roof and connection to the AHU at Tenant's sole cost and responsibility**
Modifications to AHU's to increase 100% outside air supply to tenant premises including design, permitting, equipment modifications, power wiring, control wiring, testing and commissioning as required by the tenant		**X**	**Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility**
Horizontal supply air ductwork distribution system from shaft connections for tenant areas		X	
Laboratory exhaust fans suitable for laboratory operations. Fire rated shafts and floor openings to be provided by tenant	X	X	Lab exhaust fan array on roof serving floors 2—3 with a capacity of 16,813 cfm each; and floors 4-12 with a capacity of 18,381 cfm per floor each. The shafts and floor openings for the exhaust fans have been filled in and will need to be re-opened and reconstructed with fire ratings to comply with the occupancy type in which the building and the respective floor floors are permitted. Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission the system after opening and reconstructing the shafts and ductwork from the ceiling of the 9th floor to the roof and connection to the AHU at Tenant's sole cost and responsibility.
Lab exhaust ductwork sized to accommodate all floors served by the fans in the building and designed to accommodate future tie ins without a shutdown		X	
Laboratory exhaust horizontal connections at each floor for tenant use		X	
Central chiller plant to provide AHU's AH-1A, AH-1B with cooling source	X		Plant provides 35 tons on floors 2-3 each; 38 tons on floors 4-6 each; and 38 tons on floors 7-12 each.
Central chiller plant to provide AHU AH-1C with cooling source for 100% outside air unit	X		Plant provides 19 tons for floors 2-3 each; 22 tons for floors 4-6 each; and 21 tons for floors 7-12 each

Design, permitting, installation, power wiring, control wiring, testing and commissioning of supplemental cooling source to supplement landlord provided chiller plant capacity and condensor water allocation for tenant premises as required by tenant		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Design, permitting, installation, power wiring, control wiring, testing and commissioning of supplemental heating hot water boiler system to supplement landlord provided system as required by tenant for tenant premises supplemental HVAC systems		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Condenser water for supplemental cooling	X		System provides 13 tons for floors 1-12 each.
Fan coil units within tenant premises to provide supplemental cooling required for the tenant program including power and control wiring, piping and insulation per code		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Tenant specialty exhaust systems		X	
Hot water plant serving air handling units and Tenant hot water risers with valve/cap connections per floor for Tenant use	X		
Code required elevator shaft pressurization fans in the sector 1/2 and 3/4 cores as required for lab use including power and control wiring		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Tenant hot water distribution piping from risers		X	
Systems (ie: cold rooms, warm rooms, IT rooms,		X	
Automatic temperature control system for Base building equipment and common areas	X		
Automatic temperature control system for Tenant equipment and areas		X	
Building Management System (BMS) for Base Building and LL provided including boiler expansion, MAUs and Ells	X		
BMS (compatible with Landlord's system) within Tenant Premises monitoring Tenant infrastructure		X	
Air quality management required by the tenant fit up project to insure protection of workers and building occupants as required by OSHA and building construction guidelines including all design, installation, operation and maintenance of system during the construction period		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
ELECTRICAL			
Campus electrical service	X		The service to this project is 12kv, so there are no utility transformer vaults associated with this project. Secondary substations are employed to gain building utilization voltages.
Base building substations	X		Sector 1 (1) 3750 KVA substation with 5000 amp 277/480V distribution board in the primary electrical room and (1) 2500 KVA substation on roof with 4000 amp 277/480V distribution board. Sector 3 (1) 3750 KVA substation with 5000 amp 277/480V distribution board in the primary electrical room and (1) 2500 KVA substation on roof with 4000 amp 277/480V distribution board.
Distribution	X		The power distribution to Floors 2 through 12 in Sector 1 is via a 3000A, 480V, 4W bus riser which is 100% connected to the Tenant Standby Generator "1TG-01" that also serves Sector 2. This makes every floor from Levels 2 through 12 in the North Tower and Levels 2 through 6 in the North Building completely on standby power. Available power on floors 2-3 is 89 KVA each; floors 4-6 117 KVA each; floors 7-12 114KVA each
Additional Normal power	X	X	Additional normal power is available in the substation in the primary electric room in Sector 1 and requires transformers, connection and distribution by the tenant. Available power on floors 2-3 is 346VA each; floors 4-12 is 414VA each
Design, permitting, installation of electrical distribution from the Sector 1 substation located on the roof to provide tenant premises with additional normal power capacity beyond its pro rata share including all code required modifications to the electrical service		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Design, permitting, field work and modifications to existing UPS system to accommodate tenant needs. Tenant agrees to work from in place system as is.		X	Per Exhibit A, Tenant has accepted a Base Building Improvement Allowance from Landlord to design, permit, construct and commission system at Tenant's sole cost and responsibility
Emergency power	X		A 2000 KW Life Safety Emergency Generator is provided. Base building common area life safety emergency lighting and signage, as well as lab exhaust and smoke control systems are connected to Emergency power.
Conductors, metering equipment and circuit breakers to Tenant areas	X		
Main switchboard, metered, for base building systems	X		
Bus duct risers serving floors all floors	X		
Tenant meters, fused disconnect and utility transformer cabinets at all floors		X	
Life safety systems for Tenant use	X		
Standby generator for tenant systems	X		See above in "Distribution"
Electric closets at floors for base building systems and core areas	X		
Electric closets for tenant areas	X		

Power distribution for tenant areas		X	
Addressable Fire Command Center, Fire Alarm devices to Base Building common areas, mechanical/electrical rooms and risers	X		
Fire Alarm devices within Tenant areas, connected to Base Building risers and addressable Fire Command Center		X	
Lighting in common and base building areas	X		
Lighting in tenant areas		X	
Lightning protection system for building and Base Building Equipment		X	There is no lightning protection system for building.
Lightning Protection system for tenant equipment		X	There is no lightning protection system for building.
Base Building telecommunications room and empty conduit riser system	X		
Base Building security system to include exterior doors and elevator access	X		
Tenant security system for Tenant areas integrated with Base Building system		X	

Attachment 3

Mechanical Shaft Depiction

Attachment 4

Existing Approvals

Date	Landlord Approval Letters
May 18, 2021	VIR Logistics Plan 1a & Safe-off Plan for floors 10, 11, and 12 in Sector 1
June 1, 2021	VIR Demo Work for floors 10, 11, and 12 in Sector 1
June 4, 2021	Elevator C&D Separation
June 17, 2021	VIR Phase 2 Rev. 2 Logistics Plan for floors 10, 11, and 12 in Sector 1
July 11, 2021	VIR Elevator D-FASE Protection and Use Plan in Sector 1
September 1, 2021	VIR 7/23/2021 Permit Drawings and 8/3/2021 MEPF BOD in Sector 1 (Review comments and partial approval)
September 15, 2021	VIR Shaft Structural Demolition Work for floors 10, 11 and 12 in Sector 1
November 3, 2021	VIR 7/23/2021 Permit Drawings and 8/3/2021 MEPF BOD in Sector 1

EXHIBIT 1.3

FIRST REFUSAL SPACE

Note: Seventh (7^{th}) floor of the North Tower contains 26,657 RSF.

EXHIBIT 2.1

FORM OF NOTICE OF LEASE TERM DATES

To: _____
_____
_____

Re: Lease dated _____, 20__ between _____, a _____ (" **Landlord**"), and _____, a _____ ("**Tenant**") concerning Suite _____ on floor(s) _____ of the building located at **[INSERT BUILDING ADDRESS]**.

Gentlemen:

In accordance with the Lease (the "**Lease**"), we wish to advise you and/or confirm as follows:

1. The Lease Term shall commence on or has commenced on _____ for a term of _____ ending on _____.

2. The Rent Commencement Date occurred on_, subject to the Base Rent abatement set forth in Section 3 of the Lease.

3. Your rent checks should be made payable to _____ at _____.

4. Tenant's Share of Direct Expenses with respect to the North Tower is _____, subject to any Retail Space Cost Pool.

5. Capitalized terms used here that are defined in the Lease shall have the same meaning when used herein.

If the provisions of this letter correctly set forth our understanding, please acknowledge by signing at the place provided below on the enclosed copy of the letter and returning the same to Landlord.

"Landlord":

KRE EXCHANGE OWNER LLC,
a Delaware limited liability company

By: _____
Its: _____

Agreed to and Accepted as
of _____, 20___

"Tenant":

_____
a _____

By: _____
Its: _____

EXHIBIT 4.4.3

THE EXCHANGE

MISSION BAY REQUIREMENTS

1. **Environmental Covenant**. The Project may contain hazardous materials in soils and in the ground water under the Project, and is subject to a deed restriction (Covenant and Environmental Restriction on Property) dated as of February 23, 2000, and recorded in the Official Records of the City and County of San Francisco, California (the "**Official Records**") on March 21, 2000, as Document No. 2000-G748552 (the "**Environmental Covenant**"), which Environmental Covenant imposes certain covenants, conditions, and restrictions on usage of the Project. The foregoing statement is required by the Environmental Covenant and is not a declaration that a hazard exists. As required by Section 3.3 of the Environmental Covenant, Landlord hereby states as follows: "The land described herein may contain hazardous materials in soils and in the ground water under the property, and is subject to a deed restriction (Covenant and Restriction) dated as of February 23, 2000, and recorded on March 21, 2000, in the Official Records of San Francisco County, California, as Document No. G748552, which Covenant and Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists." The Environmental Covenant references and requires compliance with the provisions of the Risk Management Plan, Mission Bay Area, San Francisco, California, dated May 11, 1999 (as may be amended from time to time, the "**RMP**"). Tenant hereby acknowledges receipt of a copy of the original RMP, and hereby covenants (i) to comply with the RMP (to the extent the RMP applies to Tenant's activities), (ii) to obligate other entities with which Tenant contracts for construction, property maintenance, or other activities that may disturb soil or groundwater to comply with the applicable provisions of the RMP, and (iii) to refrain (and to cause the entities with which it so contracts to refrain) from interfering with Landlord's or other Occupant's (with "Occupant" having the meaning ascribed in the Environmental Covenant) compliance with the RMP. Additionally, in all future leases, licenses, permits, or other agreements between Tenant and another entity which authorizes such entity to undertake or to engage in activities that are subject to one or more requirements set forth in the RMP, Tenant will provide a copy of the RMP or its relevant provisions prior to execution of such agreements and ensure that such agreements contain covenants that (i) such entity will comply with the RMP (to the extent the RMP applies to the entity's activities); (ii) such entity will obligate other entities with which it contracts for construction, property maintenance or other activities which may disturb soil or groundwater to comply with the applicable provisions of the RMP; and (iii) such entity (and the entities with which it so contracts) will refrain from interfering with Landlord's, Tenant's, or other Occupants' compliance with the RMP.

