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, 2020

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 **(State or other jurisdiction of incorporation or organization)**	**81-2730369** **(I.R.S. Employer Identification No.)**
499 Illinois Street, Suite 500 **San Francisco, California** **(Address of principal executive offices)**	**94158** **(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, 2020 was approximately $2.3 billion based upon the closing price of its Common Stock on June 30, 2020 of $40.97 per share, as reported by The Nasdaq Global Select Market.

The number of shares of Registrant's Common Stock outstanding as of February 22, 2021 was 127,836,816.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement, or the Proxy Statement, for the Registrant's 2021 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, 2020.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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, 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.

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 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 significant net losses since inception and anticipate that we will continue to incur substantial net losses for the foreseeable future and may never achieve or 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 will 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.
- Our pursuit of a potential therapy for COVID-19, the disease caused by the virus SARS-CoV-2, is at an early stage, and we are committing substantial financial resources and personnel and making substantial capital commitments with third parties in furtherance thereof.
- Our future success is substantially dependent on the successful clinical development, regulatory approval and commercialization of our 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 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.
- 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.
- Clinical product development involves a lengthy and expensive process. We may incur additional costs and encounter substantial delays or difficulties in our clinical trials.
- Our business could be materially adversely affected by the effects of health pandemics or epidemics, including the current 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.
- 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.

PART I

Item 1. Business.

Overview

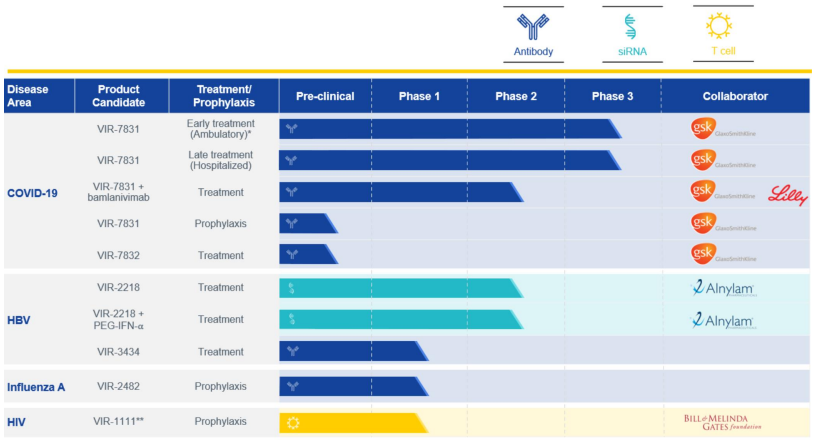
Our mission is to create a world without infectious disease.

We are a clinical-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. Infectious diseases are one of the leading causes of death worldwide and can cause trillions of dollars of direct and indirect economic burden each year – as evidenced by the current 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 potential 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 development pipeline consists of 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. Given the global impact of infectious diseases, we are committed to developing cost-effective treatments that can be delivered at scale.

Our Development Pipeline

Our current product candidates are summarized in the chart below:



**VIR-7831 IV formulation currently in Phase 3 COMET-ICE trial; IM formulation currently in Phase 2 COMET-PEAK trial, and pending in Phase 3 COMET-TAIL and COMET-STAR trials.*
***Vaccine designed to establish proof of concept in Phase (Ph) 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: As of February 24, 2021, there were over 112.0 million recorded infections and almost 2.5 million recorded deaths worldwide from COVID-19. The U.S. Food and Drug Administration, or FDA, has granted Emergency Use Authorization, or EUA, to two vaccines for prophylaxis of COVID-19, to three monoclonal antibody, or mAb, regimens for treatment of mild-to-moderate COVID-19 and for convalescent plasma, and has approved remdesivir for the treatment of hospitalized COVID-19 patients. Corticosteroids and other drugs are also being used to treat hospitalized patients. The ongoing safety and efficacy of these medicines, however, particularly as the virus mutates while it infects more people and comes under increased immune pressure, is uncertain.

We have moved rapidly to address this global health challenge, together with our collaboration partner GlaxoSmithKline plc. Our focus is on treating and preventing severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2 (the virus that causes COVID-19), as well as potential future coronavirus outbreaks. To do so, we are developing differentiated mAbs (VIR-7831 and VIR-7832), small molecules, and vaccines. We anticipate that the initial registration populations for our mAb product candidates will include those in need of treatment for COVID-19, and potentially those who would benefit from prophylaxis of COVID-19.

VIR-7831 and VIR-7832 are SARS-CoV-2-neutralizing mAbs. Both VIR-7831 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 data suggest that VIR-7831 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 achieve high concentration in the lungs for optimal penetration into airway tissues affected by SARS-CoV-2 and to have an extended half-life. 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.

Our clinical program for VIR-7831 and VIR-7832 is comprised of the following trials:

Trial		Population	Primary Endpoint	Milestones
COMET VIR-7831	ICE Early Treatment (IV)	Adults at high risk of hospitalization or death (e.g., obesity, diabetes, age >55)	Reduction in hospitalization and/or death	**Phase 3 Data** (1Q:2021)
	PEAK Early Treatment (IM)	Low-risk adults with mild to moderate COVID-19	Viral kinetics and safety	**Phase 2 Start** (February 2021)
	TAIL Early Treatment (IM)	Adults at high risk of hospitalization or death (e.g., obesity, diabetes, age >55)	Reduction in hospitalization and/or death	**Phase 3 Start** (2Q:2021)
	STAR Prophylaxis (IM)	Uninfected adults at high risk	Prevent symptomatic infection	**Phase 3 Start** (2Q:2021)
NIH ACTIV PARTNERSHIP VIR-7831	Hospitalized (IV)	Hospitalized adults with COVID-19	Time to sustained recovery (i.e., discharged, home for 14 consecutive days) and/or reduction in death	**Phase 3 Part 1 review** (1Q:2021)
BLAZE-4 VIR-7831/ bamlanivimab	Early Treatment (IV)	Low-risk adults with mild to moderate COVID-19	Percentage of participants who have a viral load greater than 5.27 at Day 7	**Phase 2 Data** (1H:2021)
agile Coronavirus Drug Testing Initiative VIR-7832/VIR-7831	Early Treatment (IV)	Adults with mild to moderate COVID-19	Safety and tolerability of VIR-7832; virologic comparison of VIR-7831 and VIR-7832	**Phase 1b/2a Start** (1Q:2021)

In August 2020, we initiated the lead-in phase of our Phase 2/3 VIR-7831 trial named 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. In October 2020, the trial continued into Phase 3 based on a positive evaluation of the safety and tolerability data from the Phase 2 lead-in. Results for the primary endpoint of COMET-ICE are expected in the first quarter of 2021, and if positive, will be used to seek EUA from the FDA and ultimately approval through the submission of a biologics license application, or BLA. In December 2020, we initiated a Phase 3 trial named Therapeutics for Inpatients with COVID-19, or TICO, of VIR-7831 for the treatment of hospitalized adults with COVID-19 as part of a new sub-trial of the National Institutes of Health's, or NIH's, Accelerating COVID-19 Therapeutic Interventions and Vaccines, or ACTIV, Program, specifically ACTIV-3. An evaluation of the benefit/risk profile of VIR-7831 is expected in the first quarter of 2021 and will determine if VIR-7831 continues in the next part of the ACTIV-3 trial. In January 2021, we initiated a Phase 2 combination trial of VIR-7831 and Eli Lilly and Company's bamlanivimab (LY-CoV555) for the treatment of mild to moderate COVID-19 in low-risk adults as part of Eli Lilly and Company's BLAZE-4 trial. This trial will evaluate the impact of VIR-7831 plus bamlanivimab on viral clearance and clinical outcomes in participants with mild to moderate COVID-19. Initial results for this arm of the BLAZE-4 trial are expected in the first half of 2021. In February 2021, we initiated COMET-Patient SafEty, TolerAbility, PharmacoKinetics, or COMET-PEAK , a Phase 2 trial evaluating an intramuscular, or IM, formulation of VIR-7831 in low-risk adults with mild to moderate COVID-19. In the second quarter of 2021, we also plan to initiate two additional IM trials of VIR-7831: 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, and COMET-Stop Transmission of Acute SARS-CoV-2, or COMET-STAR, for prophylaxis or prevention of symptomatic infection of COVID-19.

In addition, in the first quarter of 2021, we anticipate initiating a Phase 1b/2a trial of VIR-7832 for the treatment of adults with mild to moderate COVID-19 at high risk of hospitalization as part of the U.K.-based and National Health Service, or NHS, supported AGILE initiative. The dose-escalation Phase 1b part of the trial will evaluate the safety and tolerability of single ascending doses of VIR-7832 for the treatment of mild to moderate COVID-19. The Phase 2a portion will evaluate the safety and virologic activity of VIR-7832, as well as T cell responses to SARS-CoV-2 of VIR-7832 and VIR-7831.

In connection with the advancement of our COVID-19 mAbs, we and our collaboration partner, Glaxo Wellcome UK Limited and Beecham S.A. (individually and collectively referred to as GSK), have established a strategic manufacturing network, which will enable the manufacture of approximately two million doses to patients the first year following potential EUA, and several fold that in the second year, depending on titer and yield. 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, Biogen Inc., or Biogen, and Samsung Biologics Co., Ltd., or Samsung. In addition, we are collaborating on potential commercialization with WuXi Biologics, for greater China and with GSK, for all other countries.

HBV: Approximately 290 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.

We plan to initiate a Phase 2 trial in the second half of 2021 that combines VIR-2218 and VIR-3434, which we believe have the potential to act in concert by inhibiting virion production, removing potentially tolerogenic HBV proteins, and stimulating new HBV specific T cells. Additionally, in July 2020, we initiated a Phase 2 combination clinical trial of VIR-2218 with PEG-IFN-α, an approved immune modulatory agent, and anticipate initial clinical data in the second quarter of 2021. In January 2021, we announced a clinical trial collaboration with Gilead Sciences, Inc., or Gilead, to initiate a Phase 2 trial of VIR-2218 in combination with GS-9688 (selgantolimod), a TLR-8 agonist, and nivolumab, an approved PD-1 inhibitor, in 2021 in both treatment-experienced and treatment-naïve patients with HBV. We also anticipate that Brii Biosciences Offshore Limited, or Brii Bio, will start a Phase 2 trial of VIR-2218 in combination with BRII-179, an investigational T cell vaccine, in the first half of 2021. We anticipate that the initial registration population for these product candidates will be patients chronically infected with HBV.

VIR-2218 is a subcutaneously administered HBV-targeting siRNA that is currently in a Phase 2 clinical trial. 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's, Enhanced Stabilization Chemistry Plus, or ESC+, technology, which has the potential to enhance the therapeutic index. In total, 37 healthy volunteers and 24 patients with chronic HBV on NRTIs have 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, dose dependent reductions in HBsAg in patients at doses ranging from 20 mg to 200 mg, which are durable at the higher doses for at least nine months. In July 2020, we initiated a Phase 2 combination clinical trial of VIR-2218 with PEG-IFN-α and anticipate initial clinical data in the second quarter of 2021.

VIR-3434 is a subcutaneously administered HBV-neutralizing mAb currently in a Phase 1 clinical trial. 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. We have also engineered VIR-3434 to have an extended half-life and to potentially function as a therapeutic T cell vaccine for chronic HBV infection. These modifications are intended to enhance its potential to result in an HBV functional cure. In January 2021, we announced initial data from the first blinded cohort of eight patients with chronic HBV on NRTIs, two of whom received placebo, and six of whom received a single dose of 6mg VIR-3434. Six of the eight patients responded and achieved a mean reduction of 1.3 $\log_{10}$ IU/mL in serum HBsAg by day eight, the day when nadir was achieved in most patients. We anticipate additional clinical data from our Phase 1 trial in the second quarter of 2021. We also expect to initiate a Phase 2 clinical trial of VIR-3434 in combination with VIR-2218 in the second half of 2021.

Influenza: On average, each year the influenza virus infects 5% to 10% of the world's population and results in an estimated 500,000 deaths. In the 2018-2019 flu season, it is estimated that 34,000 people died from influenza in the United States alone. Influenza vaccines have historically had limited success, with an average efficacy of 40%. 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 February 2021, we entered into a binding preliminary collaboration agreement with GSK, or the 2021 Preliminary Agreement, which included a program to research, develop and commercialize mAbs for the prevention, treatment or prophylaxis of the influenza virus. In addition, after we complete and report Phase 2 trial outcomes for VIR-2482, GSK will have the exclusive option to obtain exclusive rights to co-develop and commercialize VIR-2482. See the section titled "Our Collaboration, License and Grant Agreements—Collaboration Agreement with GSK" for a description of the 2021 Preliminary Agreement.

VIR-2482 is an intramuscularly administered influenza A-neutralizing mAb currently in a Phase 1/2 clinical trial. In vitro, VIR-2482 has been shown to cover all major strains of influenza A that have arisen since the 1918 Spanish flu pandemic. 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 increase lung tissue bioavailability and to extend its half-life so that a single intramuscular 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. VIR-2482 has been generally well-tolerated in the approximately 100 healthy volunteers dosed in the Phase 1 portion of the clinical trial. Initiation of the Phase 2 trial for VIR-2482, which was delayed due to the impact of COVID-19, is now planned for the fourth quarter of 2021 with proof-of-concept results anticipated in the first half of 2022.

HIV: Each year there are approximately 1.7 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. In December 2020, we initiated a Phase 1 trial for VIR-1111. We anticipate the initial registration population for our eventual HIV vaccine will be individuals at high risk of contracting HIV.

VIR-1111 is a subcutaneously administered HIV T cell vaccine based on human cytomegalovirus, or HCMV, currently in a Phase 1 clinical trial. 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. We anticipate initial clinical data for VIR-1111 in the second half of 2021.

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 our 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, and malaria, and bacterial pathogens, including *clostridium difficile*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, and *Acinetobacter spp*. An example of the power of this platform is the anti-Ebola virus mAb Ebanga (ansuvimab-zykl, formerly known as mAb114), which was approved by the FDA on December 21, 2020 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 RSV 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 Chief Technology Officer, Michael Kamarck, Ph.D., was previously Senior Vice President of Global Vaccines and Biologics Manufacturing at Merck & Co., Inc., President of Merck BioVentures and President of Technical Operations and Product Supply across all of the businesses of Wyeth Pharmaceuticals, Inc. Our Chief Business Officer and a co-founder, Jay Parrish, Ph.D., previously led infectious disease business development and was a medicinal chemist at Gilead. 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 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 a leader 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

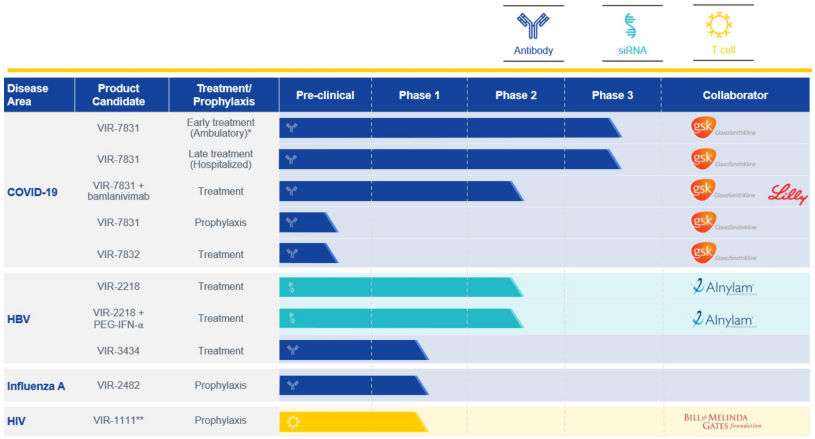
We are a clinical-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. The core elements of our business strategy include:

- **Rapidly advancing our pipeline**. Currently underway are two Phase 3 clinical trials, four Phase 2 clinical trials, and three 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 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.

Development Programs

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



**VIR-7831 IV formulation currently in Phase 3 COMET-ICE trial; IM formulation currently in Phase 2 COMET-PEAK trial, and pending in Phase 3 COMET-TAIL and COMET-STAR trials.*
***Vaccine designed to establish proof of concept in Phase (Ph) 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

We are developing VIR-7831 and VIR-7832 treatment and prophylaxis of COVID-19. Both VIR-7831 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 data suggest that VIR-7831 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 resistance to develop. Both mAbs have also been designed to achieve high concentration in the lungs to ensure optimal penetration into airway tissues affected by SARS-CoV-2 and to have an extended half-life. In addition, VIR-7832 has been designed to potentially enhance virus-specific T cell function, which could help treat and/or prevent COVID-19 infection.

VIR-7831 is currently in a Phase 3 clinical trial for the treatment of ambulatory patients at high risk of hospitalization or death from COVID-19. Results for the primary endpoint of the trial are expected in the first quarter of 2021, and if positive, will be used to seek EUA from the FDA and ultimately approval through the submission of a BLA. VIR-7831 is also currently in a Phase 3 trial for the treatment of hospitalized adults with mild to moderate COVID-19, a Phase 2 combination trial of VIR-7831 and bamlanivimab (LY-CoV555) for the treatment of mild to moderate COVID-19, and in the second quarter of 2021, we plan to initiate a Phase 3 trial of VIR-7831 trial for prophylaxis or prevention of symptomatic infection of COVID-19. In the first quarter of 2021, we anticipate initiating a Phase 1b/2a trial of VIR-7832 for the treatment of mild to moderate COVID-19.

Disease Overview and Limitations of Current Standard of Care

As of February 24, 2021, there were over 112.0 million recorded infections and almost 2.5 million recorded deaths worldwide from COVID-19. The FDA has granted EUA to two vaccines for prophylaxis of COVID-19, to three mAb regimens for treatment of mild-to-moderate COVID-19, and for convalescent plasma, and has approved remdesivir for the treatment of hospitalized COVID-19 patients. Corticosteroids and other drugs are also being used the treat hospitalized patients. Although it is anticipated that additional vaccines and potentially other medicines in development may become available during 2021, initial supplies will likely be limited and it will take time for widespread distribution programs to be rolled out globally to mitigate the pandemic. Despite the high efficacy of the initial vaccine candidates, there are still populations in whom vaccine immunogenicity may potentially be suboptimal, such as the elderly with comorbidities, immunocompromised persons, or those who may not be able to tolerate vaccines. Importantly, the durability of current vaccines and other medicines in the setting of the continued emergence of SARS-CoV-2 mutations is uncertain. A highly effective SARS-CoV-2 mAb with the ability to block viral entry into healthy cells and clear infected cells, with lung bioavailability, with long half-life, and a high barrier to resistance that can be used to treat and/or prevent COVID-19, could have an impact on reducing disease-associated morbidity and mortality in ambulatory and hospitalized settings, as well as reducing virus transmission and decreasing the infection burden globally. An increased distribution to mucosal tissue is expected to result in higher and more sustained levels of VIR-7831 in the respiratory mucosa, which is a potential advantage for treatment and prophylaxis. Furthermore, mAbs are expected to confer rapid clinical benefit and protection following dosing as opposed to a vaccine which may require longer duration to attain a complete immunogenic response.

Our clinical program for VIR-7831 and VIR-7832 is comprised of the following trials:

Trial		Population	Primary Endpoint	Milestones
COMET VIR-7831	ICE Early Treatment (IV)	Adults at high risk of hospitalization or death (e.g., obesity, diabetes, age >55)	Reduction in hospitalization and/or death	**Phase 3 Data** (1Q:2021)
	PEAK Early Treatment (IM)	Low-risk adults with mild to moderate COVID-19	Viral kinetics and safety	**Phase 2 Start** (February 2021)
	TAIL Early Treatment (IM)	Adults at high risk of hospitalization or death (e.g., obesity, diabetes, age >55)	Reduction in hospitalization and/or death	**Phase 3 Start** (2Q:2021)
	STAR Prophylaxis (IM)	Uninfected adults at high risk	Prevent symptomatic infection	**Phase 3 Start** (2Q:2021)
NIH ACTIV PARTNERSHIP VIR-7831	Hospitalized (IV)	Hospitalized adults with COVID-19	Time to sustained recovery (i.e., discharged, home for 14 consecutive days) and/or reduction in death	**Phase 3 Part 1 review** (1Q:2021)
BLAZE-4 VIR-7831/ bamlanivimab	Early Treatment (IV)	Low-risk adults with mild to moderate COVID-19	Percentage of participants who have a viral load greater than 5.27 at Day 7	**Phase 2 Data** (1H:2021)
agile Coronavirus Drug Testing Initiative VIR-7832/VIR-7831	Early Treatment (IV)	Adults with mild to moderate COVID-19	Safety and tolerability of VIR-7832; virologic comparison of VIR-7831 and VIR-7832	**Phase 1b/2a Start** (1Q:2021)

VIR-7831 for COVID-19

Molecular Characteristics. VIR-7831 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. VIR-7831 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. VIR-7831 potently neutralizes live SARS-CoV-2 in vitro, reduces viral replication and symptoms in the hamster model 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. Vir and GSK are collaborating on the development of VIR-7831 for the treatment and prophylaxis of COVID 19.

Phase 2/3 Trials of VIR-7831.

COMET-ICE: VIR-7831 is currently being assessed as a treatment in adults with mild to moderate COVID-19 who are at high risk of hospitalization or death. This trial is a Phase 3, randomized, double-blind, multi-center, placebo-controlled trial of VIR-7831 with planned interim analyses to allow early stopping for futility, efficacy, or safety. The trial includes a lead-in phase to evaluate the safety and tolerability of VIR-7831, followed by an expansion phase with 1:1 randomization of VIR-7831 and placebo in approximately 1,340 participants. Results for the primary clinical endpoint of reduction of hospitalization and/or death are expected in the first quarter of 2021.

ACTIV-3/TICO: VIR-7831 is also being assessed in an ongoing trial to decrease time to sustained recovery in hospitalized adults with COVID-19. This is a Phase 3, multicenter, adaptive, randomized, blinded controlled platform trial evaluating the safety and efficacy of therapeutics for hospitalized patients with COVID-19. An evaluation of the safety and efficacy using pulmonary and extrapulmonary ordinal outcomes comparing VIR-7831 against control (i.e. placebo plus standard of care) in Part 1 (150 patients on VIR-7831) is expected in the first quarter of 2021 and will determine if VIR-7831 continues into Part 2 of the trial (350 patients on VIR-7831). In Part 1, five days after dosing, participants' clinical status is assessed, based on the need for supplemental oxygen, mechanical ventilation, or other supportive care. If the VIR-7831 treatment arm appears to have a positive benefit-risk profile, the trial will move into Part 2 and enroll additional participants, including those who are more severely ill (i.e., adults with organ failure requiring mechanical support, or COVID-19-associated dysfunction of organs other than the lungs). These patients will be followed for 90 days to analyze their response to treatment. The primary efficacy endpoint is the sustained recovery for 14 days after release from the hospital and/or reduction in death. This trial is part of a sub-trial of the NIH ACTIV-3 platform.

BLAZE-4: VIR-7831 is also being assessed in Eli Lilly and Company's ongoing BLAZE-4 trial, which is a Phase 2, randomized, double-blind, placebo-controlled, single-dose trial to evaluate the safety and efficacy of mono and combination therapy with mAbs in low-risk adults with mild to moderate COVID-19. An arm of this trial will evaluate the impact of the combination of VIR-7831 plus Eli Lilly and Company's bamlanivimab (LY-CoV555) on viral clearance and clinical outcomes in participants with mild and moderate COVID-19. Initial results for this arm of the BLAZE-4 trial are expected in the first half of 2021.

COMET-PEAK: VIR-7831 is also currently being evaluated in a Phase 2, multicenter, randomized, double-blind, two-part, parallel group trial designed to compare 1) the safety, tolerability and pharmacokinetics of second-generation VIR-7831 manufactured material to first-generation VIR-7831 manufactured material intravenously, and 2) the viral kinetics and safety of intravenous, or IV, administration compared to IM administration of VIR-7831 in low-risk adults with mild to moderate COVID-19. The low, 500 mg dose of VIR-7831 lends itself to an IM administration, which could facilitate broader access to monoclonal antibody therapy in settings where IV administration is not feasible.

COMET-TAIL: This is a planned Phase 3, multicenter, randomized, double-blind, placebo-controlled trial evaluating an IM route of administration of VIR-7831 in adults at high risk of hospitalization or death. The primary clinical endpoint is the reduction of hospitalization and/or death, and the trial is expected to start in the second quarter of 2021.

COMET-STAR: This is a planned Phase 3, multicenter, randomized, double-blind, placebo-controlled trial designed to evaluate the safety and efficacy of VIR-7831 as prophylaxis for COVID-19. Adult participants at risk of becoming infected by COVID-19 will receive one dose of VIR-7831 by IM administration. The primary clinical endpoint of this trial is the prevention of symptomatic infection. This trial is expected to start in the second quarter of 2021.

VIR-7832 for COVID-19

Molecular Characteristics. VIR-7832 is identical to VIR-7831, except that VIR-7832 contains additional modifications in the Fc domain that is 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. The Phase 1b portion of this trial is a double-blinded, randomized, first-in-human dose-escalation trial for VIR-7832 in which adults with mild to moderate COVID-19 infection will be 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. Once a suitable dose is identified, VIR-7832 will progress to Phase 2a in which VIR-7832, VIR-7831 and placebo will be 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 will be to investigate the safety and virologic activity of VIR-7832 in patients with mild to moderate COVID-19 infection. Immunologic parameters, such as T-cell responses to SARS-CoV-2, will also be examined. The trial is a collaboration between Vir and GSK and is being conducted as part of the U.K.-based NHS supported AGILE initiative.

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.

We plan to initiate a Phase 2 trial in the second half of 2021 that combines VIR-2218 and VIR-3434. We believe that this combination has the potential to inhibit virion production, removing potentially tolerogenic HBV proteins, and stimulating new HBV specific T cells. Additionally, in July 2020, we initiated a Phase 2 combination clinical trial of VIR-2218 with PEG-IFN-α, an approved immune modulatory agent, and anticipate initial clinical data in the second quarter of 2021. In January 2021, we announced a clinical trial collaboration with Gilead to initiate a Phase 2 trial of VIR-2218 in combination with GS-9688 (selgantolimod), a TLR-8 agonist, and nivolumab, an approved PD-1 inhibitor in 2021 in both treatment-experienced and treatment-naïve patients with HBV. We also anticipate that Brii Bio will start a Phase 2 trial of VIR-2218 in combination with BRII-179, an investigational T cell vaccine, in the first half of 2021.

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, dose dependent reductions in HBsAg in patients at doses ranging from 20 mg to 200 mg, which are durable at the higher doses for at least nine months. Parts D-F are evaluating additional doses of VIR-2218, with and without PEG-IFN-α.

VIR-3434, an HBV-neutralizing mAb, is currently in a Phase 1 clinical trial. In January 2021, we announced initial data from the first blinded cohort of eight patients with chronic HBV infection on NRTIs, two of whom received placebo, and six of whom received a single dose of 6mg VIR-3434, which showed six of eight patients responded and achieved a mean reduction of 1.3 $\log_{10}$ IU/mL in serum HBsAg by day eight, the day when nadir was achieved in most patients. We anticipate additional clinical data from our Phase 1 trial in the second quarter of 2021.

Disease Overview and Limitations of Current Standard of Care

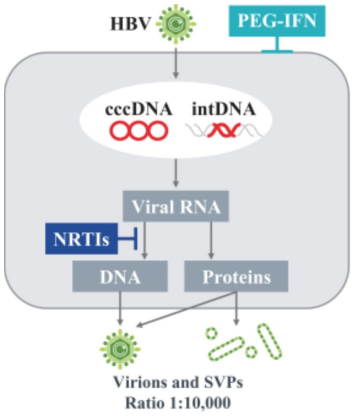
Approximately 290 million people globally are chronically infected with HBV. In the United States, up to two million people are chronically infected with HBV. Chronic HBV can lead to many serious complications, including liver scarring, liver failure and liver cancer. Globally, approximately 900,000 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 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 a multi-billion dollar market in 2017.

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

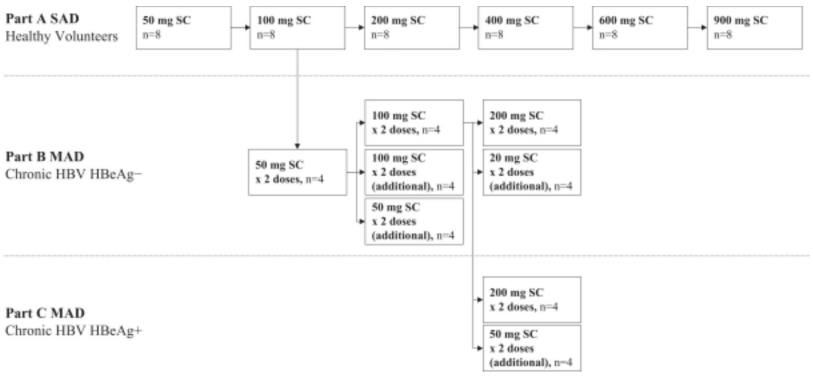
Molecular Characteristics. VIR-2218 is an investigational, single siRNA targeting a conserved sequence of HBV that allows for predicted activity against 99.7% of the strains of HBV, including all 10 HBV genotypes. Because this conserved sequence falls within a specific region of the X gene of HBV that 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.

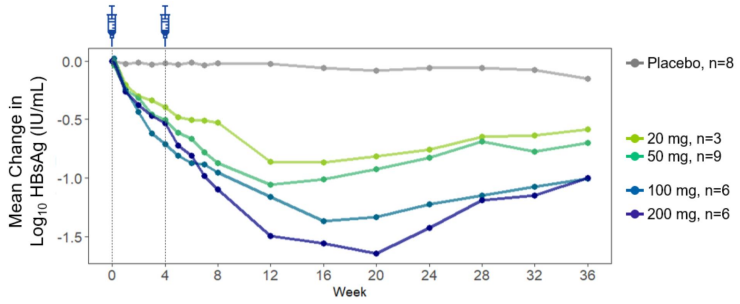
In Part B of the trial, 24 patients with chronic HBV who are HBeAg negative have been enrolled. Each Part B completed cohort includes three patients receiving VIR-2218 and one patient receiving placebo. All cohorts have completed dosing and have completed follow-up.

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 36 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. At Week 36, the average reduction in patients receiving 200 mg dose level was 1 log, demonstrating a durable HBsAg response.

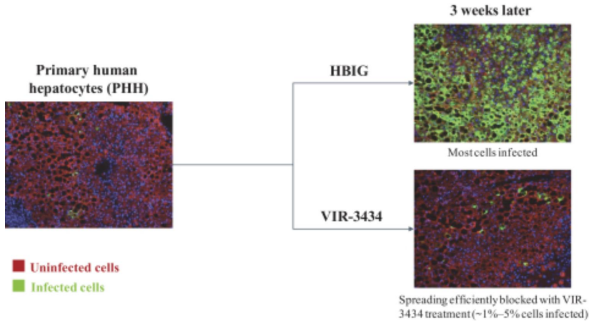
The ability of VIR-2218 to result in substantial and durable declines in HBsAg after only two doses suggests that VIR-2218 has the potential to play an important role in the functional cure of chronic HBV. We have initiated and plan to initiate additional clinical trials evaluating VIR-2218 in combination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

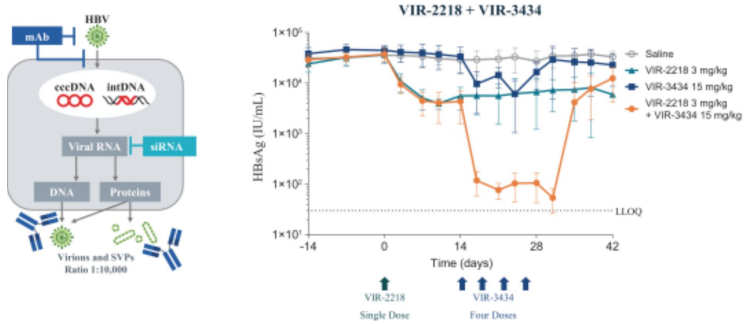
Molecular Characteristics and Preclinical Data. VIR-3434 is an investigational mAb targeting a conserved region on HBsAg that allows it to neutralize strains from all 10 HBV genotypes. VIR-3434 specifically targets the antigenic loop, or AGL, on HBsAg. The AGL helps the virus bind to hepatocytes and 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 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.