2. **Special Tax Acknowledgment**. In accordance with Section 53341.5 of the California Government Code, Tenant previously has delivered to Landlord acknowledgments, duly executed by Tenant, confirming that Tenant has been advised of the terms and conditions of the "CFDs" (as defined below), including that the Project is subject to the "CFD Assessments" (as defined below). As used herein, (a) "**CFDs**" shall mean, collectively, (i) the Redevelopment Agency Community Facilities District No. 5 (Mission Bay Maintenance) (the "**Maintenance CFD**") (established to pay a portion of the costs of ongoing maintenance of open space parcels in Mission Bay), (ii) the Redevelopment Agency Community Facilities District No. 6 (Mission Bay South Public Improvements) (the "**Infrastructure CFD**") (established to pay a portion of the costs of constructing and installing public infrastructure in Mission Bay), and (iii) the San Francisco Unified School District of the City and County of San Francisco Community Facilities District No. 90-1 (Public School Facilities) (the "**Public School CFD**") (established to pay a portion of the costs of acquiring and/or constructing public school facilities), and (b) "**CFD Assessments**" shall mean the special taxes (i) to be levied on the Project and other property in Mission Bay in accordance with the terms and conditions of the "Rate and Method of Apportionment of Special Tax" applicable to the Infrastructure CFD and the Maintenance CFD, respectively, and (ii) to be levied on the Project and other property in accordance with the terms and conditions applicable to the Public School CFD. Tenant acknowledges that, pursuant to the CFDs, CFD Assessments may be levied on the Project and that, without limiting the generality of any other provision contained in this Lease, Direct Expenses shall include all such CFD Assessments.

3. **Project Labor Agreement**. Tenant has been informed by Landlord of the following: (a) Perini Corporation, CDC and its parent, subsidiaries and successor developers in which it holds a majority interest (collectively, "**CDC Parties**"), the San Francisco Building and Construction Trades Council, AFL-CIO ("**Council**"), and certain affiliated local unions originally entered into a certain Mission Bay Project Agreement (the "**Original Project Labor Agreement**") for the Mission Bay project on October 8, 1990, pursuant to which (i) CDC Parties

agreed, to the fullest extent possible, to award all construction contracts in Mission Bay for "Covered Work" (as defined in the Original Project Labor Agreement) to unionized construction firms; and (b) CDC and the individual members of the Council entered into an Addendum to Agreement ("**Addendum**") that amended certain terms of the Original Project Labor Agreement (the Original Project Labor Agreement, as amended by the Addendum, shall be referred to as the "**Project Labor Agreement**"), pursuant to which CDC agreed that CDC would require, as a condition of any sale, conveyance, ground lease, or donation of real property covered by the Project Labor Agreement ("**Covered Property**"), that any and all successors in interest and/or assignees, buyers, ground lessees, or donees (any of the foregoing, a "**Covered Successor**") of Covered Property shall require any contractors to which the Covered Successor contracts work that is covered by the Project Labor Agreement to sign and become a party to a successor project labor agreement (a "**Successor Project Labor Agreement**", the form of which is attached hereto as **Schedule 1** to this **Exhibit 4.4.3**). Tenant acknowledges that the Project is Covered Property, that Landlord is a Covered Successor, and that Landlord has agreed to require any contractors to which Landlord contracts work which is Covered Work to sign and become a party to a Successor Project Labor Agreement. Accordingly, Tenant hereby agrees that Tenant shall require any contractors to which Tenant or any of its contractors contract work which is Covered Work to execute and deliver a Successor Project Labor Agreement. If Tenant acts as a contractor, Tenant shall be required to sign a Successor Project Labor Agreement as project contractor. Tenant will cause its general contractor to execute a Successor Project Labor Agreement prior to the commencement of any construction work on the Project and shall deliver an executed original of each Successor Project Labor Agreement to Landlord. Following Landlord's receipt of such executed original of the Successor Project Labor Agreement, Landlord shall use commercially reasonable efforts to obtain full execution of the Successor Project Labor Agreement by the union signatories, but Tenant acknowledges that Landlord shall have no liability whatsoever if full execution of the Successor Project Labor Agreement is not obtained.

4. First Source Hiring Program. Tenant has been informed by Landlord that there is a City-wide "First Source Hiring Program" ("**FSHP**") (adopted by the City and County of San Francisco on August 10, 1998, Ordinance No. 264-98). Tenant hereby acknowledges that its activities with respect to the Project are or may be subject to the FSHP. Accordingly, Tenant shall comply with any provisions of the FSHP that are applicable to the Premises or any construction in, or use or development of, the Premises by Tenant.

5. **Non-Discrimination**. Without limiting the generality of any other provision of this Lease, there shall be no discrimination against, or segregation of, any person or group of persons or any employee or applicant for employment on account of race, color, creed, religion, sex, marital or domestic partner status, familial status, national origin, ancestry, lawful source of income (as defined in Section 3304 of the San Francisco Police Code), gender identity, sexual orientation, age, or disability (including, without limitation, HIV/AIDS status) in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of any part of the Project, nor shall Tenant or any person claiming under or through Tenant, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use, or occupancy of tenants, lessees, subtenants, sublessees, or vendees in any part of the Project. All deeds, leases, subleases, or contracts concerning the Project shall contain the non-discrimination and non-segregation clauses specified for each type of document in Section 33436 of the California Health and Safety Code.

6. **Tax Exempt Entities**. Tenant acknowledges that it has received and reviewed that certain Grant Deed dated May 19, 2014, executed and acknowledged on behalf of FOCIL-MB, LLC, and Landlord, recorded in the Official Records on May 23, 2014, as Document No. 2014-J886903-00 (the "**Grant Deed**"), and further that this Lease and Tenant are subject and subordinate to, and Tenant shall not violate, the covenants contained in such Grant Deed. Such Grant Deed contains certain covenants by Landlord regarding payments of taxes (or payments in lieu of taxes) if (a) there is any sale, assignment, conveyance, lease, sublease, or other alienation of any portion of the Project to an entity that is or could be exempt from property taxation (a "**Tax Exempt Entity**"), or (b) there is a grant to a Tax Exempt Entity of occupancy rights (such as under a space lease) where, as the result of such grant, all or any portion of any improvements on all or any portion of the Project would or could be exempt from property taxation. Accordingly, Tenant shall not Transfer the Premises, or any portion thereof, or sublease space in, or otherwise grant any occupancy rights, in the Premises to any Tax Exempt Entity without first: (a) obtaining from such Tax Exempt Entity a binding contractual commitment, in form and substance reasonably satisfactory to, and for the benefit of, the Successor Agency to the Redevelopment Agency (the "**Successor Agency**") and the City and County of San Francisco (collectively, "**City and County**"), obligating such entity to make a payment in lieu of taxes ("**PILOT Agreement**") equal to the full amount of the property taxes that would have been assessed against the Premises notwithstanding

such occupancy by a Tax Exempt Entity; or (b) entering into a binding PILOT Agreement, in form and substance reasonably satisfactory to, and for the benefit of, the Successor Agency and the City and County, requiring the full payment of property taxes (or a payment in lieu thereof in an amount equal to the property taxes) that would have been assessed against the Premises notwithstanding such occupancy by such Tax Exempt Entity, or (c) obtaining the written consent of the Successor Agency and the City and County, in their respective sole discretion. Tenant hereby agrees not to request that Landlord request an adjustment to the "**Base Year Value**" (as defined below) for the "South Plan Area" (as defined in the OPA), or any portion thereof, as a result of any Transfer permitted under this Lease to a Tax Exempt Entity. For purposes hereof, (i) the term "Base Year Value" means the aggregate assessed value of property within the South Plan Area on the assessment roll last equalized prior to the effective date of the ordinance adopting the Redevelopment Plan, and (ii) the term "last equalized" has the meaning set forth in Section 2052 of the California Revenue and Tax Code.

7. **Mitigation Measures**. Tenant has been informed by Landlord that the Project (along with other property) is subject to the Mitigation Monitoring and Reporting Program for the Mission Bay South Plan Area (including, but not limited to, the Mission Bay South CEQA Mitigation Measures described in Attachment L to the Mission Bay South Owner Participation Agreement between the Redevelopment Agency and CDC dated November 16, 1998, and recorded in the Official Records on December 3, 1998, as Document No. 98-G477258). Tenant shall comply with the following mitigation measures (and with any other mitigation measures that Landlord reasonably determines are applicable to Tenant's operations in the Premises):

(a) Mitigation Measure L01 *(Biohazardous Materials Handling Guidelines)*: Require businesses that handle biohazardous materials and do not receive federal funding to certify that they follow the guidelines published by the National Research Council and the U.S. Department of Health and Human Services Public Health Service, National Institutes of Health, and Centers for Disease Control as set forth in Biosafety in Microbiological and Biomedical Laboratories, Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines), and Guide for the Care and Use of Laboratory Animals, or their successors, as applicable.

(b) Mitigation Measure L02 *(Use of HEPA Filters)*: Require businesses handling biohazardous materials to certify that they use high efficiency particulate air (HEPA) filters or substantially equivalent devices on all exhaust from Biosafety Level 3 laboratories unless they demonstrate that exhaust from the Biosafety Level 3 laboratories would not pose a substantial health and safety hazards to the public or the environment. Require such businesses to certify that they inspect or monitor the filters regularly to ensure proper functioning.