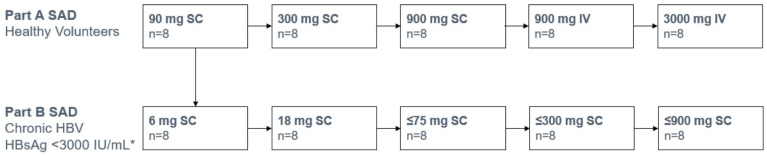
We have also evaluated the antiviral activity of the combination of VIR-2218 and VIR-3434 in an adeno-associated virus-HBV mouse model. As shown in the figure below, VIR-2218 and VIR-3434 work together to reduce the level of HBsAg.



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 three 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.



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. Optional Part C not shown. *Part B 6 mg cohort conducted in patients with HBsAg levels less than 1,000 IU/ml.*

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.

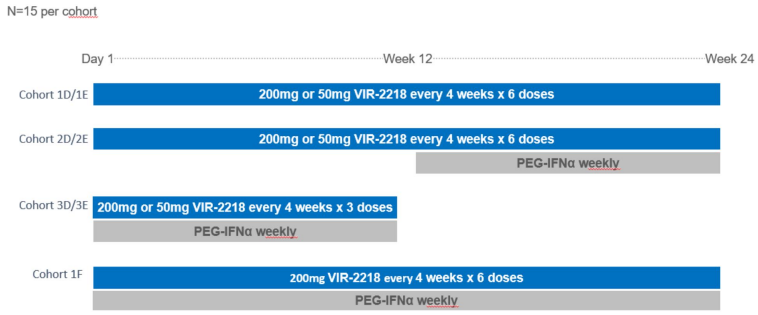
Clinical Data. To date, all Part A cohorts have completed dosing up to 3000 mg administered intravenously. The trial's Safety Review Committee, or SRC, has reviewed blinded safety data for at least two weeks post dose from all Part A cohorts. Based on this data, VIR-3434 was generally well tolerated in healthy volunteers with no clinical safety concerns. The majority of 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 January 2021, we announced initial data from Part B in patients with chronic HBV on NRTIs receiving 6mg VIR-3434 or placebo. Data from the first blinded cohort of eight patients, two of whom received placebo and six of whom received a single dose of 6 mg of VIR-3434, showed that six of eight patients responded and in those who responded, a mean reduction of 1.3 $\log_{10}$ IU/mL in serum HBsAg by day eight was achieved, the day when nadir was achieved in most patients. The ability of a single dose of 6mg of VIR-3434 to markedly lower HBsAg demonstrate VIR-3434 has the potential to play an important role in the functional cure of HBV. We anticipate additional clinical data from our Phase 1 trial in the second quarter of 2021.

Other HBV Combinations and New Product Candidates

Phase 2 Trial of VIR-2218 in combination with PEG-IFN-α. VIR-2218-1001 Parts D to 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 of the trial in July 2020.

VIR-2218-1001 Parts D to F will evaluate multiple doses of VIR-2218, either 50mg or 200mg, alone or in combination with PEG-IFN-α starting on Day 1 or at Week 12. The trial cohorts are shown below. We anticipate initial clinical data in the second quarter of 2021.



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

We plan to initiate a Phase 2 trial in the second half of 2021 that combines VIR-2218 and VIR-3434, which we believe have the potential to act in concert by inhibiting virion production, removing potentially tolerogenic HBV proteins, and stimulating new HBV specific T cells.

Additionally, In January 2021, we announced a clinical trial collaboration with Gilead to initiate a Phase 2 trial of VIR-2218 in combination with GS-9688 (selgantolimod), a TLR-8 agonist, and nivolumab, an approved PD-1 inhibitor in 2021 in both treatment-experienced and treatment-naïve patients with HBV. The primary outcome of the trial will be the proportion of patients achieving a functional cure, defined as an off-therapy loss of HBsAg and HBV DNA from the serum. Trial costs will be shared equally by the parties, and we will supply VIR-2218 and Gilead will supply selgantolimod. We and Gilead will retain full rights to our respective product candidates and will discuss the potential path forward for any future combination trials based on the outcome of the Phase 2 trial.

We also anticipate that Brii Bio will start a Phase 2 trial of VIR-2218 in combination with BRII-179, an investigational a T cell vaccine, in the first half of 2021.

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. Initiation of Phase 2 clinical trial for VIR-2482, which was delayed due to the impact of COVID-19, is now expected in the fourth quarter of 2021 with proof-of-concept results anticipated in the first half of 2022.

In February 2021, we entered into the 2021 Preliminary Agreement with GSK, which included a program to research, develop and commercialize mAbs for the prevention, treatment or prophylaxis of the influenza virus. In addition, after we complete and report Phase 2 trial outcomes for VIR-2482, GSK will have the exclusive option to obtain exclusive rights to co-develop and commercialize VIR-2482. See the section titled “Our Collaboration, License and Grant Agreements—Collaboration Agreement with GSK” for a description of the 2021 Preliminary Agreement.

Disease Overview and Limitations of Current Standard of Care

On average, each year the influenza virus infects 5% to 10% of the world’s population and results in an estimated 500,000 deaths. The efficacy of the seasonal flu vaccine has ranged from 10% to 60% over the past 15 years, with an average of 40%, overall, across all populations. seasonal flu vaccine efficacy in the elderly, defined as those 65 and older, has been found to be notably lower, in some flu seasons. 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 who had either pre-existing lung and/or heart disease. These patients comprise a population with a high unmet economic and medical 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. Approximately 8% of acute chronic obstructive pulmonary disease exacerbations are thought to be attributable to influenza. Overall, it is estimated that the annual influenza-related economic burden is approximately $87 billion.

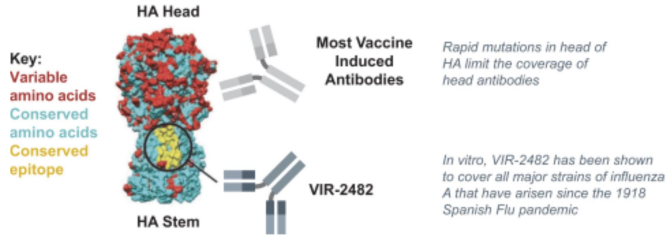
There are two major types of influenza virus, type A and type B. Influenza A has been estimated in the United States to cause over 85% of influenza hospitalizations from 2005 to 2013 and has been the source of all known influenza pandemics. During the 1918 Spanish flu pandemic, up to 3% of the world’s population is estimated to have died.

While vaccines to prevent illness from seasonal influenza exist, their efficacy is limited. In the United States, over the last 15 years, on average only approximately 40% of those who received the influenza vaccine were protected. In some seasons, such as the 2004-2005 flu season, the vaccine’s efficacy was 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 and higher dose administration, do not address these two fundamental limitations.

VIR-2482 for Influenza A

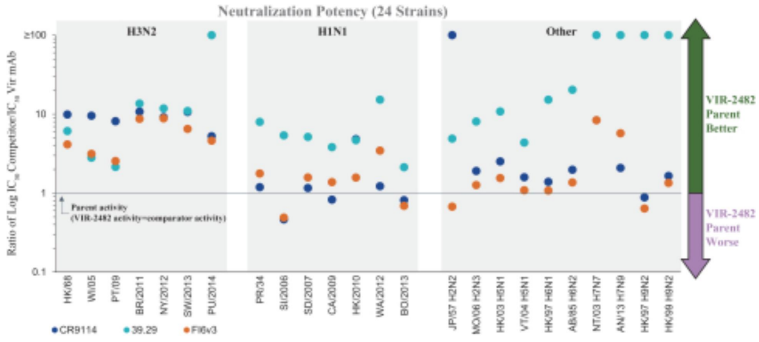
Molecular Characteristics and Preclinical Data. VIR-2482 is an investigational mAb targeting a functionally conserved epitope on the influenza A hemagglutinin protein located within the stem region. We believe that all strains of influenza, past and future, have and likely will contain this conserved 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.*

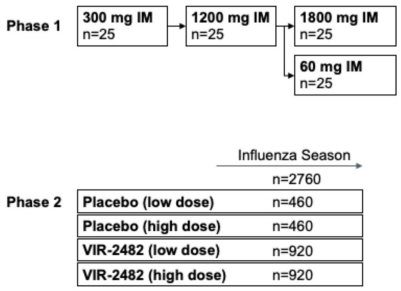
While other stem-binding influenza A antibodies have been identified, we have demonstrated that VIR-2482 has the broadest coverage when compared to a large representative panel of stem-binding mAbs. In prophylactic lethal challenge studies of influenza A in mice, VIR-2482 was able to protect mice from 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. We initiated dosing of the Phase 1/2 clinical trial for VIR-2482 in August 2019. This trial is designed to include up to 2,860 healthy volunteers across the Phase 1 and Phase 2 portions. Initiation of Phase 2 clinical trial for VIR-2482, which was delayed due to the impact of COVID-19, is now planned for the fourth quarter of 2021 with proof-of-concept results anticipated in the first half of 2022.



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

The Phase 1 portion of this trial, a single ascending dose trial in healthy adult volunteers, has completed enrollment of all four dose cohorts (60mg, 300 mg, 1200 mg, and 1800 mg) and the subjects remain in follow-up. The Phase 2 portion of this trial will be a dose-ranging, double-blind, placebo-controlled trial in healthy adult volunteers. 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 primary endpoint of the Phase 1 portion is evaluation of safety and tolerability. 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, as well as quantification of influenza A viral load at the time of presentation with influenza illness.

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.

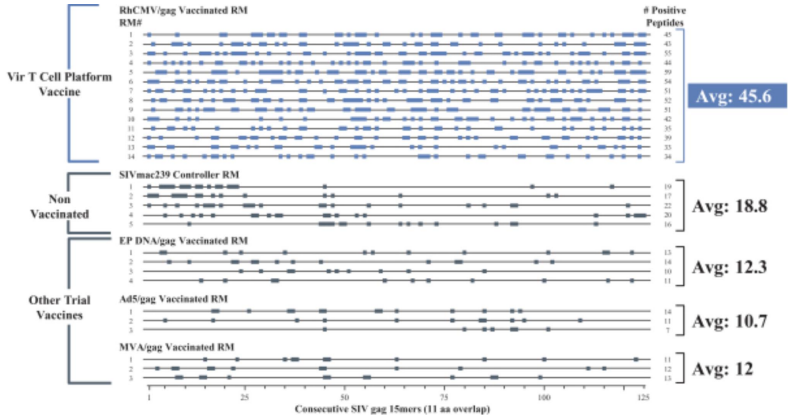
Disease Overview and Limitations of the Current Standard of Care

Each year there are approximately 1.7 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 33 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 2019, Gardasil® revenue approached $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.

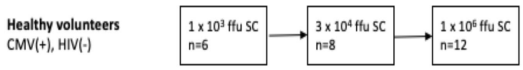


Number of epitopes recognized by T cells using RhCMV compared to other vaccine vector technologies or NHPs naturally achieving SIV control*. Each line represents a different NHP. Each box denotes the relative location of the epitope within the antigen that is recognized by the T cells elicited by that 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.



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

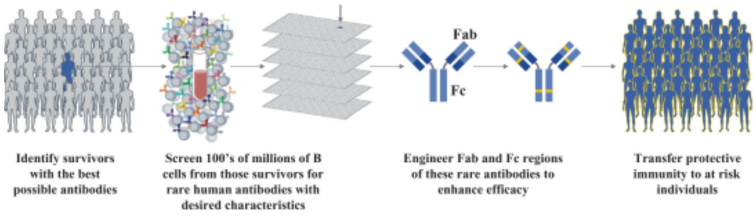
We are using specialized mAbs to treat or prevent rapidly evolving and/or previously untreatable pathogens. These mAbs act in a variety of ways, including direct pathogen neutralization and immune system stimulation. We combine high-throughput, rapid isolation of rare, highly potent, broad-spectrum and 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

Four of our product candidates, 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 and a range of bacterial pathogens, including *Staphylococcus aureus*, *Klebsiella pneumoniae*, and *Acinetobacter spp*. An example of the power of this platform is the anti-Ebola virus mAb Ebanga (ansuvimab-zykl, formerly known as mAb114), which was approved by the FDA on December 21, 2020. This mAb was identified by our scientists using the technologies described above in collaboration with the NIH and others and is being 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.

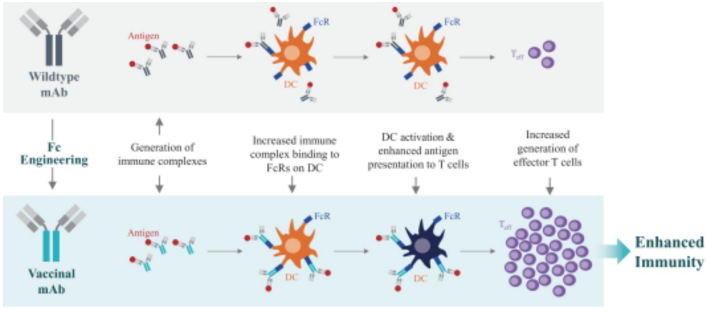
Fab engineering is performed to further increase mAb potency and breadth of coverage. mAb potency and breadth are based on the epitope bound, affinity of binding and valency. In some cases, it may be valuable to create mAbs that bind to more than one epitope, so-called "multi-specific" mAbs, by engineering 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 antibody-dependent cell cytotoxicity, or 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.

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.

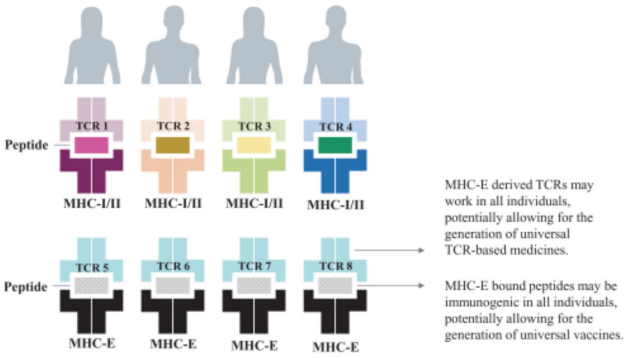
MHC-E as a Near-Universal Target for Medicines that Leverage T Cell Receptors

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.



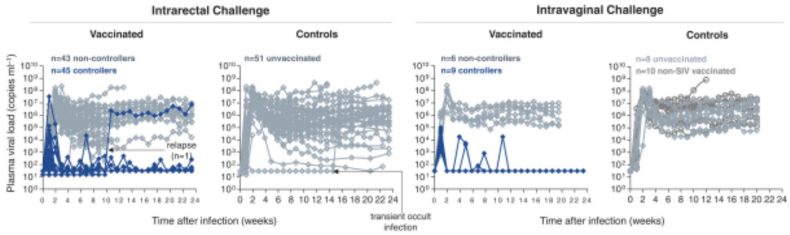
***Comparison of standard T cell responses to MHC-E responses**. Peptides that are bound to MHC-I, -II or -E proteins are expressed on cell surfaces where they are recognized by T cell receptors on T cells (TCRs). This interaction results in the expansion of T cells that can recognize diverse antigen 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.

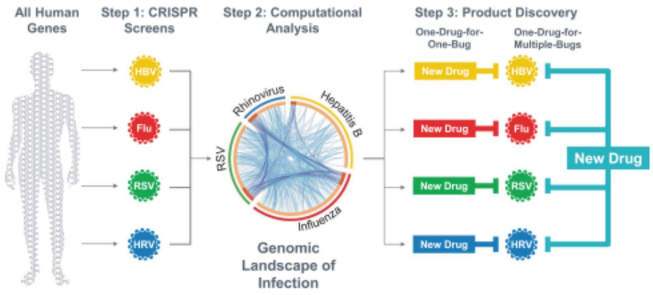
The Bill & Melinda Gates Foundation is providing funds for the manufacturing and early clinical development of our HIV and TB vaccine programs. If proof of concept for the potential efficacy of our T cell vaccine platform is obtained in currently planned clinical trials, we plan to apply this T cell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

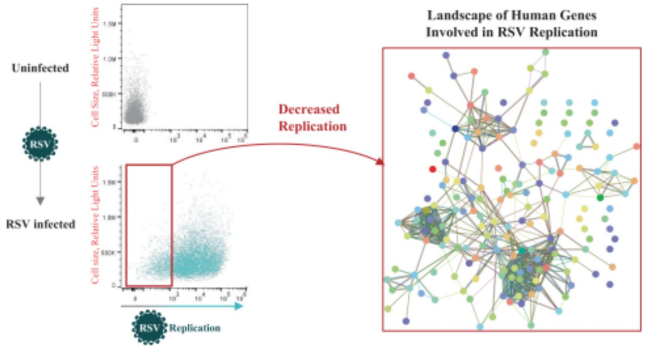
Our Approach

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.

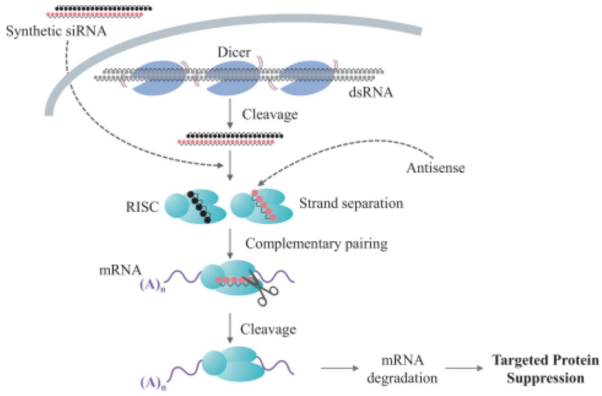
Step 3: Product Discovery

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.

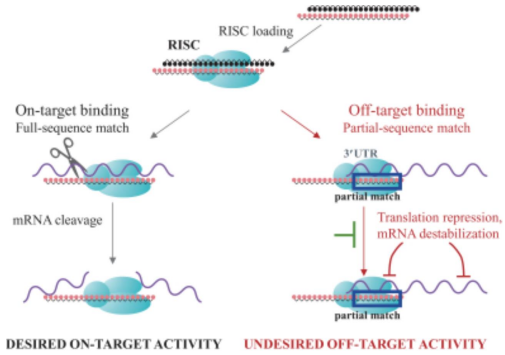
siRNA Delivery Mechanism

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 GSK Collaboration

In June 2020, we entered into a definitive collaboration agreement with GSK, or the 2020 GSK Collaboration, 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 and potentially other coronaviruses. The 2020 GSK Collaborationis 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, or the Functional Genomics Program. The initial antibodies under the Antibody Program are VIR-7831 and VIR-7832, which have demonstrated high affinity for the SARS-CoV-2 spike protein and are highly potent in neutralizing SARS-CoV-2 in live-virus cellular assays.

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. 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 will be 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 will 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 agreements with WuXi Biologics (as further described below) and Biogen, we will bear 72.5% of the costs related to such manufacturing technology transfer and for commercial manufacturing of the antibody products under such agreements with WuXi Biologics and Biogen, 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 joint steering committee from time to time.

On a collaboration product-by-collaboration product basis, either party will have the 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 the conduct and funding of such collaboration product. Unless a party has opted out prior to such time, the parties would 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 will pay 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 with respect to such antibody product in the United States, pursuant to which we will 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 Collaboration, 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 an affiliate of GSK at a price per share of $37.73, for an aggregate purchase price of approximately $250.0 million.

2021 Expanded GSK Collaboration

On February 14, 2021, we entered into the 2021 Preliminary Agreement with GSK, pursuant to which the parties agreed to expand the 2020 GSK Collaboration, 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; (2) an expansion of the 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, 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 will have the exclusive option to obtain exclusive rights to co-develop and commercialize VIR-2482, or the Option.

For a period of three years following the effective date of the 2021 Preliminary 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 development and early-stage manufacturing of products under the Expanded Functional Genomics Program and the Additional Programs (subject to GSK's final decision making authority if the parties cannot agree), and GSK will be primarily responsible for commercial manufacturing and commercialization activities for products under the Functional Genomics Program and Additional Programs.

In general, we will share 50% of all development costs in accordance with the budget for each of the collaboration programs (other than for 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 commercially reasonable rates to be agreed in the definitive collaboration agreement, determined by 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 such program unilaterally, or also cease the conduct and funding of such collaboration product. 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.

The parties will continue to negotiate a more detailed collaboration agreement, or the Expanded Definitive Collaboration Agreement, including more detailed financial terms, as well as operational provisions and consequences of any ongoing collaboration program as a result of a change of control. If we cannot reach agreement and enter into the Expanded Definitive Collaboration Agreement within 90 days following the effective date of the 2021 Preliminary Agreement, the terms of the Expanded Definitive Collaboration Agreement will be determined through mediation and binding arbitration. The 2021 Preliminary Agreement may be terminated by either party if the conditions for the effectiveness of the preliminary collaboration agreement (customary closing conditions, including the expiration or termination of the applicable waiting period under the HSR Act, as defined below) are not met by June 30, 2021. The 2021 Preliminary Agreement will terminate upon the execution of the Expanded Definitive Collaboration Agreement, which will supersede the 2021 Preliminary Agreement. The Expanded Definitive Collaboration Agreement will remain in effect, on a collaboration program-by-collaboration program basis, until there is no product being developed or commercialized under such collaboration program, unless earlier terminated by either party. Either party has the right to terminate the 2021 Preliminary Agreement or the Expanded Definitive Collaboration Agreement in the case of the insolvency of the other party, an uncured material breach of the other party, or such other events that both parties agree to be included in the Expanded Definitive Collaboration Agreement.

GSK will make an upfront payment to us of $225 million, 50% of which will become payable at the effective date of the 2021 Preliminary Agreement and 50% of which will become payable at the effective date of the Expanded Definitive Collaboration Agreement. If GSK exercises the Option, GSK will pay us an Option exercise fee of $300 million unless certain agreed product criteria for VIR-2482 are not met, in which case the parties will negotiate an alternative Option exercise fee. If we are unable to agree on an alternative Option exercise fee, then subject to certain rights of GSK, we will have the right to continue the development and commercialization of VIR-2482 by itself or with a third party. Upon achievement of a pre-defined regulatory milestone for the first product arising from the Influenza Program, GSK will make a milestone payment to us of up to $200 million.

In connection with the 2021 Preliminary Agreement, we entered into a stock purchase agreement, or the Stock Purchase Agreement, with Glaxo Group Limited, or GGL, an affiliate of GSK, pursuant to which GGL will purchase shares of our common stock for an aggregate purchase price of approximately $120.0 million. The price per share will be equal to the average of (a) the volume weighted average price of a share of our common stock for a seven trading day period, starting with the opening of trading on the seventh trading day prior to the date of the Stock Purchase Agreement and ending with the close of trading on the trading day prior to the date of the Stock Purchase Agreement and (b) the volume weighted average price of a share of our common stock for a seven trading day period, starting with the opening of trading on the seventh trading day prior to the Data End Date and ending with the close of trading on the trading day prior the Data End Date, subject to certain price collar adjustments. The "Data End Date" means the tenth trading day immediately following the date that we make a public announcement regarding initial Phase 3 results for the COMET-ICE trial for VIR-7831.

Pursuant to the terms of the Stock Purchase Agreement, GGL has agreed not to, without our prior written consent and subject to certain conditions and exceptions, among other things, directly or indirectly acquire additional shares of our outstanding common stock, seek or propose a tender or exchange offer, merger or other business combination involving us, solicit proxies or consents with respect to any matter, or undertake other specified actions related to the potential acquisition of additional equity interests in us, collectively, the Standstill Restrictions. The Standstill Restrictions will expire on the one-year anniversary of the Equity Closing Date (as defined below).

The Stock Purchase Agreement also provides that until the first anniversary of the Equity Closing Date, GGL will hold and not sell any of its shares, subject to certain exceptions. We have 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.

The consummation of the transactions under each of the 2021 Preliminary Agreement and the Stock Purchase Agreement are 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, or the HSR Act; provided, however, that in no event will the closing of the transactions under the Stock Purchase Agreement occur prior to the Data End Date, or such closing, the Equity Closing Date.

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 to expand our existing collaboration of five infectious disease targets to nine, 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 (collectively, the COVID Collaboration Targets).

Pursuant to both amendments, we and Alnylam agreed to each be responsible for the pre-clinical development costs incurred by each party in performing our allocated responsibilities under an agreed-upon initial pre-clinical development plan for each of the four new targets. Following the completion of initial pre-clinical development activities, we had a pre-agreed program option to progress one or more candidates arising from the coronavirus program into further development, subject to Alnylam's right to opt-in, during a specified period, to share equally with us the profits and losses in connection with development and commercialization of a coronavirus product.

In December 2020, we entered into a letter amendment with Alnylam amending the Alnylam Agreement, as amended, 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 amendment, Alnylam will be 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 will no longer have the obligation to reimburse Alnylam for any share of costs incurred by Alnylam in conducting activities under the COV Workplan after July 1, 2020.

In connection with the letter amendment, we will no longer have a pre-agreed program option, but, if Alnylam selects a development candidate arising from the COV Workplan, we and Alnylam have agreed to negotiate in good faith an agreement with respect to the COV Target and siRNA products directed thereto. If Alnylam terminates the COV Workplan, does not select a development candidate, or we are unable to agree upon the terms of a definitive agreement, then the COV Target and related siRNA program will no longer be included within the Alnylam Agreement, as amended and all rights to the siRNA program directed to VIR-2703 will revert 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 15 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 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, and such agreement, as amended in May 2019 and in September 2020, 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 achievement of specified development and regulatory milestone events, we will be required to pay up to $8.5 million with respect to the first infectious disease product for the HIV indication, up to $7.0 million with respect to each of the first four other infectious disease products with specified projected peak worldwide annual net sales, and up to $3.6 million with respect to any other infectious disease product. Following regulatory approval, we will be required to pay commercial success milestones of up to $40.0 million in the aggregate for the achievement of specified aggregate worldwide annual net sales of the first infectious disease product for the HIV indication and the first four infectious disease products with specified projected peak worldwide annual net sales. 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 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 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 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 Alnylam Agreement, Brii Bio's rights will be subject to the terms of the Alnylam Agreement, as amended.

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 Alnylam Agreement, as amended.

As partial consideration for our entry into the Brii Agreement, upon closing of Brii Bio Parent's Series A preferred stock financing, we 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 our HBV siRNA program, under the terms of the Alnylam Agreement, as amended, in February 2020 we transferred to Alnylam a specified percentage of such equity consideration allocable to such

program. 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 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, or the 2019 Xencor Agreement, with Xencor, Inc., or Xencor, pursuant to which we obtained a non-exclusive, sublicensable (only to our affiliates and subcontractors) license to incorporate Xencor's half-life extension Fc region-related 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 half-life extension Fc-related technologies, for each of the influenza A and HBV research programs. These technologies are used in our VIR-2482 and VIR-3434 product candidates.

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 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 in the low 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, or the 2020 Xencor Agreement, with Xencor pursuant to which we obtained a non-exclusive license to Xencor's Fc-region related technologies to extend the half-life of novel antibodies that we are investigating as potential treatments for patients with COVID-19. Under the terms of the agreement, we will be solely responsible for the activities and costs related to research, development, regulatory and commercial activities. These technologies are used in our VIR-7831 and VIR-7832 product candidates.

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.

In February 2021, we and Xencor executed amendments to the 2019 Xencor Agreement and the 2020 Xencor Agreement primarily to expand the scope of the licensed technology under each agreement, which may increase our royalty payment obligations in certain circumstances. Under the amended agreements, we will be obligated to pay Xencor tiered royalties on net sales ranging from low- to mid-single-digits under the amended 2019 Xencor Agreement and at the mid-single-digits under the amended 2020 Xencor Agreement.

Letter Agreement with the Bill & Melinda Gates Foundation

In December 2016, we entered into a letter agreement with the Bill & Melinda Gates Foundation, or the Gates Agreement, in connection with the Bill & Melinda Gates Foundation's investment in us through the purchase of $10.0 million of shares of our Series A-1 convertible preferred stock in December 2016 and $10.0 million of shares of our Series B convertible preferred stock in January 2019. We are obligated to use the proceeds of the Bill & Melinda Gates Foundation's investment 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, 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 and TB 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 plus 5% compounding interest or (b) the fair market value as determined by an independent third-party, such redemption or sale, a Gates Foundation Redemption. Following a Gates Foundation Redemption, if either (i) a sale of the company or all of our material assets relating to the Gates Agreement, or (ii) a firmly underwritten public offering of our common stock at a per share valuation in excess of 200% of the valuation used for the Gates Foundation Redemption occurs, in each case closing prior to the first anniversary of the Gates Foundation Redemption, then solely if a preliminary prospectus for such offering, or a binding agreement with respect to any such sale transaction, was filed or signed, as applicable, 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 public offering or 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 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.

Separately, in January 2018 and March 2018, we entered into two 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 and TB programs, respectively, through the award of two research grants totaling in the aggregate up to $12.2 million with

respect to the HIV program, and up to $14.9 million with respect to the TB 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 December 31, 2021. The TB grant agreement will remain in effect until February 28, 2021. As of December 31, 2020, we had received $16.4 million with respect to the HIV program and $12.2 million with respect to the TB program. 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 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.

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.

Agreement and Plan of Merger with Agenovir

In January 2018, we entered into an agreement and plan of merger, or the Agenovir Merger Agreement, with Agenovir Corporation, or Agenovir, pursuant to which we purchased all equity interests of Agenovir. The primary assets purchased in the acquisition were in-process research and development programs in human papillomavirus, or HPV, and hepatitis B virus, or HBV, generally intended to utilize CRISPR/Cas9.

Pursuant to the Agenovir Merger Agreement, we are required to use commercially reasonable efforts following the closing date to develop and seek regulatory approval in the United States for at least one product arising from the HBV program acquired under the Agenovir Merger Agreement. With respect to the HPV program, other than an obligation of

Agenovir during a specified period (which has now expired) to use reasonable efforts to divest or grant a license to a third party, we do not have any ongoing diligence obligations to progress activities under the HPV program. During a specified period following the closing of the Agenovir acquisition, we will be required to pay Agenovir's former stockholders up to $45.0 million in the aggregate for the achievement of specified development and regulatory milestones for the first HBV product, and if we elect to progress the HPV program, we will owe up to $45.0 million in the aggregate for the achievement of development and regulatory milestones for the first HPV product. In addition, during a specified period following the closing of the Agenovir acquisition, if we successfully commercialize one or more products arising from the HBV program or the HPV program, we will owe milestone payments for the achievement of specified levels of worldwide annual net sales of up to $90.0 million for products arising from each program, or up to $180.0 million in the aggregate, if we were to commercialize products from both the HBV program and the HPV program. In February 2020, we terminated the HPV program and we have no further obligations related to this program under the Agenovir Merger Agreement.

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 chemistry, manufacturing and control, or CMC, capabilities and are working with contract development and manufacturing organizations, or CDMOs, to supply our early stage product candidates in the near-term. We have completed our internal capacity build in process development, analytical development, quality, manufacturing, and supply chain. Specifically, our San Francisco, California and Portland, Oregon facilities include laboratories that support process development, production of HCMV research viral seed stock and selected quality control testing for our products.

We have established relationships with multiple CDMOs and have produced material to support preclinical studies and Phase 1 and Phase 2 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 partner GSK have executed manufacturing agreements with large-scale CDMOs to support future scale-up and capacity, particularly for potential commercialization.

Production Modalities

Antibody Platform

The technology and industrial processes for producing mAbs are well-established across the biopharmaceutical industry. Over the last 20 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 collaboration partners for all of our pipeline clinical supplies. For our COVID-19 program, we and our partner 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 two 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 plan to conduct a technology transfer and assume responsibility for Phase 3 clinical and subsequently 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 Phase 3 manufacturing at one of these qualified facilities.