(c) Mitigation Measure L03 *(Handling of Biohazardous Materials)*: Require businesses handling biohazardous materials to certify that they do not handle or use biohazardous materials requiring Biosafety Level 4 containment (i.e., dangerous or exotic materials that pose high risks of life-threatening diseases or aerosol-transmitted infections, or unknown risks of transmitting in the Project Area).

8. **Declaration of Tax Appeal Waiver Agreement**. Tenant acknowledges that it has received and reviewed a certain Declaration of Tax Appeal Waiver Agreement dated May 23, 2014, executed and acknowledged on behalf of FOCIL-MB, LLC, and Landlord, recorded in the Official Records on May 23, 2014, as Document No. 14-J886906 ("**Declaration of Tax Appeal Waiver Agreement**"), and further that this Lease and Tenant are subject and subordinate to, and Tenant shall not violate, the covenants contained in such Declaration of Tax Appeal Waiver Agreement. Such Declaration of Tax Appeal Waiver Agreement contains certain covenants by Landlord to not (and waivers of any rights to) take any action or seek to take any action (including filing any appeal, contest, commencing any legal action or otherwise challenging or disputing in any way) that would result in a reduction of the assessed value of the Project for property tax purposes below a "**Minimum Amount**" (as defined in the Declaration of Tax Appeal Waiver Agreement as the sum of (i) $95,000,000.00 plus (ii) the actual construction costs for the Project, provided, however, that the Minimum Amount shall increase on the anniversary of the Completion of Construction (as defined therein) and annually thereafter by 2%). In connection with the foregoing, and notwithstanding the terms and conditions of Article 4 of this Lease, (a) Tenant shall not have the right to require Landlord to seek any reduction in Tax Expenses below the Minimum Amount, and (b) notwithstanding anything to the contrary set forth in this Lease, only Landlord may institute proceedings to reduce Tax Expenses and the filing of any such proceeding by Tenant without Landlord's consent shall constitute an Event of Default by Tenant under this Lease.

SCHEDULE 1 TO EXHIBIT 4.4.3

THE EXCHANGE

SUCCESSOR PROJECT LABOR AGREEMENT

[ATTACHED]

MISSION BAY

PROJECT AGREEMENT

This Project Agreement ("Agreement") is entered into this _____ day of _____, 200_ by and among _____ (hereinafter referred to as the "Project Contractor"), and the San Francisco Building and Construction Trades Council, AFL-CIO; and affiliated Local Unions whose names are subscribed hereto and who have, through their duly authorized officers, executed this Agreement (hereinafter collectively referred to as the "Union" or the "Unions"). The term Contractor as used in this Agreement includes all contractors and subcontractors of whatever tier. Contractor agrees to comply with the collective bargaining agreements listed in Schedule A for the purposes of the Covered Work only, and any obligation incurred under Schedule A agreements shall expire with the termination of this Agreement. Where specific reference to _____ only is intended, the term Project Contractor is used. This project is being constructed pursuant to an Owner's Participation Agreement ("Owner OPA") for Mission Bay _____ originally between the Redevelopment Agency of the City and County of San Francisco and Catellus Development Corporation ("Catellus") and subsequently transferred in part to _____ (the "Owner"). The project area is generally bound by _____.

Catellus and the Unions entered into the Mission Bay Project Agreement ("Original PLA") for the entire Mission Bay project on October 8, 1990. The Original PLA was amended by an Addendum to Agreement effective _____ 2003 ("Addendum"), which among other things, requires the execution of this Agreement by the Project Contractor when Catellus sells, conveys, ground leases or donates to a third party any real property covered by the Original PLA, subject to the terms and conditions of the Addendum.

ARTICLE I. PURPOSE

The construction at the Owner's project will require substantial numbers of employees from construction and other supporting crafts. The orderly and uninterrupted construction of the work at the Mission Bay project and the Owner's project are of significant interest to the parties to this Agreement.

It is the purpose of this Agreement to ensure that all work covered by this Agreement proceeds efficiently, economically, and with due consideration for the protection of labor standards, wages, and working conditions.

Consistent with the implementation of the programs described in the Mission Bay Affirmative Action and Economic Development Plan ("MBAAWEDP"), Project Contractor will, to the fullest extent possible, award all construction contracts to unionized construction firms. Project Contractor further commits that all construction work under its jurisdiction shall be at prevailing wages, fringes and conditions for all trades and crafts pursuant to the appropriate contract identified on Schedule A. Project Contractor will use good-faith efforts to maximize MBE, WBE and LBE contracts with union firms. Should it be determined that Minority Business Enterprise/Women Owned Business Enterprise; (MBE/WBE) goals for .this project are not being reached a a result of this Agreement, the affected crafts, San Francisco Building Trades Council and Project Contractor will meet and confer to arrive at a resolution which allows for MBE/WBE goal attainment.

The parties to this Agreement have agreed and do establish and put into practice effective and binding methods for the settlement of all misunderstandings, disputes, or grievances that may arise between or among the parties to this Agreement. To accomplish the purpose that the Contractor be assured of complete continuity of operation and that labor-management peace be maintained, the Unions agree not to engage in any strike, picketing, work stoppage, slowdown, sympathy action or any other disruptive activities directed to or in connection with Covered Work, and the Contractors agree not to engage in any lockout.

ARTICLE II. EFFECT OF OTHER AGREEMENTS

The provisions of this Agreement, including the local collective bargaining agreements listed on Schedule A, shall apply to Project Contractor's construction and the Owner's project, notwithstanding the provisions of local and/or national union agreements which may conflict or differ with the terms of this Agreement. Where a subject is covered by the provisions of this Agreement is also covered by a collective bargaining agreement which is listed on Schedule A, the provisions of this Agreement shall prevail. Where a subject is covered by the provisions of a collective bargaining agreement identified in Schedule A and not covered by this Agreement, the provisions of the appropriate collective bargaining agreement identified on Schedule A shall prevail. Further, the parties are bound by the MBAAEDP which is incorporated in its entirety in this document as though set forth herein. This Agreement is not a collateral agreement within the meaning of Section 56.3(c) and 56.11 of the San Francisco Administrative Code.

ARTICLE III. SCOPE OF THE AGREEMENT

This Agreement shall apply to all demolition, new construction including exterior landscaping and tenant work, including but not limited to mill cabinet work and built-in furniture work performed on the Owner's project by or otherwise at the control and direction of Project Contractor excluding uses existing at the time of execution of this Agreement (referred to herein as "Covered Work").

ARTICLE IV. UNION RECOGNITION

The Contractor recognizes the Unions signatory hereto as the collective bargaining agents for its employees covered by the terms of this Agreement.

This Agreement does not apply to general superintendents, superintendents, assistant superintendents, (unless covered in a collective bargaining agreement listed in Schedule A), office and clerical employees, guards or other professional or supervisory employees as defined in the National Labor Relations Act.

ARTICLE V. MANAGEMENT'S RIGHTS

The Contractors retain full and exclusive authority for the management of its operations. Except as expressly limited by other provisions of this Agreement and the appropriate collective bargaining agreement listed on Schedule A, the Contractor retains the right to direct the working force, including the hiring, promotion, transfer, discipline or discharge of employees; the selection of foremen; the assignment and scheduling of work; and, the requirement of overtime work and the determination of when it shall be worked. No rules, customs, or practices which limit or restrict productivity, efficiency or the individual and/or joint working efforts of employees shall be permitted or observed. The Contractor may utilize any methods or techniques of construction.

Except as otherwise stated in the appropriate collective bargaining agreement listed on Schedule A, there shall be no limitation or restriction upon the Contractor’s choice of materials or design, nor, regardless of source or location, upon the full use and installation of equipment, machinery, package units, precast, prefabricated, prefinished or preassembled materials, tools, or other labor saving devices. The Contractor may without restriction install or otherwise use materials, supplies or equipment regardless of their source. The on-site installation of application of such items shall be performed by the craft customarily having jurisdiction over such work under the applicable collective bargaining agreement listed on Schedule A; provided, however, it is recognized that other personnel having special talents or qualifications may participate in the installation, checkout or testing of specialized or unusual equipment or facilities.

Except as otherwise stated in the appropriate collective bargaining agreement listed on Schedule A, it is recognized that the use of new technology, equipment, machinery, tools and/or labor savings devices and methods of performing work will be initiated by the Contractor from time to time during the project. The Union agrees that it will not in any way restrict the implementation of such new devices or work methods. If there is any disagreement between the Contractor and the Union concerning the manner or implementation of such device or method of work, the implementation shall proceed as directed by the Contractor, and the Union shall have the right to arbitrate the dispute as set forth in Article VIII of this Agreement.

The failure of the Contractor to exercise rights herein reserved to it or the exercise of those rights in a particular way shall not be deemed a waiver of said rights or of the Contractor's right to exercise said rights in some other manner not in conflict with the terms of this Agreement.

ARTICLE VI. UNION REPRESENTATION

Authorized representatives of the Union shall have access to the Covered Work provided they do not interfere with the work of employees and further provided that such representatives fully comply with the posted visitor and security and safety rules of the Covered Work.

The Union shall have the right to designate working journey workers as stewards. The Union shall, in writing, notify the Contractor as to the identity of the designated steward prior to the assumption of his/her duties as a steward. In addition to his/her work as an employee, the steward shall have the right to receive, but not solicit, complaints or grievances and to discuss and assist in the adjustment of the same with the employee's appropriate supervisor. The Contractor will not discriminate against a steward in the proper performance of his/her Union duties provided that such duties do not interfere with his/her regular work or with the work of other employees. Stewards shall receive the regular rate of pay for their respective craft. There will be no non-working stewards. The steward shall not have the right to determine when overtime shall be worked or who shall work overtime, or to interfere with any of the supervisory functions of the Contractor.