Manufacturing Agreements

In connection with the global spread of the current 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 Biologics Co., Ltd., or Samsung, pursuant to which Samsung will perform 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 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 antibodies in greater China pursuant to an exclusive license granted for the selected 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 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 collaboration agreement with GSK. In accordance with the terms of the collaboration 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 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.

The Biogen agreement provides us the right to request a technology transfer of all manufacturing technology and processes developed under the agreement to us or any third party designated by us to conduct manufacturing of a SARS-CoV-2 antibody using such technology, including applicable licenses to us under Biogen's relevant intellectual property rights. In connection with any such technology transfer, we have also agreed to pay an "access fee" to Biogen for each successful batch of SARS-CoV-2 antibody drug substance manufactured using certain improvements relating to increases in batch yield developed under the agreement, whether such manufacturing is performed by us, our affiliates, or third parties. If we successfully manufacture all batches of SARS-CoV-2 antibody drug substance for which we are currently committed under the Samsung letter agreement, based on our current working assumptions of manufacturing yield per batch, the access fee payable to Biogen in connection with the Samsung manufacturing will total approximately $100.0 million.

We will bear 72.5% of the costs under the Biogen agreement and GSK will bear 27.5% of such costs pursuant to our collaboration agreement with GSK, subject to certain conditions and exceptions.

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.

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 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 and convenience.

COVID-19

There are limited FDA-approved treatments for COVID-19 and several treatments and prophylactic vaccines are available under EUA. An intravenously administered antiviral, remdesivir, marketed by Gilead, is FDA-approved for treatment in the hospitalized setting. Three intravenously administered antibody regimens are available under EUA, bamlanivimab alone and bamlanivimab plus etesevimab by Eli Lilly and Company, and casirivimab and imdevimab by Regeneron Pharmaceuticals, Inc., or Regeneron, in the mild-to-moderate setting. Convalescent plasma is also available under EUA. Additionally, limited quantities of COVID-19 vaccines are available under EUA from Moderna, Inc. and Pfizer Inc. (in partnership with BioNTech SE). Numerous large and small pharmaceutical companies are developing programs with various mechanisms of actions, including prophylactic vaccines, antivirals, immunomodulators, and antibodies. Companies with antibodies in clinical development include AbbVie, Inc., Adagio Therapeutics, AstraZeneca plc, Brii Bio, Celltrion Healthcare Co.,Ltd., Eli Lilly and Company and Regeneron. Companies with oral antivirals in clinical development include Merck & Co. and Roche Holding AG, or Roche. Companies with prophylactic vaccines in clinical development include AstraZeneca plc, GSK, Johnson & Johnson, Novavax, Inc. and Sanofi S.A.

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 (in partnership with Dicerna Pharmaceuticals, Inc.) In addition, GC Pharma is developing an antibody against surface antigen. Several companies, including Altimmune, Inc., GSK, Janssen 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.

While several companies, including AstraZeneca plc, Janssen, Roche, have conducted clinical trials of antibodies for the treatment of influenza, to our knowledge, there are currently no other prophylactic antibodies in development. 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 Inc. (in partnership with BioNTech SE) and Sanofi S.A. (in partnership with Translate Bio). Some intend 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 National Institutes of Health 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 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. Gilead, Janssen and Merck & Co., Inc. and Viiv Healthcare Limited have 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 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, 2020, 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

VIR-7831

Our VIR-7831 intellectual property portfolio includes multiple United States provisional patent applications. These applications include composition of matter claims, pharmaceutical composition claims, and method of treatment claims. The 20-year term of any patents issuing from these provisional patent applications is presently estimated to expire in 2041, absent any available patent term adjustments or extensions.

Licensed Patents

Our VIR-7831 intellectual property portfolio also includes patents and patent applications that we have non- exclusively licensed from Xencor. As of December 31, 2020, these patents and applications include seven 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 between 2021 and 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2020, these patents and applications include 91 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 United Kingdom 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 2021 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, 2020, four patent applications pending in Brazil, Canada, China and Europe directed to composition of matter claims, pharmaceutical composition claims, composition for use in 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 2021 and 2028, absent any available patent term adjustments or extensions.

VIR-7832

Our VIR-7832 intellectual property portfolio includes multiple United States provisional patent applications. These applications include composition of matter claims, pharmaceutical composition claims, and method of treatment claims. The 20-year term of any patents issuing from these provisional patent applications is presently estimated to expire in 2041, absent any available patent term adjustments or extensions.

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, 2020, one pending patent application in the United States and 33 pending patent applications in the African Regional Intellectual Property Organization, or 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, Nigeria, Organisation Africaine de la Propriété Intellectuelle, or OAPI (Africa), 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, 2020, these patents and applications include seven 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 between 2021 and 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2020, these patents and applications include 91 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 United Kingdom 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 2021 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, 2020, four patent applications pending in Brazil, Canada, China and Europe directed to composition of matter claims, pharmaceutical composition claims, composition for use in 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 2021 and 2028, 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, 2020, one issued patent in the United States directed to composition of matter claims, pharmaceutical composition claims and method of treatment claims. This family also includes 41 issued patents in Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Italy, Japan, Jordan, Latvia, Lebanon, Lithuania, Luxembourg, Monaco, North Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom 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.

Another of these families includes, as of December 31, 2020, one issued patent in Nigeria directed to composition for use in treatment claims. The 20-year term of this patent is presently estimated to expire in 2038, absent any available patent term adjustments or extensions.

The three licensed families also collectively include, as of December 31, 2020, two patent applications in the United States, one pending international Patent Cooperation Treaty, or PCT, applications and 56 patent applications in the 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 three 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, 2020, four patent applications in the United States, two pending PCT patent applications and two patent applications in Taiwan. 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 2041, 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, 2020, one pending patent application in the United States and 33 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, Nigeria, OAPI (Africa), 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, 2020, these patents and applications include seven 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 between 2021 and 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2020, these patents and applications include 91 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 United Kingdom 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 2021 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, 2020, four patent applications pending in Brazil, Canada, China and Europe directed to composition of matter claims, pharmaceutical composition claims, composition for use in 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 2021 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, 2020, one pending PCT patent application. The application includes 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.

In addition, through our subsidiary Humabs, we own two different patent families that include, as of December 31, 2020, 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, 2020, 36 issued patents in Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungry, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey and the United Kingdom 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, 2020, one pending patent application in the United States, one pending PCT application and 25 pending patent applications in ARIPO (Africa), Australia, Brazil, Canada, China, Eurasia, Europe, Hong Kong, India, Indonesia, Israel, Japan, Malaysia, Mexico, Nigeria, New Zealand, OAPI (Africa), the Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Thailand 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, 2020, one issued patent in the United States directed to composition of matter claims and pharmaceutical composition claims. These families also collectively include 42 issued patents in Albania, Australia, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungry, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey and the United Kingdom 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, 2020, two patent applications in the United States and 24 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, 2020, these patents and applications include seven 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 between 2021 and 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2020, these patents and applications include 91 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 United Kingdom 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 2021 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, 2020, four patent applications pending in Brazil, Canada, China and Europe directed to composition of matter claims, pharmaceutical composition claims, composition for use in 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 2021 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, 2020, two pending patent applications in the United States and 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, 2020, one issued patent in the United States directed to composition of matter claims and pharmaceutical composition claims. This family also includes 42 issued patents in Albania, Australia, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungry, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Monaco, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan, Turkey and the United Kingdom 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, 2020, 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, 2020, two pending PCT patent applications and one pending application in Taiwan. 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.

Four of these families collectively include, as of December 31, 2020, six issued patents in the United States directed to composition of matter 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, five of the seven patent families collectively include, as of December 31, 2020, 206 issued patents in Albania, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Monaco, North Macedonia, Malta, New Zealand, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Serbia, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine and the United Kingdom 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, 2020, nine patent applications in the United States and 99 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, OAPI (Africa), 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, 2020, three patent applications in the United States and 22 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, 2020, nine 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, 2020, 60 issued patents in Albania, Australia, Belgium, Canada, China, Croatia, Denmark, Finland, France, Germany, Hungary, Iceland, Indonesia, Ireland, Japan, Latvia, Lithuania, Luxembourg, Macao, Monaco, Netherlands, North Macedonia, Norway, Russia, Singapore, Slovenia, South Korea, Sweden, Switzerland and the United Kingdom 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, 2020, two patent applications in the United States and 16 patent applications in Australia, Canada, China, Europe, Hong Kong, India, Japan, Russia, 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, 2020, 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, 2020, one pending patent application in the United States and 33 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, Nigeria, OAPI (Africa), 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, 2020, 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 United Kingdom directed to process (methods of producing) claims. The two families also collectively include, as of December 31, 2020, two 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, 2020, these patents and applications include seven 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 between 2021 and 2025, absent any available patent term adjustments or extensions. Additionally, as of December 31, 2020, these patents and applications include 91 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 United Kingdom 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 2021 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, 2020, four patent applications pending in Brazil, Canada, China and Europe directed to composition of matter claims, pharmaceutical composition claims, composition for use in 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 2021 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.

Seven of the 10 families collectively include, as of December 31, 2020, 11 issued patents in the United States, directed to composition of matter 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, seven of the 10 families collectively include, as of December 31, 2020, 239 issued patents in Albania, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czechia, Denmark, Germany, Estonia, Finland, France, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, North Macedonia, Malta, Monaco, Netherlands, Norway, New Zealand, Poland, Portugal, Romania, San Marino, Serbia, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine and the United Kingdom 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, 2020, eight patent applications in the United States, a pending PCT application and 90 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, OAPI (Africa), 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, 2020, 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 2041, 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.

Small molecule drugs are subject to regulation under the Food, Drug, and Cosmetic Act, or FDCA, and biological products are additionally subject to regulation under the Public Health Service Act, or PHSA, and both are subject to additional federal, state, local and foreign statutes and regulations. 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;
- submission to the FDA of an investigational new drug application, or IND, 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; and
- FDA review and approval of an NDA, or licensure of a BLA, to permit commercial marketing of the product for particular indications for use in the United States.

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. There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Sponsors of clinical trials of FDA-regulated products are required to register and disclose certain clinical trial information, which is publicly available at www.clinicaltrials.gov.

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 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. 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. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

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. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter 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 Complete Response letter without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the Complete Response letter, 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 risk evaluation and mitigation strategy, or 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, 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 the Department of Health and Human Services, or 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.

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.

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. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA or BLA application fee.

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.

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.

Biosimilars and 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.

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. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

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. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, recent government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Hatch-Waxman Amendments and 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. 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. 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 that the FDA may accept an ANDA four years into the NCE exclusivity period if the ANDA applicant also files a paragraph IV certification.

Drugs and biologics can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

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. Beginning in 2022, applicable manufacturers also will be 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 European Union, or 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 Public Health Service Act. At this time, we are unsure of the full impact that the ACA will have on our business.

Since its enactment, there have been and remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA, and we expect such challenges and amendments to continue. Since January 2017, President Trump signed several Executive Orders and other directives designed to delay the implementation of certain ACA provisions or otherwise circumvent requirements for health insurance mandated by the ACA. Concurrently, Congress considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017, or Tax Act, includes a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." In addition, the 2020 federal spending package permanently eliminated, effective January 1, 2020, the Affordable Care Act's mandated medical device tax and "Cadillac" tax on high-cost employer-sponsored health coverage and, effective January 1, 2021, also eliminated the health insurer tax. The Bipartisan Budget Act of 2018, or the BBA, among other things, amended the ACA, effective January 1, 2019, to increase from 50% to 70% the point-of-sale discount that is owed by biopharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." In December 2018, a U.S. District Court Judge in the Northern District of Texas, or Texas District Court Judge, ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. The United States Supreme Court is currently reviewing this case, but it is unknown when a decision will be reached. Although the United States Supreme Court has yet ruled on the constitutionality of the ACA, on January 28, 2021, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through May 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructs certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how the Supreme Court ruling, other such litigation, and the healthcare reform measures of the Biden administration will impact the ACA.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. 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 BBA, will continue through 2030 unless additional Congressional action is taken. However, COVID-19 relief support legislation suspended the 2% Medicare sequester from May 1, 2020 through March 31, 2021. In January 2013, the American Taxpayer Relief Act of 2012 was enacted which, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Further, there has been increasing legislative and enforcement interest in the United States with respect to drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, the Trump administration used several means to propose or implement drug pricing reform, including through federal budget proposals, executive orders and policy initiatives. For example, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that attempt to implement several of the administration's proposals. The FDA also released a final rule, effective November 30, 2020, implementing a portion of the importation executive order providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from biopharmaceutical 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 pending review by the Biden administration until March 22, 2021. On November 20, 2020, CMS issued an 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, effective January 1, 2021. On December 28, 2020, the United States District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. However, it is unclear whether the Biden administration will work to reverse these measures or pursue similar policy initiatives.

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. 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, or CTA, 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 United Kingdom, 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, partners 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 General Data Protection Regulation (EU) 2016/679, or 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 UK, 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, 2020, we had 327 full-time employees, 237 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 also expect 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 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 report, and the inclusion of our website address in this report is an inactive textual reference only. 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 significant net losses since inception and anticipate that we will continue to incur substantial net losses for the foreseeable future and may never achieve or maintain profitability.

Since inception in April 2016, we have incurred significant net losses and have never generated any revenue from product sales. Our net loss was $298.7 million, $174.7 million and $115.9 million for the years ended December 31, 2020, 2019 and 2018, respectively. As of December 31, 2020, we had an accumulated deficit of $667.2 million.

We expect to continue to incur significant expenses and increasing net losses for 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. To date, we have never obtained regulatory approval for, or commercialized, any products. It could be several years, if ever, before we have a commercialized product. The net losses we incur may fluctuate significantly from quarter to quarter and year to year. To become and 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 never generate revenue that is sufficient to offset our expenses and achieve 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 when, or if, we will be able to achieve 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.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and 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 clinical-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. As an organization, we have not yet demonstrated an ability to successfully complete clinical development, obtain regulatory approvals, manufacture a commercial-scale product or conduct sales and marketing activities necessary for successful commercialization or arrange for a third party to conduct these activities on our behalf. 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 will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We will 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, 2020, excluding restricted cash, we had cash, cash equivalents and short-term investments of $736.9 million. Based upon our current operating plan, we believe that our existing cash, cash equivalents and short-term investments as of December 31, 2020 will fund our current operating plans through at least the next 12 months from the issuance date of our consolidated financial statements for the period ended December 31, 2020. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds 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 will 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 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 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 product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our 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 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. 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 future 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 collaborations and strategic alliances, 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 or strategic alliances, 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 future commercialization efforts or grant rights to develop and market product candidates that we would otherwise develop and market ourselves.

Our pursuit of a potential therapy for COVID-19, the disease caused by the virus SARS-CoV-2, is at an early stage, and we are committing substantial financial resources and personnel and making substantial capital commitments with third parties in furtherance thereof and we may be unable to secure sufficient capital or manufacturing capacity to develop and commercialize a therapy that successfully treats the virus in a timely manner, if at all.

In response to the recent outbreak of COVID-19, the disease caused by the virus SARS-CoV-2, we are pursuing various potential therapies to address the disease, including through mAbs using our antibody platform (in collaboration with several partners), such as VIR-7831 and VIR-7832. Our testing and development of these potential therapies is in early stages, and we may be unable to produce a therapy that successfully treats the virus in a timely manner, if at all. For example, we initiated a Phase 3 clinical trial in October 2020 for VIR-7831, for which we anticipate results for the primary endpoint in the first quarter of 2021.

We are also committing substantial financial resources, both internally and externally, and personnel to the development of a potential therapy for COVID-19, which may cause delays in or otherwise negatively impact our other development programs, despite uncertainties surrounding the longevity and extent of COVID-19 as a global health concern. In particular, our ability to develop an effective therapy will 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 the Samsung MSA and WuXi Biologics MSA for drug substance, drug product and raw material were approximately $370.0 million as of December 31, 2020, excluding the approximate “access fee” payable to Biogen. 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 crucial 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 short-term investments. We may also need to enter into additional manufacturing arrangements in the future in order to create an effective supply chain for our COVID-19 product candidates that will adequately support demand. We will need to raise substantial additional capital to fund the development of our 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. 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 and could rapidly dissipate 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 our therapy will be approved for inclusion in government stockpile programs, which may be material to the commercial success of the approved product candidate, either in the United States or abroad.

In addition, another party may be successful in producing a more efficacious therapy for SARS-CoV-2 or in producing a therapy in a more timely 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. There are efforts by several public and private entities to develop a therapy for COVID-19, some of which are further along in the clinical development process than we are. For example, in December 2020, Pfizer Inc. and Moderna, Inc. received Emergency Use Authorization, or EUA, from the U.S. Food and Drug Administration, or the FDA, for their COVID-19 vaccines which have been proven to be 95% and 94% effective, respectively, 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 we will secure U.S. government funding or a broad enough manufacturing infrastructure, 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 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 ultimately commercialize a therapy for COVID-19, if approved.

Risks Related to the Development and Commercialization of Our Product Candidates

Our future success is substantially dependent on the successful clinical development, regulatory approval and commercialization of our 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, if approved, successfully commercialize our product candidates 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 have only recently initiated clinical trials for four product candidates and have not obtained regulatory approval for any 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 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, biologics license application, or 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 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, 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, 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 initiated a Phase 2 clinical trial to combine VIR-2218 with pegylated interferon-alpha and we are planning trials that combine 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 similar regulatory authorities outside of the United States 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 similar regulatory authorities outside of the United States. 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 similar regulatory authorities outside of the United States 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.

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 other comparable 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 regulatory approval, 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 very few have received regulatory approval. 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 cytomegalovirus, 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 European Medicines Agency, or 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 suspend 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 INDs, or clinical trial applications, or CTAs, 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 VIR-7831 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 prophylaxes 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 depends 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. In addition, enrollment and retention of patients in clinical trials could be disrupted by 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 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.

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 justifies 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 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 both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with 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. 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. Product candidates that we successfully develop and commercialize may compete with existing therapies and new therapies that may become available in the future. 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 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.

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.

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. 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. For details information regarding regulatory approval and ongoing regulatory oversight, see the section titled "Business—Government Regulation and Product Approval."

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.

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. If any current or future collaborators 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 European Union, or 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.

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; 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 the early testing and development stages. VIR-7831, a SARS-CoV-2-neutralizing mAb, is currently in a Phase 3 clinical trial, and we anticipate initiating a Phase 1b/2a clinical trial for VIR-7832, also a SARS-CoV-2-neutralizing mAb, in the first quarter of 2021. 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 and how the disease affects the human body, 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.

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. If we are granted an EUA for one of our COVID-19 product candidates, we would be able to commercialize such candidate prior to FDA approval. Furthermore, the FDA may revoke an EUA where it is determined that the underlying 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 is not yet approved by the FDA and if we and our manufacturing partners have invested in the supply chain to provide one of our COVID-19 product candidates under an EUA.

If any of our future small molecule product candidates obtain regulatory approval, additional competitors could enter the market with generic 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 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 "—Risk 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 product candidates are approved, competitors could file ANDAs 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 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. 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 are regulated by the FDA as biologic products subject to approval 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 Exclusivity."

If competitors are able to obtain marketing approval for biosimilars referencing our large molecule product candidates, if approved, 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. For additional information regarding competition, see the section titled "Business—Competition."

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, health information privacy and security 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 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.

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 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 product candidates, which could make it difficult for us to sell profitably, if approved.

Market acceptance and sales of any product candidates that we commercialize, if approved, will 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 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 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 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, 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 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 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. For additional information regarding healthcare legislative reform measures, see the section titled "Business—Government Regulation and Product Approval—Healthcare Reform."

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. For example, it is possible that additional governmental action is 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 that may have been obtained and we may not achieve or sustain profitability.

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 any approved product, which could have an adverse effect on demand for our 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, partners 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 product manufacturing, storage and distribution, or testing. We are dependent on third parties to 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 not yet manufactured 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 product candidates. Certain of our product candidates may have to compete with existing and future products, such as the annual flu vaccine or any potential 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 our contract 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, our contract manufacturing partners for compliance with the cGMP requirements. If our contract 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 contract 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 delay 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 foreign CDMOs, including a CDMO in China which we 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 partnerships in China which could have an adverse effect on our business, financial condition, results of operations and prospects. Evolving changes in China's economic, political, and social conditions and the uncertainty around China's relationship with other governments, such as the United States and the United Kingdom 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 manufacturers entails risks to which we would not be subject if we manufactured product candidates ourselves, including:

- delay or inability to procure or expand sufficient manufacturing capacity;
- issues related to scale-up of manufacturing;
- 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;
- 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 components;
- lack of qualified backup suppliers for those 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 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 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 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 manufacturers that supply synthetic siRNAs. 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 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 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 material 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 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 two CDMOs specializing in live vaccine manufacturing (IDT Biologika and Advanced Bioscience Laboratories, Inc.). However, the existing process will require 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 recently made statements and taken certain actions that may lead to potential 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. Recently 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 not started commercialization of drug candidates, any unfavorable government policies on international trade, such as export controls, capital controls or tariffs, may affect the demand for our drug products, the competitive position of our drug products, and import or export of raw materials used in our drug development, particularly with respect to raw materials 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, 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.

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, 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, any of the foregoing could expose us to liability to the applicable patent owner.

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 Drug Price Competition and Patent Term Restoration Act of 1984, or 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 abbreviated new drug application, or 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—Hatch-Waxman Amendments and Exclusivity."

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 product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our 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, 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 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 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. 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.

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. 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 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 partnerships 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. 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 expect to rely on trademarks as one means to distinguish any of our product candidates that are approved for marketing from the products of our competitors. We have not yet selected trademarks for our product candidates and have not yet begun the process of applying to register trademarks for our current or any future product candidates. 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 a letter agreement with the Bill & Melinda Gates Foundation, or the Gates Agreement, in December 2016 in connection with the Bill & Melinda Gates Foundation's investment in us through the purchase of $20.0 million of shares of our convertible preferred 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—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 plus 5% compounding interest or (2) the fair market value as determined by an independent third-party, which amount may increase in the event of certain underwritten public offerings of our common stock or 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 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.

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 expect to expand our organization, and we may experience difficulties in managing this growth, which could disrupt our operations.

As of December 31, 2020, we had 327 full-time employees. As the clinical development of our product candidates progresses, we also expect 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 operate as a public company. 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 situation 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 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. 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 CDMO, 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), 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 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 and any future outbreaks of the disease, which was declared by the World Health Organization as a global pandemic, and is resulting in travel restrictions, quarantines orders and other restrictions by governments to reduce the spread of the disease. As a result, a large part of our workforce has been working remotely since March 2020 and plans to fully reopen our offices have not yet been initiated. Our reopening plans, when implemented, will be consistent with local government requirements and their phased approach to reopening. 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. 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 coronavirus 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. For example, the initiation of the Phase 2 trial for VIR-2482, which was delayed due to the impact of COVID-19, is now planned for the fourth quarter of 2021. Further delays to our trials may occur.

The 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 is currently resulting 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 continues 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.

Our internal computer systems, or those of our collaborators, service providers or other contractors or consultants, may fail or suffer security breaches. Any of these events could result in 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 internal computer and information technology systems, cloud-based computing services and those of our current and any future collaborators, service providers and other contractors or consultants are potentially vulnerable to malware, computer viruses, 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 confidential information, including intellectual property, proprietary business information and personal information. We have in the past experienced security breaches of our information technology systems. 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.

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, 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. 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, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any

disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, including but not limited to information related to any of our product candidates, we could incur liability, our competitive and reputational position could be harmed, and the further development and commercialization of our product candidates could be delayed.

In addition, our internal computer and information technology systems, cloud-based computing services and those of our current and any future collaborators, service providers and other contractors or consultants are potentially vulnerable to data security breaches, whether by employees, contractors, consultants, malware, phishing attacks or other cyber-attacks, that may expose confidential information, intellectual property, proprietary business information or personal information to unauthorized persons.

For example, we have experienced phishing attacks in the past and we may be a target of phishing attacks or other cyber-attacks in the future. If a data security breach affects our or our service providers' systems, 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 or individuals pursuant to various federal, state and foreign data protection, privacy and security laws, regulations and guidelines, if applicable. Such laws may include the federal Health Insurance Portability and Accountability Act of 1996, or 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 Health and Human Services, or the 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. Furthermore, a data security breach could result in fines, increased costs or loss of revenue and we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed. Additionally, federal, state and international laws and regulations, such as the HIPAA, HITECH, the California Consumer Privacy Act and General Data Protection Regulation (EU) 2016/679, 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 (and our service providers) 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 (and our service providers') actual or perceived failure to comply with such obligations could harm our reputation, subject us to significant fines and liability, and otherwise adversely affect our business.

We, and our service providers, receive, process, store and use personal information and other data about our clinical trial participants, employees, partners and others. We are subject to numerous domestic and foreign laws and regulations regarding privacy, data protection, 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. We strive to comply with all applicable 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 laws and regulations, any privacy and data security obligations pursuant to contract or pursuant to our stated privacy or security policies or obligations to third parties may result in governmental enforcement actions (including fines, penalties, judgments, settlements, 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. 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 United States and abroad and (iv) laws that require the true, complete and accurate reporting of financial information or data. 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. 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.

We have incurred substantial losses since inception and do not expect to become profitable in the near future, if ever. As of December 31, 2020, we had net operating loss carryforwards of $483.7 million for federal tax purposes and $216.8 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 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 Act and the Coronavirus Aid, Relief and Economic Security 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. Because we have been generating taxable losses since inception, we do not expect any changes resulting from the new NOL provision to the current tax benefit and valuation allowance.

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.

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, through January 31, 2021, the closing price of our stock ranged from $11.83 per share to $83.07 per share. In addition, since we announced our pursuit for a potential therapy for COVID-19 in 2020, our stock has experienced pronounced and extended periods of volatility. 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, the media or others relating to the ongoing COVID-19 pandemic (including regarding our and others' efforts to develop COVID-19 therapies) 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. Information related to our development, manufacturing, regulatory and commercialization efforts with respect to VIR-7831 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 for 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 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. which generally requires public companies with principal executive offices in California to include specified numbers of directors from "underrepresented communities." 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 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 4.4 Description of Capital Stock filed as part of this Annual Report on Form 10-K.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which prohibits a person who owns 15% or more of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired 15% or more of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. These provisions could discourage potential acquisition proposals and could delay or prevent a change in control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

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 DGCL, 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. The first one commenced on April 1, 2017 and expires on August 31, 2024, with an option to extend for five years. The second one commenced on July 1, 2019 and expires on July 31, 2021, with an option to extend up to one year. The third one commenced on December 24, 2020 and expires on August 30, 2033, with no option to extend. We also have several other locations, including a location in Portland, Oregon, where we lease approximately 3,862 square feet of office, research and development, engineering, and laboratory space pursuant to a lease agreement which commenced on June 15, 2015 and expires on April 30, 2021; and a location in 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 commenced on January 1, 2019 and expires on December 31, 2028, with an option to extend for five years. We also have offices located in Boston, Massachusetts, San Diego, California and St. Louis, Missouri. 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. Prior to that date, there was no public trading market for our common stock. As a result, we have not set forth information with respect to the high and low prices of our common stock for any full fiscal quarter within the two most recent fiscal years. The high and low closing sales price of our common stock for the period from October 11, 2019 to December 31, 2020 was $75.00 and $11.65, respectively.

On February 22, 2021, the closing sale price of our common stock was $68.77.

Holders of Record

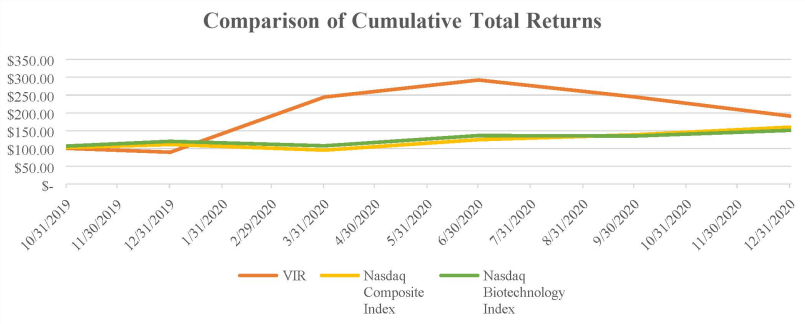
As of February 22, 2021, there were approximately 157 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. 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, 2020 for (i) our common stock, (ii) the Nasdaq Composite Index and (iii) the Nasdaq Biotechnology Index. Pursuant to applicable Securities and Exchange Commission 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 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

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 the 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. 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.

On July 10, 2020, we issued and sold 8,214,285 shares of our 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 (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 we received total gross proceeds from the offering of approximately $345.0 million. After deducting underwriting discounts and commissions of $20.7 million and offering expenses of $1.1 million, the net proceeds were $323.2 million.

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), and from our follow-on offering as described in our S-1 filed with the SEC on July 6, 2020, pursuant to Rule 462(b). We invested the funds received in cash equivalents and other marketable securities in accordance with our investment policy.

Recent Sales of Unregistered Equity Securities

None.

Issuer Purchases of Equity Securities

None.

Item 6. Selected Financial Data.

You should read the following selected consolidated financial data together with the information under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included in this Form 10-K. The consolidated statement of operations data for each of the years ended December 31, 2020, 2019 and 2018 and the consolidated balance sheet data as of December 31, 2020 and 2019 are derived from our audited consolidated financial statements included elsewhere in this Form 10-K. The selected consolidated statement of operations data for the year ended December 31, 2017 and consolidated balance sheet data as of December 31,

2018 and 2017 are derived from our audited consolidated financial statements which are not included in this Annual Report on Form 10-K. Our historical results of any prior periods are not necessarily indicative of results to be expected in any future period.

Consolidated Statement of Operations Data:

	Year Ended December 31,			
	2020	2019	2018	2017
	(in thousands, except share and per share data)			
Revenue:				
Grant revenue	$ 9,123	$ 7,380	$ 9,800	$ 2,559
License revenue from a related party	22,747	—	—	—
Contract revenue	44,498	711	868	149
Total revenue	76,368	8,091	10,668	2,708
Operating expenses:				
Research and development	302,411	148,472	100,229	62,512
General and administrative	70,937	37,598	29,131	21,693
Total operating expenses	373,348	186,070	129,360	84,205
Loss from operations	(296,980)	(177,979)	(118,692)	(81,497)
Other income (expense):				
Interest income	2,836	8,511	2,540	638
Other income (expense), net	(4,467)	(5,061)	(212)	83
Total other income (expense)	(1,631)	3,450	2,328	721
Loss before (provision for) benefit from income taxes	(298,611)	(174,529)	(116,364)	(80,776)
(Provision for) benefit from income taxes	(54)	(154)	480	10,924
Net loss	$ (298,665)	$ (174,683)	$ (115,884)	$ (69,852)
Net loss per share, basic and diluted[1]	$ (2.51)	$ (5.76)	$ (15.12)	$ (32.45)
Weighted-average shares outstanding, basic and diluted[1]	119,159,424	30,349,920	7,666,463	2,152,273

(1) See Notes 2 and 14 to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for an explanation of the calculations of our basic and diluted net loss per share and the weighted-average number of shares outstanding used in the computation of the per share amounts.

Consolidated Balance Sheet Data:

	As of December 31,			
	2020	2019	2018	2017
	(in thousands)			
Cash, cash equivalents and short-term investments	$ 736,861	$ 383,436	$ 98,443	$ 187,918
Long-term investments	—	24,290	—	—
Working capital	673,301	343,789	77,875	179,912
Total assets	918,761	512,071	191,596	251,566
Convertible preferred stock warrant liability	—	—	1,024	929
Convertible preferred stock	—	—	309,137	292,525
Accumulated deficit	(667,184)	(368,519)	(193,836)	(77,952)
Total stockholders' equity (deficit)	716,852	423,942	(179,177)	(68,916)

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, 2020 and 2019, including year-over-year comparisons of our financial performance and condition for these years. Discussion and analysis of the year ended December 31, 2018 specifically, as well as the year-over-year comparison of our financial performance and condition for the years ended December 31, 2019 and 2018, 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, 2019, as filed with the SEC on March 26, 2020.

Overview

We are a clinical-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 current 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 potential 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 development pipeline consists of 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. Given the global impact of infectious diseases, we are committed to developing cost-effective treatments that can be delivered at scale.

COVID-19

- VIR-7831, a severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2, -neutralizing monoclonal antibody, or mAb, started the lead-in phase of a Phase 2/3 trial named COVID-19 Monoclonal antibody Efficacy Trial - Intent to Care Early, or COMET-ICE, in August 2020 for the treatment of adults at high risk of hospitalization or death from COVID-19. In October 2020, the trial continued into Phase 3 based on a positive evaluation of the safety and tolerability data from the Phase 2 lead-in. Results for the primary endpoint of COMET-ICE are expected in the first quarter of 2021, and if positive, will be used to seek Emergency Use Authorization from the Food and Drug Administration and ultimately approval through the submission of a biologics license application. In December 2020, we initiated a Phase 3 trial named Therapeutics for Inpatients with COVID-19, or TICO, of VIR-7831 for the treatment of hospitalized adults with COVID-19 as part of a new sub-trial of the National Institutes of Health's Accelerating COVID-19 Therapeutic Interventions and Vaccines, or ACTIV, Program, specifically ACTIV-3. An evaluation of the benefit/risk profile of VIR-7831 is expected in the first quarter of 2021 and will determine if VIR-7831 continues in the next part of the ACTIV-3 trial. In January 2021, we initiated a Phase 2 combination trial of VIR-7831 and bamlanivimab (LY-CoV555) for the treatment of mild to moderate COVID-19 in low-risk adults as part of Eli Lilly and Company's BLAZE-4 trial. Initial results for this arm of the BLAZE-4 trial are expected in the first half of 2021. In February 2021, we initiated COMET-Patient SafEty, TolerAbility, PharmacoKinetics, or COMET-PEAK, a Phase 2 trial evaluating an intramuscular, or IM, formulation of VIR-7831 in low-risk adults with mild to moderate COVID-19. In the second quarter of 2021, we plan to initiate two additional IM trials of VIR-7831.
- VIR-7832, a vaccinal SARS-CoV-2-neutralizing mAb, is anticipated to initiate a Phase 1b/2a trial in the first quarter of 2021 for the treatment of adults with mild to moderate COVID-19 at high risk of hospitalization as part of the U.K.-based and National Health Service supported AGILE initiative.

HBV

- VIR-2218, an HBV-targeting siRNA, is currently in a Phase 2 clinical trial. Initial Phase 2 data have demonstrated substantial, durable, and dose dependent reduction of hepatitis B virus surface antigen, and VIR-2218 has been generally well-tolerated. In July 2020, we initiated a Phase 2 combination clinical trial of VIR-2218 with pegylated interferon-alpha, an approved immune modulatory agent, and anticipate initial clinical data in the second quarter of 2021.
- VIR-3434, an HBV-neutralizing mAb, is currently in a Phase 1 clinical trial. We anticipate additional clinical data from our Phase 1 trial in the second quarter of 2021. We also expect to initiate a Phase 2 clinical trial of VIR-3434 in combination with VIR-2218 in the second half of 2021.

Influenza A virus

- VIR-2482, a mAb designed for the prevention of influenza A, is currently in a Phase 1/2 clinical trial and has been generally well-tolerated. Initiation of the Phase 2 trial for VIR-2482, which was delayed due to the impact of COVID-19, is now planned for the fourth quarter of 2021 with proof-of-concept results anticipated in the first half of 2022.

HIV

- VIR-1111, an HIV T cell vaccine based on human cytomegalovirus, or HCMV, is currently in a Phase 1 trial. We anticipate initial clinical data for VIR-1111 in the second half of 2021.

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 early clinical trials.

Prior to our initial public offering, or IPO, we funded our operations primarily from the issuance and sale of convertible preferred stock, and to a lesser extent from revenue from grant agreements with government-sponsored and private organizations, as well as research and development services. In October 2019, we completed our IPO pursuant to which we received net proceeds of $126.4 million, after deducting underwriting discounts, commissions and offering expenses. In July 2020, we completed a follow-on offering of our common stock and issued 8,214,285 shares of our common stock for net proceeds of $323.2 million, after deducting underwriting discounts, commissions and offering expenses. As of December 31, 2020, we had $736.9 million in cash, cash equivalents and short-term investments. Based upon our current operating plan, we believe that our existing cash, cash equivalents and short-term investments as of December 31, 2020 will enable us to fund our operations through at least the next 12 months from the issuance date of the consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

We have incurred significant operating losses since our inception and expect to continue to incur significant operating losses for the foreseeable future. We do not have any products approved for sale, we have not generated any revenue from the sale of products, and we do not expect to generate revenue from the sale of our 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 losses were $298.7 million, $174.7 million and $115.9 million for the years ended December 31, 2020, 2019 and 2018, respectively. As of December 31, 2020, we had an accumulated deficit of $667.2 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 early clinical trials, and to a lesser extent, 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. We expect to continue to incur net operating losses for at least the next several years. 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 function 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 chemistry, manufacturing and control, or CMC, capabilities and are working with contract

development and manufacturing organizations, or CDMOs, to supply our early stage product candidates in the near-term. We have completed our internal capacity build in process development, analytical development, quality, manufacturing and supply chain. Specifically, our San Francisco, California and Portland, Oregon facilities include laboratories that support 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 and Phase 2 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 partner GSK have executed manufacturing agreements with large-scale CDMOs to support future scale-up and capacity, particularly for potential commercialization.

COVID-19 Activities

Since February 2020, we have entered into a number of collaboration agreements to accelerate the development, manufacture, and potential commercialization of therapies to treat and prevent COVID-19 and other coronaviruses. We have also made substantial efforts to protect our intellectual property in this area, as evidenced by the expansion of our patent portfolio.

Development and Commercialization

- In June 2020, we, Glaxo Wellcome UK Limited and Beecham S.A. (collectively referred to as GSK), entered into a definitive collaboration agreement, or the 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 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, and (3) products based on genome-wide CRISPR screening of host targets expressed in connection with exposure to SARS-CoV-2. The initial antibodies under the Antibody Program are VIR-7831 and VIR-7832, which have demonstrated high affinity for the SARS-CoV-2 spike protein and are highly potent in neutralizing SARS-CoV-2 in live-virus cellular assays.
- In March and April 2020, we entered into two further amendments to our collaboration and license agreement with Alnylam Pharmaceuticals, Inc., or the Alnylam Agreement, to expand our existing collaboration of five infectious disease targets to nine, including one targeting SARS-CoV-2 and potentially other coronaviruses, and up to three targeting human host factors for SARS-CoV-2. In December 2020, we entered into a letter agreement with Alnylam to modify certain funding and governance provisions in connection with RNAi programs directed to certain specified targets directed to coronaviruses, including VIR-2703, and to modify certain rights of each party with respect to products arising from such programs.

Manufacturing

- In February 2020, we entered into a development and manufacturing collaboration with WuXi Biologics (Hong Kong) Limited, or WuXi Biologics, for the clinical development, manufacturing, and commercialization of our proprietary antibodies developed for SARS-CoV-2. In addition, in June 2020, we entered into a binding letter of intent with WuXi Biologics, or the WuXi Biologics Letter Agreement, under which WuXi Biologics will perform certain development and manufacturing services for our SARS-CoV-2 antibody program. In July 2020, we assigned the WuXi Biologics Letter Agreement to GlaxoSmithKline Trading Services Limited, or GSKTSL, and GSKTSL entered into a non-exclusive Master Services Agreement for Commercial Manufacture of Drug Substance with WuXi Biologics, or 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 our SARS-CoV-2 antibody program. In accordance with the terms of the GSK Agreement, we will continue to be responsible for 72.5% of the costs under the WuXi Biologics MSA, and GSK will bear 27.5% of such costs, subject to certain conditions and exceptions.
- In May 2020, we entered into a clinical development and manufacturing agreement with Biogen, Inc., or Biogen, under which Biogen will perform process development activities and specified manufacturing services under agreed statements of work for certain pre-commercial and clinical supply of SARS-CoV-2 antibodies.
- In April 2020, we entered into a binding letter agreement, or the Samsung Letter Agreement, with Samsung Biologics Co., Ltd., or Samsung, under which Samsung will perform development and manufacturing services for

our SARS-CoV-2 antibody program. In July 2020, we assigned the Samsung Letter Agreement to GSKTSL, and GSKTSL entered into a Master Services Agreement with Samsung, or the Samsung MSA, thereby superseding the Samsung Letter Agreement, and pursuant to which, among other things, Samsung will perform development and manufacturing services for clinical and commercial supply of antibody products under our SARS-CoV-2 antibody program. In accordance with the terms of the GSK Agreement, we will continue to be responsible for 72.5% of the costs under the Samsung MSA, and GSK will bear 27.5% of such costs, subject to certain conditions and exceptions.

COVID-19 Business Update

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 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. 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. If the COVID-19 pandemic persists for an extended period of time and begins to impact essential distribution systems, we could experience disruptions to our supply chain and operations, and associated delays in the manufacturing of clinical trial supply. 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. For example, the initiation of the Phase 2 trial for VIR-2482, which was delayed due to the impact of COVID-19, is now planned for the fourth quarter of 2021. 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

Revenue

We do not have any products approved for sale, we have not generated any revenue from the sale of our products, and we do not expect to generate revenue from the sale of our 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 revenue consists of: (i) grant revenue; and (ii) license and contract revenue. Grant revenue is comprised of revenue derived from grant agreements with government-sponsored and private organizations. License and contract revenue is comprised of revenue generated from license rights issued and research and development services.

Operating Expenses

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 the development of our product candidates, which include:

- expenses related to license and collaboration agreements, and 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 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. We may never succeed in achieving regulatory approval for any of our product candidates. 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 revenue from the commercialization and sale 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.

General and Administrative

Our general and administrative expenses consist primarily of personnel-related expenses for personnel in executive, finance and other administrative functions, facilities and other allocated expenses, and other expenses for outside professional services, including legal, audit and accounting services, and insurance costs. Personnel-related expenses consist of salaries, benefits and stock-based compensation.

We expect our general and administrative expenses to increase substantially in absolute dollars for the foreseeable future as we continue to support our continued research and development activities, grow our business and, if any of our product candidates receive marketing approval, commercialization activities. 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.

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, and convertible preferred stock warrant liability prior to the IPO. Upon completion of our IPO, the outstanding warrant to purchase shares of our Series A-1 convertible preferred stock automatically converted into a warrant to purchase shares of common stock and therefore, was no longer subject to remeasurement each period.

Provision for Income Taxes

Provision for income taxes consisted of immaterial international income tax.

Results of Operations

Comparison of Years Ended December 31, 2020 and 2019

The following table summarizes our results of operations for the periods presented:

	Year Ended December 31,		
	2020	2019	Change
	(in thousands)		
Revenue:			
Grant revenue	$ 9,123	$ 7,380	$ 1,743
License revenue from a related party	22,747	—	22,747
Contract revenue	44,498	711	43,787
Total revenue	76,368	8,091	68,277
Operating expenses:			
Research and development	302,411	148,472	153,939
General and administrative	70,937	37,598	33,339
Total operating expenses	373,348	186,070	187,278
Loss from operations	(296,980)	(177,979)	(119,001)
Other income (expense):			
Interest income	2,836	8,511	(5,675)
Other expense, net	(4,467)	(5,061)	594
Total other income (expense)	(1,631)	3,450	(5,081)
Loss before provision for income taxes	(298,611)	(174,529)	(124,082)
Provision for income taxes	(54)	(154)	100
Net loss	$ (298,665)	$ (174,683)	$ (123,982)

Revenue

Total revenue was $76.4 million and $8.1 million for the years ended December 31, 2020 and 2019, respectively. The increase in total revenue was primarily due to $43.3 million of revenue related to the license granted to GSK under our collaboration agreement, and $22.7 million of revenue related to Brii Biosciences Offshore Limited's, or Brii Bio's, exercise of its option to obtain exclusive rights to develop and commercialize compounds arising from VIR-2218 in the China territory.

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,		
	2020	2019	Change
	(in thousands)		
Licenses, collaborations and contingent consideration	$ 110,378	$ 35,483	$ 74,895
Personnel	69,624	44,675	24,949
Contract manufacturing	36,985	18,227	18,758
Clinical costs	29,660	8,629	21,031
Other	55,764	41,458	14,306
Total research and development expenses	$ 302,411	$ 148,472	$ 153,939

Research and development expenses were $302.4 million and $148.5 million for the years ended December 31, 2020 and 2019, respectively. This increase was primarily due to the following factors:

- licenses, collaborations and contingent consideration expenses increased by $74.9 million, which was primarily attributable to increases of $28.7 million related to the change in fair value of the contingent consideration from our acquisition of Humabs Biomed SA, or Humabs, $25.4 million of costs pursuant to our collaboration with GSK, $19.3 million on achievement of the first development milestone related to our Alnylam Agreement, and $10.0 million payment to Alnylam resulting from Brii Bio's exercise of its option for VIR-2218, partially offset by a $5.0 million milestone achieved in 2019 under our 2018 MedImmune Agreement and $2.8 million decrease in costs incurred under our Alnylam Agreement;

- personnel-related expenses increased by $24.9 million, which was primarily attributable to an increase in our headcount;
- clinical costs increased by $21.0 million, which was primarily attributable to activities related to our VIR-7831, VIR-2218 and VIR-3434 clinical trials;
- contract manufacturing expense increased by $18.8 million, which was primarily attributable to an increase of $30.2 million related to initiation of manufacturing activities and process development for our COVID-19 programs, partially offset by a decrease of $11.3 million related to the manufacturing for HBV, HIV and influenza A drug products completed in 2019; and
- other research and development expenses increased by $14.3 million, which was primarily attributable to increases of $5.4 million in external research costs due to increased clinical and manufacturing activities, $4.6 million in the allocation of facilities and other costs due to an increase in our headcount, and $4.3 million in supplies and equipment costs to support our programs related to COVID-19.

General and Administrative Expenses

General and administrative expenses were $70.9 million and $37.6 million for the years ended December 31, 2020 and 2019, respectively. The increase was primarily due to an increase in personnel-related expenses related to additional headcount, legal fees, external consulting and other expenses due to costs associated with operating as a public company, including additional compliance-related expenses as a result of no longer being an emerging growth company.

Interest Income

Interest income were $2.8 million and $8.5 million for the years ended December 31, 2020 and 2019, respectively. The decrease was primarily due to lower interest rates and accretion income on investment balances in 2020 compared to 2019.

Other Expense, Net

Other expense, net were $4.5 million and $5.1 million for the years ended December 31, 2020 and 2019, respectively. The decrease was primarily due to the $2.0 million final revaluation of the convertible preferred stock warrant liability prior to the IPO, partially offset by an increase of $1.4 million in the fair value of the contingent consideration related to the TomegaVax acquisition.

Liquidity, Capital Resources and Capital Requirements

Sources of Liquidity

As of December 31, 2020, we had $736.9 million in cash, cash equivalents and short-term investments, and an accumulated deficit of $667.2 million. We have financed our operations primarily through sales of our common stock and convertible preferred securities and payments received under our grant and collaboration agreements.

On October 10, 2019, our registration statement on Form S-1 was declared effective by the SEC and our shares began trading on The Nasdaq Global Select Market on October 11, 2019. We sold an aggregate of 7,142,858 shares of our common stock at an initial offering price of $20.00 per share. As a result of the IPO, we received $126.4 million in net proceeds, after deducting underwriting discounts and commissions of approximately $10.0 million and offering expenses of approximately $6.4 million. In April 2020, we issued 6,626,027 shares of our common stock to Glaxo Group Limited (an affiliate of GSK) at a price per share of $37.73, for an aggregate purchase price of approximately $250.0 million. In July 2020, we completed a follow-on offering of our common stock and issued 8,214,285 shares of our common stock for net proceeds of $323.2 million, after deducting underwriting discounts, commissions and offering expenses. In November 2020, we also entered into a sales agreement (the “Sales Agreement”) with Cowen and Company, LLC (“Cowen”), 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, 2020, 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 early clinical trials, and to a lesser extent, general and administrative expenditures.