The Contractor agrees to notify the appropriate Union twenty-four (24) hours prior to the layoff of a steward, except in the case of discipline or discharge for a cause. If a steward is protected against such layoff by the provision of any of the collective bargaining agreements listed on Schedule A, such protection shall be recognized to the extent that the steward possesses the necessary qualifications to perform the work remaining. In any case in which a steward is discharged or disciplined for cause the appropriate Union shall be notified immediately by the Contractor. For the purpose of this provision, "cause" for discharge shall mean incompetence, unexcused absenteeism, disobedience of orders, unsatisfactory performance of duties and violation of posted project work rules.

On work where Catellus' or Owner's personnel may be working in close proximity of the construction activities, the Union agrees that its representatives, stewards and individual workers will not interfere with Catellus' or Owner's personnel or with the work which is being performed by Catellus' or Owner's personnel. This is not to be construed to mean that Catellus' or Owner's personnel may perform work covered by the collective bargaining agreements listed on Schedule A.

ARTICLE VII **WORK STOPPAGES AND LOCKOUTS**

During the term of this Agreement, there shall be no strikes, picketing, work stoppages, slowdowns, sympathy actions or any other disruptive activities directed at or in connection with Covered Work for any reason by the Union or by any employee, and there shall be no lockout by the Contractor.

Failure of any Union or employee to cross any picket line established at the site of Covered Work is a violation of this Article.

The Union shall not sanction, aid or abet, encourage or continue any work stoppage, slowdown, sympathy action, strike, picketing or other disruptive activity at the site of Covered Work and shall undertake all possible means to prevent or to terminate any such activity. No employee shall engage in activities which violate this Article. Any employee who participates in or encourages any activities which interfere with the normal operations of the Covered Work shall be subject to disciplinary action, including discharge. The Union shall not be liable for acts of employees for which it has no responsibility.

In lieu of or in addition to any other action at law or equity, any party, including the Project Contractor, who the parties agree is a beneficiary of this Agreement and specifically this Article with full right of participation in any action under this Article, may institute the following procedure when a breach of paragraphs 1, 2, and/or 3 of this Article is alleged:

(a) The party invoking this procedure shall notify Gerald Mckay or John Kagel who the parties agree shall be the permanent Arbitrator under this procedure. In the event that the permanent Arbitrator is unavailable at any time, he shall appoint his alternate. Notice to the Arbitrator shall be by the most expeditious means available, with notice by telegram to the party alleged to be in violation and the involved International Union President.

(b) Upon receipt of said notice, the Arbitrator named above or his alternate shall set and hold a hearing within twenty-four (24) hours if it is contended that the violation still exists.

(c) The Arbitrator shall notify the parties by telegram of the place and time he has chosen for this hearing. Said hearing shall be completed in one session. A failure of any party to parties to attend said hearing shall not delay the hearing of evidence or issuance of an award by the Arbitrator.

(d) The sole issue at the hearing shall be whether or not a violation of paragraphs 1, 2 and/or 3 of this Article has, in fact, occurred and the Arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages. Any issue concerning damages is reserved for court proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing and may be issued without an opinion. If any party desires an opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of the Award. The Arbitrator may order cessation of the violation of this Article and other appropriate relief, and such Award shall be served on all parties by hand or registered mail upon issuance.

(e) Such Award may be enforced by any court of competent jurisdiction upon the filing of this Agreement and all other relevant documents referred to hereinabove in the following manner. Telegraphic notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain an temporary order enforcing the Arbitrator's Award as issued under paragraph 4(d) of this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such Agreement does not waive any party's right to participate in a hearing for a final order of enforcement. The court's order or orders enforcing the Arbitrator's Award shall be served on all parties by hand or by delivery to their last known address or by registered mail.

(f) Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance therewith are hereby waived by the parties to whom they accrue.

(g) The fees and expenses of the Arbitrator shall be divided equally between the moving parties and the party or parties respondent.

ARTICLE VIII PROJECT COORDINATION COMMITTEE

The parties agree to form a committee comprised of representatives for the Building Trades Council, affected local union and Project Contractor, to meet and discuss issues which may arise from time to time regarding the interpretation, application and enforcement of this Agreement.

In the event a dispute arises between or among the parties thereto which cannot be resolved by the committee described in the preceding paragraph, then the dispute shall be referred to arbitration as described in Article VII with mutually agreed-upon extensions to time limits set forth therein, as may be required.

ARTICLE IX WORK ASSIGNMENTS AND JURISDICTION DISPUTES

Work shall be assigned by the Contractor. There shall be no strikes, picketing, work stoppage, sympathy actions, slowdowns or other disruptive activity arising out of any jurisdictional dispute directed at or in connection with Covered Work during the term of this Agreement.

Except as provided below, all jurisdictional disputes will be settled in accordance with the procedural roles and decisions of the Plan for Settlement of Jurisdictional Disputes in the Construction Industry and shall be binding upon the Contractor and the Unions.

Where a jurisdictional dispute involves any Union not a party to the Plan for Settlement of Jurisdictional Disputes in the Construction Industry and is not resolved among the Unions and the site representative of the affected Contractor, it shall be referred for resolution to the International Unions with which the disputed Unions are affiliated. The International Unions shall hereafter meet with the representative of the affected Contractor to reach a joint resolution of the disputes. For purposes of all disputes referred to the International Unions shall hereafter meet with the representative of the affected Contractor to reach a joint resolution of the disputes. For purposes of all disputes referred to the International Unions, the Project Contractor shall be a party in interest. The resolution of the dispute shall be reduced to writing, signed by representatives of the Local and/or International Unions and a copy furnished to the Contractor. (The Local and/or International Unions and the Contractor, in making their determination, shall have no authority to assign work to a double crew, that is, to more employees than the minimum required to perform the work involved, or to assign the work to employees who are not qualified to perform the work involved.) This does not prohibit establishment of composite crews following jurisdictional guidelines where more than one employee is needed for the job. The work shall proceed as assigned by the Contractor until such resolution by the parties has been confirmed in the manner indicated by the disputing Unions to the Contractors. Any such resolution shall be final and binding on the Contractor and the Unions.

ARTICLE X WAGES, HOURS, WORKING CONDITIONS AND FRINGE BENEFITS

With the exception of black Friday which shall not be observed on construction covered by this Agreement. wages, hours, fringe benefits and other working conditions shall be determined by the appropriate collective bargaining agreements listed on Schedule A. Make-up days as provided in certain collective bargaining agreements listed on Schedule A shall apply to work covered by this Agreement.

ARTICLE XI NO DISCRIMINATION

The Contractor and the Unions agree that they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or age in any manner prohibited by law.

ARTICLE XII APPRENTICES

In order to meet and fulfill minority and woman apprentices and journey-level goals, to ensure those inducted into apprenticeship programs through Mission Bay Affirmative Action reach status, a continuity of work is required. All work covered by this Agreement will have an appropriate apprenticeship program equal to or better than those established by the appropriate collective bargaining agreements listed on Schedule A or their respective equivalent. The work will be done under the wages, hours, conditions, benefits of the appropriate collective bargaining agreement identified on Schedule A. The recruitment, selection, employment and training of apprentices shall be without discrimination because of age, race, color, religion, national origin, or sex. This provision shall be applied in manner consistent with the MBAAEDP and the appropriate JATC, except where superseded by the provisions of the Amended Consent Decree in Civil Case No. C-71-1277RFP, as modified, or as may be subsequently modified during the term of this Agreement.

ARTICLE XIII SAFETY AND HEALTH

The Contractor, the Unions and the employees shall comply with all applicable provisions of local, state, and federal laws and regulations relating to the job safety and safe work practices.

ARTICLE XIV SAVINGS AND SEPARABILITY

It is not the intention of either the Contractor or the Union parties hereto to violate any laws governing the subject matter of this Agreement. The parties hereto agree that in the event any provisions of this Agreement are finally held or determined to be illegal or void as being in contravention of any applicable law, the remainder of this Agreement shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this Agreement. Further, Contractor and Union agree that if and when any or all provisions of this Agreement are finally held or determined to be illegal or void by a court of competent jurisdiction, an effort will be made to then promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of any applicable law and the intent of the parties hereto.

This Article shall not be construed to waive the prohibitions of Article VII, and if the parties arc unable to resolve their differences, the matter shall be referred to the procedure of Article VIII for resolution.

ARTICLE XV ENTIRE UNDERSTANDING

The parties agree that the total results of their bargaining are embodied in this Agreement, and any attached exhibits and schedules, and no party signatory hereto is required to render any performance not set forth in the wording of this Agreement. This Agreement may be amended only by written agreement signed by the parties hereto. In the event that modification to this Agreement is required, the parties agree to promptly convene the Project Coordination Committee to discuss and negotiate the necessary modification.

ARTICLE XVI DURATION OF THE AGREEMENT

This Agreement shall become effective immediately upon Project Contractor's commencement of any demolition or construction activities at the Owner's project within the scope of the Owner's OPA and this Agreement and shall continue in effect for the duration Owner's construction activities on the Owner's project as described in Article III above. Construction of any phase, portion, section or segment of Owner's project shall be deemed completed when such phase, portion, section or segment has been turned over to the Owner and has received the final acceptance from the Owner's representative.

The collective bargaining agreements identified on Schedule A attached to this Agreement shall continue in full force and effect until the contractor and union parties to those collective bargaining agreements notify the Project Contractor of the mutually agreed upon changes in such agreements. The parties agree that any provisions negotiated into said collective bargaining agreements will not apply to work on the Owner's project if such provisions are less favorable to the Contractor than those uniformly required of contractors for construction work covered by those agreements. Such provisions, negotiated, shall not be recognized or applied on Owner's project if they may be construed to apply exclusively or predominantly to work covered by this Agreement.

The Unions agree that there will be no strikes, work stoppages, sympathy actions, picketing, slowdowns or other disruptive activities affecting the Covered Work by the Unions involved in the negotiation of the collective bargaining agreements listed on Schedule A, nor shall there by any lockout on Covered Work affecting the Unions during the course of such negotiations. Any disagreement between the parties over the incorporation into a collective bargaining agreement listed on Schedule A of such provision agreed upon in the negotiation of the collective bargaining agreement shall be subject to the grievance and arbitration procedures of Article VIII.

This Agreement shall be effective until _____, _____ 200_ and shall renew automatically for additional terms of seven years (7) each unless not less than ninety (90) days prior to the termination date of the initial or any subsequent term either Project Contractor or the San Francisco Building Trades Council give written notice to the other requesting modification or termination of the Owner's OPA. Notwithstanding, this Agreement shall terminate upon the termination of the Owner's OPA. Should this Agreement terminate due to the termination of the Owner's OPA, it will be automatically reinstated if the Owner's OPA or a substitute agreement thereto is reinstated within three (3) years of its termination. If reinstatement of the Owner's OPA or a substitute agreement thereto occurs more than three (3) years after its termination, the parties will negotiate a new project agreement. Reinstatement of this Agreement is subject to the seven (7) year terms and notice provision stated above.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and effective as of the day and year above written.

PROJECT CONTRACTOR

_____

SAN FRANCISCO BUILDING AND
CONSTRUCTION TRADES COUNCIL, AFL-CIO

_____

_____

UNIONS (See Schedule A Attached)

SCHEDULE A

Insulators & Asbestos Workers Local 16

_____

Dated: _____

Boilermakers Local 549

_____

Dated: _____

Bricklayers & Allied Crafts Local 3

_____

Dated: _____

Carpenters Local 22

_____

Dated: _____

Carpenters Local 2236

_____

Dated: _____

Carpet & Linoleum Layers Local 12

_____

Dated: _____

Cement Masons Local 300, Area 580

_____

Dated: _____

Electrical Workers Local 6

_____

Dated: _____

Elevator Constructors Local 8

_____

Dated: _____

Glaziers & Glassworkers Local 718

_____

Dated: _____

Hod Carriers Local 36

Dated:

Iron Workers Local 377

Dated:

Laborers Local 67

Dated:

Laborers Local 261

Dated:

Lathers Local 68-L

Dated:

Laborers Local 102

Dated:

Operating Engineers Local 3

Dated:

Painters Local 4

Dated:

Piledrivers Local 34

Dated:

Operative Plasterers Local 66

Dated:

Plumbers & Steamfitters Local 38

Dated:

Roofers & Waterproofers Local 40

Dated:

Sheet Metal Workers Local 104

Dated:

Sign & Display Local 510

Dated:

Sprinkler Fitters Local 483

Dated:

Teamsters Local 853

Dated:

Professional & Technical Engineers Local 21

Dated:

Iron Workers Shop Local 790

Dated:

United Steelworkers of America Machinists Local 1304

Dated:

Window Cleaners Local 44

Dated:

EXHIBIT 5.2

RULES AND REGULATIONS

Tenant shall faithfully observe and comply with the following Rules and Regulations. Landlord shall not be responsible to Tenant for the nonperformance of any of said Rules and Regulations by or otherwise with respect to the acts or omissions of any other tenants or occupants of the Project. In the event of any conflict between the Rules and Regulations and the other provisions of this Lease, the latter shall control.

1. Tenant shall not alter any lock or install any new or additional locks or bolts on any doors or windows of the Premises without obtaining Landlord's prior written consent, which shall not be unreasonably withheld, conditioned or delayed. If Tenant shall affix additional locks on doors then Tenant shall furnish Landlord with copies of keys or pass cards or similar devices for said locks. Tenant shall bear the cost of any lock changes or repairs required by Tenant. Two keys will be furnished by Landlord for the Premises, and any additional keys required by Tenant must be obtained from Landlord at a reasonable cost to be established by Landlord. Upon the termination of this Lease, Tenant shall restore to Landlord all keys of stores, offices, and toilet rooms, either furnished to, or otherwise procured by, Tenant and in the event of the loss of keys so furnished, Tenant shall pay to Landlord the cost of replacing same or of changing the lock or locks opened by such lost key if Landlord shall deem it necessary to make such changes. Notwithstanding anything to the contrary contained in the foregoing, Tenant may control entry to Tenant designated laboratory facilities within its Premises.

2. All doors opening to public corridors shall be kept closed at all times except for normal ingress and egress to the Premises.

3. Landlord reserves the right to close and keep locked all entrance and exit doors of the Building during such hours as are customary for the Comparable Buildings. Tenant, its employees and agents must be sure that the doors to the Building are securely closed and locked when leaving the Premises if it is after the normal hours of business for the Building. Any tenant, its employees, agents or any other persons entering or leaving the Building at any time when it is so locked, or any time when it is considered to be after normal business hours for the Building, may be required to sign the Building register. Access to the Building may be refused unless the person seeking access has proper identification or has a previously arranged pass for access to the Building. Landlord will furnish passes to persons for whom Tenant requests same in writing. Tenant shall be responsible for all persons for whom Tenant requests passes and shall be liable to Landlord for all acts of such persons. Landlord and its agents shall in no case be liable for damages for any error with regard to the admission to or exclusion from the Building of any person. In case of invasion, mob, riot, public excitement, or other commotion, Landlord reserves the right to prevent access to the Building or the Project during the continuance thereof by any means it deems appropriate for the safety and protection of life and property.

4. No furniture, freight or equipment of any kind (other than inconspicuous freight or equipment) shall be brought into the Building without prior notice to Landlord. All moving activity into or out of the Building shall be scheduled with Landlord and done only at such time and in such manner as Landlord designates. Landlord shall have the right to prescribe the weight, size and position of all safes and other heavy property brought into the Building and also the times and manner of moving the same in and out of the Building. Safes and other heavy objects shall, if considered necessary by Landlord, stand on supports of such thickness as is necessary to properly distribute the weight. Landlord will not be responsible for loss of or damage to any such safe or property in any case. Any damage to any part of the Building, its contents, occupants or visitors by moving or maintaining any such safe or other property shall be the sole responsibility and expense of Tenant.

5. No furniture, packages, supplies, equipment or merchandise will be received in the Building or carried up or down in the elevators, except between such hours, in such specific elevator and by such personnel as shall be designated by Landlord.

6. The requirements of Tenant will be attended to only upon application at the management office for the Project or at such office location designated by Landlord. Employees of Landlord shall not perform any work or do anything outside their regular duties unless under special instructions from Landlord.

7. No sign, advertisement, notice or handbill shall be exhibited, distributed, painted or affixed by Tenant on any part of the Premises or the Building without the prior written consent of Landlord. Tenant shall not disturb, solicit, peddle, or canvass any occupant of the Project and shall cooperate with Landlord and its agents of Landlord to prevent same.

8. The toilet rooms, urinals, wash bowls and other apparatus shall not be used for any purpose other than that for which they were constructed, and no foreign substance of any kind whatsoever shall be thrown therein. The expense of any breakage, stoppage or damage resulting from the violation of this rule shall be borne by the tenant who, or whose servants, employees, agents, visitors or licensees shall have caused same.

9. Discharge of industrial sewage to the Building plumbing system shall only be permitted if Tenant, at its sole expense, shall have obtained all necessary permits and licenses therefor, including without limitation permits from state and local authorities having jurisdiction thereof.

10. Tenant shall not overload the floor of the Premises, nor mark, drive nails or screws, or drill into the partitions, woodwork or drywall or in any way deface the Premises or any part thereof without Landlord's prior written consent; provided, however, that Landlord's prior written consent shall not be required for the hanging of normal and customary office artwork and personal items. Landlord reserves the right to have Landlord's structural engineer review Tenant's floor loads on the Building at Landlord's expense, unless such study reveals that Tenant has exceeded the floor loads, in which case Tenant shall pay the cost of such survey.

11. Except for vending machines intended for the sole use of Tenant's employees and invitees, no vending machine or other heat generating machines (other than fractional horsepower office machines and laboratory equipment as contemplated by the Permitted Use) shall be installed, maintained or operated upon the Premises without the written consent of Landlord.

12. Tenant shall not use or keep in or on the Premises, the Building, or the Project any kerosene, gasoline, explosive material, corrosive material, or other inflammable or combustible fluid, chemical, substance or material, except as permitted by the Lease. Tenant shall provide material safety data sheets for any Hazardous Substances used or kept on the Premises.

13. Tenant shall not without the prior written consent of Landlord use any method of heating or air conditioning other than that supplied by Landlord.

14. Tenant shall not use, keep or permit to be used or kept, any foul or noxious gas or substance in or on the Premises except as permitted by the Lease, or permit or allow the Premises to be occupied or used in a manner offensive or objectionable to Landlord or other occupants of the Project by reason of noise, odors, or vibrations, or interfere with other tenants or those having business therein, whether by the use of any musical instrument, radio, phonograph, or in any other way. Tenant shall not throw anything out of doors, windows or skylights or down passageways.

15. Tenant shall not bring into or keep within the Project, the Building or the Premises any animals (except service animals), birds, aquariums, or, except in areas designated by Landlord, bicycles or other vehicles.

16. No cooking shall be done or permitted on the Premises, nor shall the Premises be used for the storage of merchandise, for lodging or for any improper, objectionable or immoral purposes. Notwithstanding the foregoing, Underwriters' laboratory-approved equipment and microwave ovens may be used in the Premises for heating food and brewing coffee, tea, hot chocolate and similar beverages for employees and visitors, provided that such use is in accordance with all applicable federal, state, county and city laws, codes, ordinances, rules and regulations.

17. The Premises shall not be used for manufacturing or for the storage of merchandise except as such storage may be incidental to the use of the Premises provided for in the Summary. Tenant shall not occupy or permit any portion of the Premises to be occupied as an office for a messenger-type operation or dispatch office, public stenographer or typist, or for the manufacture or sale of liquor, narcotics, or tobacco in any form, or as a medical office, or as a barber or manicure shop, or as an employment bureau without the express prior written consent of Landlord. Tenant shall not engage or pay any employees on the Premises except those actually working for such tenant on the Premises nor advertise for laborers giving an address at the Premises.