Future Funding Requirements

Based upon our current operating plan, we believe that our existing cash, cash equivalents and short-term investments as of December 31, 2020 will enable us to fund our operations through at least the next 12 months from the issuance date of the consolidated financial statements included elsewhere in this Form 10-K. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds 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 will 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.

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. Our future funding requirements will depend on many factors, including, but not limited to:

- the timing, progress and results of our ongoing preclinical studies and clinical trials of our 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 the timing and amount of any future milestone, royalty or other payments due thereunder;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our 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.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Year Ended December 31,	
	2020	2019
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (190,941)	$ (129,632)
Investing activities	(9,862)	(256,158)
Financing activities	529,474	449,244
Net increase in cash and cash equivalents and restricted cash and cash equivalents	$ 328,671	$ 63,454

Operating Activities

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.

During the year ended December 31, 2019, net cash used in operating activities was $129.6 million. This consisted primarily of a net loss of $174.7 million, partially offset by a decrease in our net operating assets of $8.2 million and non-cash charges of $36.8 million. The change in our net operating assets of $8.2 million was primarily driven by increases in accrued liabilities related to expenses incurred under the Alnylam Agreement, and employee related expenses due to higher headcount. The non-cash charges of $36.8 million primarily consisted of $12.4 million for the fair value of the derivative liability under the Alnylam Agreement, $8.7 million for stock-based compensation expense, $8.3 million for revaluation of contingent consideration, $4.5 million for depreciation and amortization expense, and $2.0 million for revaluation of convertible preferred stock liability.

Investing Activities

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.

During the year ended December 31, 2019, net cash used in investing activities was $256.2 million. This consisted of purchases of short and long-term investments of $643.9 million and purchases of property and equipment of $8.9 million, partially offset by $396.7 million in proceeds received from investments which matured during the period.

Financing Activities

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.

During the year ended December 31, 2019, net cash provided in financing activities was $449.2 million. This consisted primarily of net proceeds received from the issuance of our Series B convertible preferred stock of $317.3 million in January 2019, issuance of common stock upon completion of our IPO of $126.4 million in October 2019, repayment of promissory notes of $3.3 million, and financing lease obligation of $1.2 million.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations and commitments as of December 31, 2020:

	Payments Due by Period				
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years	Total
	(in thousands)				
Operating lease obligations	$ 6,247	$ 21,124	$ 18,630	$ 67,503	$ 113,504
Financing lease obligation	265	270	275	169	979
Total	$ 6,512	$ 21,394	$ 18,905	$ 67,672	$ 114,483

Under our collaboration, license and acquisition agreements, we have payment obligations that are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones and are required to make royalty payments in connection with the sale of products developed under those agreements. We have not included any such milestone or royalty payments in the above table. In addition, our commitments to GSK under the Samsung MSA and WuXi Biologics MSA for drug substance, drug product and raw material were approximately $370.0 million as of December 31, 2020, excluding the approximate "access fee" payable to Biogen. We have not included any such commitments in the above table. For additional information regarding these agreements, including our payment obligations thereunder, see the sections titled "Business—Our Collaboration, License and Grant Agreements," "Business—Manufacturing—Manufacturing 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.

We enter into agreements in the normal course of business with contract manufacturing organizations and contract research organizations for clinical trials, preclinical studies, manufacturing, and other services and products for operating purposes, which are generally cancelable upon written notice. These obligations and commitments are also not included in the table above.

Off-Balance Sheet Arrangements

During the periods presented we did not have, nor do we currently have, any off-balance sheet arrangements as defined under the rules of the SEC. Brii Biosciences Limited, or Brii Bio Parent, and its wholly owned subsidiary Brii Bio, are variable interest entities due to their reliance on future financing and insufficient equity at risk. However, we do not have the power to direct activities which most significantly impact the economic success of these entities and are not the primary beneficiary, and therefore we do not consolidate Brii Bio Parent or Brii Bio.

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.

Revenue Recognition

License and Contract Revenue

In accordance with 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. 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, 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. 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 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, which may include development timelines, reimbursement rates for personnel costs, discount rates and probabilities of technical and regulatory success, and estimating the progress towards satisfaction of performance obligations.

Research and Development Expenses

We expense all research and development costs in the periods in which they are incurred. We estimate preclinical and clinical expenses based on the services performed, pursuant to contracts with third parties that conduct and manage preclinical studies and clinical trials, research services, and clinical manufacturing services on our behalf. When billing terms under these contracts do not coincide with the timing of when the work is performed, we are required to make estimates of our outstanding obligations to those third parties as of period end. Our accrual estimates are based on a number of factors, including our knowledge of the research and development programs and clinical manufacturing activities, status of the programs and activities, invoicing to date, and the provisions in the contracts. We obtain information regarding unbilled services directly from these service providers and perform procedures to support our estimates based on our internal understanding of the services provided to date. However, we may also be required to estimate these services based on information available to our internal clinical and manufacturing administrative staff if such information is not able to be obtained timely from our service providers. We record the costs of research and development activities based upon the estimated amount of services provided but not yet invoiced and include these costs in accrued and other liabilities in the

consolidated balance sheets. The status and timing of actual services performed may vary from our estimates, resulting in adjustments to expense in future periods. Changes in these estimates that result in material changes to our accruals could materially affect our results of operations.

Business Combinations

Accounting for business combinations requires us to make significant estimates and assumptions, especially at the acquisition date with respect to tangible and intangible assets acquired and liabilities assumed and pre-acquisition contingencies. We use our best estimates and assumptions to accurately assign fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date as well as the useful lives of those acquired intangible assets. Examples of critical estimates in valuing certain of the intangible assets we have acquired include but are not limited to estimated cash flows and development timelines related to acquired developed technologies and in-process research and development. Our estimates may also impact our deferred income tax assets and liabilities. Unanticipated events and circumstances may occur that may affect the accuracy or validity of such assumptions, estimates or actual results.

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.

The estimated fair value of the embedded derivative related to our Alnylam Agreement was determined based on estimates and assumptions over the likelihood and timing to achieve the specified development milestone. Significant changes in the probabilities of the likelihood and timing to achieve the milestones would result in a significantly higher or lower fair value measurement. We remeasured and reclassified the derivative liability to additional paid-in capital upon achievement of the milestone and settlement of the liability in 2020. As such, the derivative liability is no longer outstanding as of December 31, 2020.

Stock-Based Compensation

We recognize compensation costs related to stock options granted to employees and nonemployees based on the estimated fair value of the awards on the date of grant, and we recognize forfeitures as they occur. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The grant date fair value of the stock-based awards is recognized on a straight-line basis over the requisite service period, which is typically the vesting period of the respective awards.

The Black-Scholes option-pricing model requires the use of highly subjective assumptions to determine the fair value of stock-based awards. These assumptions include:

- *Fair Value of Common Stock*—For all periods prior to the IPO, because there was no public market of our common stock, the fair value of the shares of common stock underlying our share-based awards was estimated on each grant date by our board of directors. In order to determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, input from management, valuations of our common stock prepared by unrelated third-party valuation firms in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities*

Issued as Compensation, and our board of directors' assessment of additional objective and subjective factors that it believed were relevant, and factors that may have changed from the date of the most recent valuation through the date of the grant. Following the closing of our IPO, our board of directors determined the fair market value of our common stock based on its closing price as reported on The Nasdaq Global Select Market on the date of grant.

- *Expected Term*—The expected term represents the period that the options granted are expected to be outstanding. We use the simplified method to determine the expected term, which is based on the average of the time-to-vesting and the contractual life of the options.
- *Expected Volatility*—Because we do not have sufficient trading history for our common stock, the expected volatility is estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the stock option grants. The comparable companies are chosen based on their size, stage in the product development cycle or area of specialty. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.
- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- *Expected Dividend*—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

See Note 13—Stock-Based Awards to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for information concerning certain of the specific assumptions we used in applying the Black-Scholes option-pricing model to determine the estimated fair value of our stock options granted in the years ended December 31, 2020, 2019, and 2018. Such assumptions involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation could be materially different.

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 of 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 sensitivities.

Interest Rate Risk

We had cash, cash equivalents and restricted cash and cash equivalents of $451.5 million as of December 31, 2020, which consisted of money market funds. We also had short-term investments of $300.3 million as of December 31, 2020. 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, 2020.

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 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, 2020, 2019 and 2018.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation has had a material effect on our results of operations during the periods presented.

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, 2020 and 2019, the related consolidated statements of operations, comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, 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, 2020, 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 25, 2021 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-02

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases in 2020 due to the adoption of Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), and the related amendments, effective January 1, 2020, using the modified retrospective approach.

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 Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Fair value of Humabs Biomed SA ("Humabs") contingent consideration

Description of the Matter

As described in Notes 3 and 4 to the consolidated financial statements, the Company has $29.2 million of contingent consideration liability recorded at December 31, 2020, representing the estimated fair value of amounts contingently payable to the former shareholders of Humabs Biomed SA ("Humabs") upon the achievement of certain clinical, regulatory and commercial milestones. Auditing the fair value of the contingent consideration required significant judgment due to the complex valuation methodologies and subjective assumptions used by management. In particular, the estimated fair value of the milestones involved the use of discounted cash flow and Monte Carlo simulation models. These models used subjective assumptions such as probability and timing of achieving the milestones, discount and volatility rates, projected patient populations and anticipated market share and product pricing.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's process for estimating the fair value of contingent consideration. Our procedures included evaluating management's controls over selecting appropriate valuation methodologies, determining and assessing subjective assumptions as identified above, and verifying the completeness and accuracy of underlying data used in the estimates.

To test the estimated fair value of the contingent consideration, our audit procedures, among others, included evaluating the Company's use of appropriate valuation methodologies and subjective assumptions with the assistance of a valuation specialist, performing sensitivity analyses to determine which assumptions had significant impact on the overall determination of fair value, and testing the completeness and accuracy of the underlying data used to develop the significant assumptions. Our audit procedures over the most significant assumptions included comparing the assumptions to current industry developments, market and economic trends and to historical assumptions used by the Company. For example, we evaluated the probability and anticipated timing of achieving certain milestones by considering the phase of development of the clinical programs and relevant third-party data regarding clinical trial success rates.

Initial accounting for Stock Purchase Agreement with Glaxo Group Limited and Definitive Collaboration Agreement with Glaxo Wellcome UK Limited and Beecham S.A. (collectively "GSK Agreement")

Description of the Matter

As discussed in Note 7 to the consolidated financial statements, the Company entered into a Stock Purchase Agreement and a Definitive Collaboration Agreement with certain affiliates of Glaxo Wellcome UK Limited ("GSK"), collectively referred to as the "GSK Agreement". Auditing management's initial application of the relevant US GAAP guidance under Accounting Standards Codification (ASC) 606, Revenue From Contracts With Customers, ASC 808, Collaborative Arrangements, and ASC 820, Fair Value Measurement, related to the GSK Agreement, was especially challenging due to the complex nature of its terms and conditions. In particular, determining the transaction price and the distinct performance obligations with a customer was judgmental. Furthermore, the shares sold to GSK included a marketability restriction, which required the Company to estimate a discount for the lack of marketability to determine the fair value of the shares. The Company concluded that the shares were sold at a premium that was considered to be additional consideration applied to the distinct performance obligations with a customer.

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 GSK Agreement and consideration of the appropriate accounting guidance in determining the appropriate conclusions. We also tested controls over management's process to determine the transaction price, the distinct performance obligations and apply an appropriate discount for the lack of marketability to estimate the fair value of the shares sold to GSK.

To test the Company's initial application of the accounting guidance to the GSK Agreement, we performed audit procedures that included, among others, reviewing the related contracts, obtaining direct confirmation of contract terms and conditions with GSK and assessing management's application of the appropriate accounting guidance in their evaluation. Our procedures included evaluating management's determination of the transaction price and identification of distinct performance obligations with a customer. We also involved a valuation specialist to test the Company's calculation of the discount for the lack of marketability associated with the shares sold to GSK and assessed management's conclusion to the inclusion of the resulting premium paid on the shares as additional consideration. Our procedures also included evaluating alternative views and any contrary or corroborative evidence associated with management's evaluation, and discussions with executive management as to the underlying business objectives of the GSK Agreement.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2017.

Redwood City, California
February 25, 2021

VIR BIOTECHNOLOGY, INC.

Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31,	
	2020	**2019**
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 436,575	$ 109,335
Short-term investments	300,286	274,101
Restricted cash and cash equivalents, current	7,993	6,181
Prepaid expenses and other current assets	27,511	13,378
Total current assets	772,365	402,995
Intangible assets, net	33,820	35,694
Goodwill	16,937	16,937
Property and equipment, net	17,946	16,308
Operating right-of-use assets	61,947	—
Restricted cash and cash equivalents, noncurrent	6,919	7,300
Long-term investments	—	24,290
Other assets	8,827	8,547
TOTAL ASSETS	$ 918,761	$ 512,071
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 5,077	$ 5,881
Accrued and other liabilities	76,936	26,495
Deferred revenue, current portion	6,451	6,181
Contingent consideration, current portion	10,600	8,200
Derivative liability	—	12,449
Total current liabilities	99,064	59,206
Deferred revenue, noncurrent	3,815	12,670
Operating lease liabilities, noncurrent	66,556	—
Contingent consideration, noncurrent	25,374	9,380
Deferred tax liability	3,253	3,305
Other long-term liabilities	3,847	3,568
TOTAL LIABILITIES	201,909	88,129
Commitments and contingencies (Note 9)		
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized as of December 31, 2020 and 2019, respectively; no shares issued and outstanding as of December 31, 2020 and 2019	—	—
Common stock, $0.0001 par value; 300,000,000 shares authorized as of December 31, 2020 and 2019, respectively; 127,416,740 and 107,648,925 shares issued and outstanding as of December 31, 2020 and 2019, respectively	13	11
Additional paid-in capital	1,385,301	793,051
Accumulated other comprehensive loss	(1,278)	(601)
Accumulated deficit	(667,184)	(368,519)
TOTAL STOCKHOLDERS' EQUITY	716,852	423,942
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 918,761	$ 512,071

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,		
	2020	**2019**	**2018**
Revenue:			
Grant revenue	$ 9,123	$ 7,380	$ 9,800
License revenue from a related party	22,747	—	—
Contract revenue	44,498	711	868
Total revenue	76,368	8,091	10,668
Operating expenses:			
Research and development	302,411	148,472	100,229
General and administrative	70,937	37,598	29,131
Total operating expenses	373,348	186,070	129,360
Loss from operations	(296,980)	(177,979)	(118,692)
Other income (expense):			
Interest income	2,836	8,511	2,540
Other expense, net	(4,467)	(5,061)	(212)
Total other income (expense)	(1,631)	3,450	2,328
Loss before (provision for) benefit from income taxes	(298,611)	(174,529)	(116,364)
(Provision for) benefit from income taxes	(54)	(154)	480
Net loss	$ (298,665)	$ (174,683)	$ (115,884)
Net loss per share, basic and diluted	$ (2.51)	$ (5.76)	$ (15.12)
Weighted-average shares outstanding, basic and diluted	119,159,424	30,349,920	7,666,463

The accompanying notes are an integral part of these consolidated financial statements.

VIR BIOTECHNOLOGY, INC.

Consolidated Statements of Comprehensive Loss
(in thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
Net loss	$ (298,665)	$ (174,683)	$ (115,884)
Other comprehensive income (loss):			
Unrealized gains (losses) on investments	(50)	149	(14)
Amortization of actuarial loss	23	—	—
Adjustment to projected benefit obligations, net of tax	(650)	(736)	—
Other comprehensive loss	(677)	(587)	(14)
Comprehensive loss	$ (299,342)	$ (175,270)	$ (115,898)

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, 2017	