18. Landlord reserves the right to exclude or expel from the Project any person who, in the judgment of Landlord, is intoxicated or under the influence of liquor or drugs, or who shall in any manner do any act in violation of any of these Rules and Regulations.

19. Tenant, its employees and agents shall not loiter in or on the entrances, corridors, sidewalks, lobbies, courts, halls, stairways, elevators, vestibules or any Common Areas for the purpose of smoking tobacco products or for any other purpose, nor in any way obstruct such areas, and shall use them only as a means of ingress and egress for the Premises.

20. Tenant shall not waste electricity, water or air conditioning and agrees to cooperate fully with Landlord to ensure the most effective operation of the Building's heating and air conditioning system, and shall refrain from attempting to adjust any controls.

21. Tenant shall store all its trash and garbage within the interior of the Premises. No material shall be placed in the trash boxes or receptacles if such material is of such nature that it may not be disposed of in the ordinary and customary manner of removing and disposing of trash and garbage in San Francisco, California without violation of any law or ordinance governing such disposal. All trash, garbage and refuse disposal shall be made only through entryways and elevators provided for such purposes at such times as Landlord shall designate.

22. Tenant shall comply with all safety, fire protection and evacuation procedures and regulations established by Landlord or any governmental agency.

23. Any persons employed by Tenant to do janitorial work shall be subject to the prior written approval of Landlord, and while in the Building and outside of the Premises, shall be subject to and under the control and direction of the Building manager (but not as an agent or servant of such manager or of Landlord), and Tenant shall be responsible for all acts of such persons.

24. No awnings or other projection shall be attached to the outside walls of the Building without the prior written consent of Landlord, and no curtains, blinds, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Premises other than Landlord standard drapes. All electrical ceiling fixtures hung in the Premises or spaces along the perimeter of the Building must be fluorescent and/or of a quality, type, design and a warm white bulb color approved in advance in writing by Landlord. Neither the interior nor exterior of any windows shall be coated or otherwise sunscreened without the prior written consent of Landlord. Tenant shall abide by Landlord's regulations concerning the opening and closing of window coverings which are attached to the windows in the Premises, if any, which have a view of any interior portion of the Building or Building Common Areas.

25. The sashes, sash doors, skylights, windows, and doors that reflect or admit light and air into the halls, passageways or other public places in the Building shall not be covered or obstructed by Tenant, nor shall any bottles, parcels or other articles be placed on the windowsills.

26. Tenant must comply with requests by Landlord concerning the informing of their employees of items of importance to Landlord.

27. No smoking is permitted in the Building or on the Project. Tenant must comply with the State of California "No-Smoking" law set forth in California Labor Code Section 6404.5, and any local "No-Smoking" ordinance which may be in effect from time to time and which is not superseded by such state law.

28. Tenant hereby acknowledges that Landlord shall have no obligation to provide guard service or other security measures for the benefit of the Premises, the Building or the Project. Tenant hereby assumes all responsibility for the protection of Tenant and its agents, employees, contractors, invitees and guests, and the property thereof, from acts of third parties, including keeping doors locked and other means of entry to the Premises closed, whether or not Landlord, at its option, elects to provide security protection for the Project or any portion thereof. Tenant further assumes the risk that any safety and security devices, services and programs which Landlord elects, in its sole discretion, to provide may not be effective, or may malfunction or be circumvented by an unauthorized third party, and Tenant shall, in addition to its other insurance obligations under this Lease, obtain its own insurance coverage to

the extent Tenant desires protection against losses related to such occurrences. Tenant shall cooperate in any reasonable safety or security program developed by Landlord or required by law.

29. All large electrical or mechanical office or laboratory equipment shall be placed by Tenant in the Premises in settings approved by Landlord, to absorb or prevent any vibration, noise and annoyance.

30. Tenant shall not use in any space or in the public halls of the Building, any hand trucks except those equipped with rubber tires and rubber side guards.

31. No auction, liquidation, fire sale, going-out-of-business or bankruptcy sale shall be conducted in the Premises without the prior written consent of Landlord.

32. No tenant shall use or permit the use of any portion of the Premises for living quarters, sleeping apartments or lodging rooms.

33. Tenant shall install and maintain, at Tenant's sole cost and expense, an adequate, visibly marked and properly operational fire extinguisher next to any duplicating or photocopying machines or similar heat producing equipment, which may or may not contain combustible material, in the Premises.

Landlord reserves the right at any time to change or rescind any one or more of these Rules and Regulations, or to make such other and further reasonable Rules and Regulations as in Landlord's reasonable judgment may from time to time be necessary for the management, safety, care and cleanliness of the Premises, Building, the Common Areas and the Project, and for the preservation of good order therein, as well as for the convenience of other occupants and tenants therein. Landlord may waive any one or more of these Rules and Regulations for the benefit of any particular tenants, but no such waiver by Landlord shall be construed as a waiver of such Rules and Regulations in favor of any other tenant, nor prevent Landlord from thereafter enforcing any such Rules or Regulations against any or all tenants of the Project. Tenant shall be deemed to have read these Rules and Regulations and to have agreed to abide by them as a condition of its occupancy of the Premises.

EXHIBIT 5.5.1.1

THE EXCHANGE

ENVIRONMENTAL QUESTIONNAIRE

ENVIRONMENTAL QUESTIONNAIRE
FOR COMMERCIAL AND INDUSTRIAL PROPERTIES

Property Name: _____

Property Address: _____

Instructions: The following questionnaire is to be completed by the Lessee representative with knowledge of the planned operations for the specified building/location. Please print clearly and attach additional sheets as necessary.

1.0 PROCESS INFORMATION

Describe planned use, and include brief description of manufacturing processes employed.

_____

_____

_____

2.0 HAZARDOUS MATERIALS

Are hazardous materials used or stored? If so, continue with the next question. If not, go to Section 3.0.

2.1 Are any of the following materials handled on the Property? Yes No

(A material is handled if it is used, generated, processed, produced, packaged, treated, stored, emitted, discharged, or disposed.) If so, complete this section. If this question is not applicable, skip this section and go on to Section 5.0.

Explosives	Fuels	Oils
Solvents	Oxidizers	Organics/Inorganics
Acids	Bases	Pesticides
Gases	PCBs	Radioactive Materials
Other (please specify)		

2-2. If any of the groups of materials checked in Section 2.1, please list the specific material(s), use(s), and quantity of each chemical used or stored on the site in the Table below. If convenient, you may substitute a chemical inventory and list the uses of each of the chemicals in each category separately.

Material	Physical State (Solid, Liquid, or Gas)	Usage	Container Size	Number of Containers	Total Quantity

2-3. Describe the planned storage area location(s) for these materials. Please include site maps and drawings as appropriate.

3.0 HAZARDOUS WASTES

Are hazardous wastes generated? Yes No

If yes, continue with the next question. If not, skip this section and go to Section 4.0.

3.1 Are any of the following wastes generated, handled, or disposed of (where applicable) on the Property?

Hazardous wastes	Industrial Wastewater
Waste oils	PCBs
Air emissions	Sludges
Regulated Wastes	Other (please specify)

3-2. List and quantify the materials identified in Question 3-1 of this section.

WASTE GENERATED	RCRA listed Waste?	SOURCE	APPROXIMATE MONTHLY QUANTITY	WASTE CHARACTERIZATION	DISPOSITION

3-3. Please include name, location, and permit number (e.g. EPA ID No.) for transporter and disposal facility, if applicable). Attach separate pages as necessary.

Transporter/Disposal Facility Name	Facility Location	Transporter (T) or Disposal (D) Facility	Permit Number

3-4. Are pollution controls or monitoring employed in the process to prevent or minimize the release of wastes into the environment? Yes No

3-5. If so, please describe.

4.0 USTS/ASTS

4.1 Are underground storage tanks (USTs), aboveground storage tanks (ASTs), or associated pipelines used for the storage of petroleum products, chemicals, or liquid wastes present on site (lease renewals) or required for planned operations (new tenants)? Yes___ No___

If not, continue with Section 5.0. If yes, please describe capacity, contents, age, type of the USTs or ASTs, as well any associated leak detection/spill prevention measures. Please attach additional pages if necessary.

Capacity	Contents	Year Installed	Type (Steel, Fiberglass, etc.)	Associated Leak Detection / Spill Prevention Measures*

*Note: The following are examples of leak detection / spill prevention measures:

Integrity testing	Inventory reconciliation	Leak detection system
Overfill spill protection	Secondary containment	Cathodic protection

4-2. Please provide copies of written tank integrity test results and/or monitoring documentation, if available.

4-3. Is the UST/AST registered and permitted with the appropriate regulatory agencies? Yes No
If so, please attach a copy of the required permits.

4-4. If this Questionnaire is being completed for a lease renewal, and if any of the USTs/ASTs have leaked, please state the substance released, the media(s) impacted (e.g., soil, water, asphalt, etc.), the actions taken, and all remedial responses to the incident.

4-5. If this Questionnaire is being completed for a lease renewal, have USTs/ASTs been removed from the Property? Yes No

If yes, please provide any official closure letters or reports and supporting documentation (e.g., analytical test results, remediation report results, etc.).

4-6. For Lease renewals, are there any above or below ground pipelines on site used to transfer chemicals or wastes? Yes No

For new tenants, are installations of this type required for the planned operations?
Yes No

If yes to either question, please describe.

5.0 ASBESTOS CONTAINING BUILDING MATERIALS

Please be advised that an asbestos survey may have been performed at the Property. If provided, please review the information that identifies the locations of known asbestos containing material or presumed asbestos containing material. All personnel and appropriate subcontractors should be notified of the presence of these materials, and informed not to disturb these materials. Any activity that involves the disturbance or removal of these materials must be done by an appropriately trained individual/contractor.

6.0 REGULATORY

6-1. Does the operation have or require a National Pollutant Discharge Elimination System (NPDES) or equivalent permit? Yes No
If so, please attach a copy of this permit.

6-2. Has a Hazardous Materials Business Plan been developed for the site? Yes No
If so, please attach a copy.

CERTIFICATION

I am familiar with the real property described in this questionnaire. By signing below, I represent and warrant that the answers to the above questions are complete and accurate to the best of my knowledge. I also understand that Lessor will rely on the completeness and accuracy of my answers in assessing any environmental liability risks associated with the property.

Signature: _____

Name: _____

Title: _____

Date: _____

Telephone: _____

EXHIBIT 7.3

THE EXCHANGE

TENANT/LANDLORD MAINTENANCE RESPONSIBILITY MATRIX[3]

Maintenance Responsibility Matrix

Landlord Held Contracts (billed through CAM)	
Janitorial	Common Areas
Pest Control	Exterior & Common Areas
Access System	Common Areas, Elevators
Electric & Gas	Common Areas, Exterior
Window Cleaning	Exterior Only
Elevators	PM Contract
HVAC	Common Areas (Base Building Operation of devised added to smoke control)
Lighting	Common Areas
Roof	Repairs & Maintenance
Plumbing	Common Areas
FLS	Entire Building including FLS adds that serve entire building.
Landscaping	Exterior maintenance
Fitness Center	Equipment maintenance
Exterior Maint.	All exterior maintenance
Parking Garage	Parking operator, R&M
Trash & Recycling	From common dumpsters in north loading dock.
Gen Maint.	Maintenance Services
Security	Common Area, Building Exterior & North Loading Dock

Billed Monthly Based on Actuals	
Electric	Metered Usage
Gas	Metered Usage
HVAC	Tenant will be responsible for costs for repairs within their space
Fire Life Safety	Siemens Fire Alarm added devices in tenant space (broken out on BB contract and billed back to TT directly).
Water	Metered usage for RO/DI system *Tenant submeter installation required*

Tenant Held Contracts	
Janitorial	Tenant Space
Pest Control	Tenant Space
Access System - tied into building system	Tenant Space
Lighting	Tenant Space
Trash & Recycling	Tenant Space
Gas	Tenant Equipment
Plumbing	Tenant Space
Mechanical Equip.	Tenant added mechanical equipment including vacuum pump, heat pumps, air compressor, cold/warm rooms, RO/DI system, bulk gases, BSL 3 AHs & BSL EFs should be on tenant maint contract.
FLS	Tenant added systems (ex. Pre-action, FM200, etc.) require contract that maintain proper compliance.

[3] Exhibit 7.3 will be revised to reflect that gas is not metered or sub metered at the Premises. Further, Tenant has requested that Landlord provide certain services which Tenant is responsible for providing and Landlord may agree to do so at Tenant's cost.

EXHIBIT 17

THE EXCHANGE

FORM OF TENANT'S ESTOPPEL CERTIFICATE

The undersigned as Tenant under that certain Lease (the "**Lease**") made and entered into as of _____, 20 ___ by and between _____ as Landlord, and the undersigned as Tenant, for Premises on the _____ floor(s) of the office building located at **[INSERT BUILDING ADDRESS]**, San Diego, California, certifies as follows:

1. Attached hereto as **Exhibit A** is a true and correct copy of the Lease and all amendments and modifications thereto. The documents contained in **Exhibit A** represent the entire agreement between the parties as to the Premises.

2. The undersigned currently occupies the Premises described in the Lease, the Lease Term commenced on _____, and the Lease Term expires on _____, and the undersigned has no option to terminate or cancel the Lease or to purchase all or any part of the Premises, the Building and/or the Project.

3. Base Rent became payable on _____, subject to the Base Rent abatement set forth in the Lease.

4. The Lease is in full force and effect and has not been modified, supplemented or amended in any way except as provided in **Exhibit A**.

5. Tenant has not transferred, assigned, or sublet any portion of the Premises nor entered into any license or concession agreements with respect thereto except as follows:

6. Intentionally Omitted.

7. All monthly installments of Base Rent, all Additional Rent and all monthly installments of estimated Additional Rent have been paid when due through _____. The current monthly installment of Base Rent is $_____.

8. All conditions of the Lease to be performed by Landlord necessary to the enforceability of the Lease have been satisfied and Landlord is not in default thereunder. In addition, the undersigned has not delivered any notice to Landlord regarding a default by Landlord thereunder. The Lease does not require Landlord to provide any rental concessions or to pay any leasing brokerage commissions.

9. No rental has been paid more than thirty (30) days in advance and no security has been deposited with Landlord except as provided in the Lease.

10. As of the date hereof, there are no existing defenses or offsets, or, to the undersigned's knowledge, claims or any basis for a claim, that the undersigned has against Landlord.

11. If Tenant is a corporation or partnership, each individual executing this Estoppel Certificate on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in California and that Tenant has full right and authority to execute and deliver this Estoppel Certificate and that each person signing on behalf of Tenant is authorized to do so.

12. There are no actions pending against the undersigned under the bankruptcy or similar laws of the United States or any state.

13. To the best of Tenant's knowledge, Tenant is in full compliance with all federal, state and local laws, ordinances, rules and regulations affecting its use of the Premises, including, but not limited to, those laws, ordinances, rules or regulations relating to hazardous or toxic materials. Tenant has never permitted or suffered, nor does Tenant have any knowledge of, the generation, manufacture, treatment, use, storage, disposal or discharge of any hazardous, toxic or dangerous waste, substance or material in, on, under or about the Project or the Premises or any adjacent premises or property in violation of any federal, state or local law, ordinance, rule or regulation.

14. To the undersigned's knowledge, all tenant improvement work to be performed by Landlord under the Lease has been completed in accordance with the Lease and has been accepted by the undersigned and all reimbursements and allowances due to the undersigned under the Lease in connection with any tenant improvement work have been paid in full. All work (if any) in the common areas required by the Lease to be completed by Landlord has been completed and all parking spaces required by the Lease have been furnished and/or all parking ratios required by the Lease have been met.

The undersigned acknowledges that this Estoppel Certificate may be delivered to Landlord or to a prospective mortgagee or prospective purchaser, and acknowledges that said prospective mortgagee or prospective purchaser will be relying upon the statements contained herein in making the loan or acquiring the property of which the Premises are a part and that receipt by it of this certificate is a condition of making such loan or acquiring such property.

Executed at _____ on the _____ day of _____, 20__.

"Tenant":

_____,
a _____

By: _____
Its: _____

By: _____
Its: _____

EXHIBIT 21

FORM LETTER OF CREDIT

IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____

DATE:_____, 20___

BENEFICIARY:

_____

_____

_____

APPLICANT:

_____

_____

_____

AMOUNT: US$_____ ($_____ and 00/100 U.S. DOLLARS)

EXPIRATION DATE:_____, 20___

LOCATION: AT OUR COUNTERS IN _____

DEAR SIR/MADAM:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____ IN YOUR FAVOR AVAILABLE BY YOUR DRAFT IN THE FORM OF "ANNEX 1" ATTACHED DRAWN ON US AT SIGHT AND ACCOMPANIED BY THE FOLLOWING DOCUMENTS:

A DATED STATEMENT SIGNED BY AN AUTHORIZED OFFICER OF THE BENEFICIARY READING AS FOLLOWS:

(A) WE ARE ENTITLED TO DRAW ON THE LETTER OF CREDIT PURSUANT TO THE TERMS OF THAT CERTAIN LEASE BY AND BETWEEN_____, AS LANDLORD, AND _____, AS TENANT

OR

(B) _____ HEREBY CERTIFIES THAT IT HAS RECEIVED NOTICE FROM _____ THAT THE LETTER OF CREDIT NO._____ WILL NOT BE RENEWED, AND THAT IT HAS NOT RECEIVED A REPLACEMENT OF THIS LETTER OF CREDIT FROM _____ SATISFACTORY TO _____ AT LEAST FORTY-FIVE (45) DAYS PRIOR TO THE EXPIRATION DATE OF THIS LETTER OF CREDIT.

THE LEASE MENTIONED IN THIS LETTER OF CREDIT IS FOR IDENTIFICATION PURPOSES ONLY AND IT IS NOT INTENDED THAT SAID AGREEMENT BE INCORPORATED HEREIN OR FORM PART OF THIS LETTER OF CREDIT.

DRAFT(S) AND DOCUMENTS MUST INDICATE THE NUMBER AND DATE OF THIS LETTER OF CREDIT. PARTIAL DRAWINGS ARE PERMITTED.

THIS LETTER OF CREDIT SHALL BE AUTOMATICALLY EXTENDED FOR AN ADDITIONAL PERIOD OF ONE YEAR, WITHOUT AMENDMENT OR CONDITION, FROM THE PRESENT OR EACH FUTURE EXPIRATION DATE UNLESS AT LEAST FORTY-FIVE (45) DAYS PRIOR TO THE THEN CURRENT EXPIRATION DATE WE NOTIFY YOU AND THE APPLICANT BY REGISTERED MAIL/OVERNIGHT COURIER SERVICE AT THE ABOVE ADDRESSES THAT THIS LETTER OF CREDIT WILL NOT BE EXTENDED BEYOND THE CURRENT EXPIRATION DATE.

THIS LETTER OF CREDIT MAY BE TRANSFERRED (AND THE PROCEEDS HEREOF ASSIGNED), AT THE EXPENSE OF THE APPLICANT (WHICH PAYMENT SHALL NOT BE A CONDITION TO ANY TRANSFER), ONE OR MORE TIMES BUT IN EACH INSTANCE ONLY IN THE FULL AMOUNT AVAILABLE TO BE DRAWN UNDER THE LETTER OF CREDIT.

ALL DEMANDS FOR PAYMENT SHALL BE MADE BY PRESENTATION OF THE DATED CERTIFICATION PRIOR TO _____ A.M. _____ TIME, ON A BUSINESS DAY AT OUR OFFICE (THE "BANK'S OFFICE") AT: _____, ATTENTION: STANDBY LETTER OF CREDIT SECTION OR BY FACSIMILE TRANSMISSION AT: (___)_____; AND SIMULTANEOUSLY UNDER TELEPHONE ADVICE TO: (___)_____, ATTENTION: STANDBY LETTER OF CREDIT NEGOTIATION SECTION WITH ORIGINALS TO FOLLOW BY OVERNIGHT COURIER SERVICE.

PAYMENT AGAINST CONFORMING PRESENTATIONS HEREUNDER SHALL BE MADE BY BANK IN IMMEDIATELY AVAILABLE U.S. FUNDS DURING NORMAL BUSINESS HOURS OF THE BANK'S OFFICE WITHIN TWO (2) BUSINESS DAYS AFTER PRESENTATION NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THE UNIFORM CUSTOMS AND PRACTICES FOR DOCUMENTARY CREDITS (1993 REVISION), INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 500, OR THE "INTERNATIONAL STANDBY PRACTICES" (ISP 98), INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 590.

WE HEREBY CERTIFY THAT THIS IS AN UNCONDITIONAL AND IRREVOCABLE CREDIT AND AGREE WITH THE DRAWERS, ENDORSERS AND BONAFIDE HOLDERS THAT THE DRAFTS DRAWN UNDER AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT SHALL BE DULY HONORED UPON PRESENTATION TO THE DRAWEE, IF NEGOTIATED ON OR BEFORE THE EXPIRATION DATE OF THIS CREDIT.

EXCEPT TO THE EXTENT INCONSISTENT WITH THE EXPRESS TERMS HEREOF, THIS LETTER OF CREDIT IS SUBJECT TO THE "INTERNATIONAL STANDBY PRACTICES" (ISP 98), INTERNATIONAL CHAMBER OF COMMERCE, PUBLICATION NO. 590.

_____	_____
AUTHORIZED SIGNATURE	AUTHORIZED SIGNATURE

ANNEX 1

BILL OF EXCHANGE

DATE:

AT SIGHT OF THIS BILL OF EXCHANGE

PAY TO THE ORDER OF _____

US _____DOLLARS (US $_____)

DRAWN UNDER

CREDIT NUMBER NO. **DATED**

TO:

.....

Authorized Signature

EXHIBIT “A”

DATE:

TO: _____

_____

RE: STANDBY LETTER OF CREDIT

NO. _____

ISSUED BY _____

LADIES AND GENTLEMEN:

FOR VALUE RECEIVED, THE UNDERSIGNED BENEFICIARY HEREBY IRREVOCABLY TRANSFERS TO:

(NAME OF TRANSFEREE) _____

(ADDRESS) _____

_____

ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY TO DRAW UNDER THE ABOVE LETTER OF CREDIT UP TO ITS AVAILABLE AMOUNT AS SHOWN ABOVE AS OF THE DATE OF THIS TRANSFER.

BY THIS TRANSFER, ALL RIGHTS OF THE UNDERSIGNED BENEFICIARY IN SUCH LETTER OF CREDIT ARE TRANSFERRED TO THE TRANSFEREE. TRANSFEREE SHALL HAVE THE SOLE RIGHTS AS BENEFICIARY THEREOF, INCLUDING SOLE RIGHTS RELATING TO ANY AMENDMENTS, WHETHER INCREASES OR EXTENSIONS OR OTHER AMENDMENTS, AND WHETHER NOW EXISTING OR HEREAFTER MADE. ALL AMENDMENTS ARE TO BE ADVISED DIRECT TO THE TRANSFEREE WITHOUT NECESSITY OF ANY CONSENT OF OR NOTICE TO THE UNDERSIGNED BENEFICIARY.

THE ORIGINAL OF SUCH LETTER OF CREDIT IS RETURNED HEREWITH, AND WE ASK YOU TO ENDORSE THE TRANSFER ON THE REVERSE THEREOF, AND

FORWARD IT DIRECTLY TO THE TRANSFEREE WITH YOUR CUSTOMARY NOTICE OF TRANSFER.

SINCERELY,

_____

(BENEFICIARY’S NAME)

_____

SIGNATURE OF BENEFICIARY

SIGNATURE AUTHENTICATED

_____

(Name of Bank)

_____

(authorized signature)

EXHIBIT 24.4

THE EXCHANGE
RECOGNITION OF COVENANTS, CONDITIONS, AND RESTRICTIONS

FORM OF RECOGNITION OF COVENANTS, CONDITIONS, AND RESTRICTIONS

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

KRE Exchange Owner LLC
c/o Longfellow Property Management Services CA, Inc.
1800 Owens Street, Suite 350
San Francisco, CA 94158
Attention: Property Management

RECOGNITION OF COVENANTS,
CONDITIONS, AND RESTRICTIONS

This Recognition of Covenants, Conditions, and Restrictions (this "**Agreement**") is entered into as of the _____ day of _____, 20___, by and between _____ ("**Landlord**"), and _____ ("**Tenant**"), with reference to the following facts:

A. Landlord and Tenant entered into that certain Lease dated _____, 20___ (the "**Lease**"). Pursuant to the Lease, Landlord leased to Tenant and Tenant leased from Landlord space (the "**Premises**") located in certain buildings on certain real property described in **Exhibit A** attached hereto and incorporated herein by this reference (the "**Property**").

B. The Premises is located in a project located on real property which is part of an area owned by Landlord containing approximately _____(__) acres of real property located in the City of _____, California (the "**Project**"), as more particularly described in **Exhibit B** attached hereto and incorporated herein by this reference.

C. Landlord, as declarant, has previously recorded, or proposes to record concurrently with the recordation of this Agreement, a Declaration of Covenants, Conditions, and Restrictions (the "**Declaration**"), dated _____, 20___, in connection with the Project.

D. Tenant is agreeing to recognize and be bound by the terms of the Declaration, and the parties hereto desire to set forth their agreements concerning the same.

NOW, THEREFORE, in consideration of (a) the foregoing recitals and the mutual agreements hereinafter set forth, and (b) for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows,

1. Tenant's Recognition of Declaration. Notwithstanding that the Lease has been executed prior to the recordation of the Declaration, Tenant agrees to recognize and by bound by all of the terms and conditions of the Declaration.

2. Miscellaneous.

2.1 This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, estates, personal representatives, successors, and assigns.

2.2 This Agreement is made in, and shall be governed, enforced and construed under the laws of, the State of California.

2.3 This Agreement constitutes the entire understanding and agreements of the parties with respect to the subject matter hereof and shall supersede and replace all prior understandings and agreements, whether verbal or in writing. The parties confirm and acknowledge that there are no other promises, covenants, understandings, agreements, representations, or warranties with respect to the subject matter of this Agreement except as expressly set forth herein.

2.4 This Agreement is not to be modified, terminated, or amended in any respect, except pursuant to any instrument in writing duly executed by both of the parties hereto.

2.5 In the event that either party hereto shall bring any legal action or other proceeding with respect to the breach, interpretation, or enforcement of this Agreement, or with respect to any dispute relating to any transaction covered by this Agreement, the losing party in such action or proceeding shall reimburse the prevailing party therein for all reasonable costs of litigation, including reasonable attorneys' fees, in such amount as may be determined by the court or other tribunal having jurisdiction, including matters on appeal.

2.6 All captions and heading herein are for convenience and ease of reference only, and shall not be used or referred to in any way in connection with the interpretation or enforcement of this Agreement.

2.7 If any provision of this Agreement, as applied to any party or to any circumstance, shall be adjudged by a court of competent jurisdictions to be void or unenforceable for any reason, the same shall not affect any other provision of this Agreement, the application of such provision under circumstances different from those adjudged by the court, or the validity or enforceability of this Agreement as a whole.

2.8 Time is of the essence of this Agreement.

2.9 The Parties agree to execute any further documents, and take any further actions, as may be reasonable and appropriate in order to carry out the purpose and intent of this Agreement.

2.10 As used herein, the masculine, feminine or neuter gender, and the singular and plural numbers, shall each be deemed to include the others whenever and whatever the context so indicates.

SIGNATURE PAGE OF RECOGNITION OF

COVENANTS, CONDITIONS AND RESTRICTIONS

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

"Landlord":

_____,

a _____

By: _____

Its: _____

"Tenant":

_____,

a _____

By: _____

Its: _____

By: _____

Its: _____

EXHIBIT 28.6

STORAGE AREA

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

a. Registration Statement (Forms S-8 Nos. 333-234212, 333-237410 and 333-253547) pertaining to the 2016 Equity Incentive Plan, 2019 Equity Incentive Plan and 2019 Employee Stock Purchase Plan of Vir Biotechnology, Inc.; and
b. Registration Statement (Form S-3 No. 333-250013) of Vir Biotechnology, Inc.;

of our reports dated February 28, 2022, with respect to the consolidated financial statements of Vir Biotechnology, Inc. and the effectiveness of internal control over financial reporting of Vir Biotechnology, Inc. included in this Annual Report (Form 10-K) of Vir Biotechnology, Inc. for the year ended December 31, 2021.

/s/ Ernst & Young LLP

Redwood City, California
February 28, 2022

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, George Scangos, Ph.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of Vir Biotechnology, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2022

By: /s/ **George Scangos**
George Scangos, Ph.D.
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Howard Horn, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vir Biotechnology, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2022

By: /s/ **Howard Horn**
Howard Horn
Chief Financial Officer and Secretary
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Vir Biotechnology, Inc. (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), George Scangos, Ph.D., President, Chief Executive Officer and Director of the Company and Howard Horn, Chief Financial Officer and Secretary of the Company, each hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 28th of February 2022.

/s/ **George Scangos**

George Scangos, Ph.D.
President, Chief Executive Officer and Director
(Principal Executive Officer)

/s/ **Howard Horn**

Howard Horn
Chief Financial Officer and Secretary
(Principal Financial and Accounting Officer)

"This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Vir Biotechnology, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing."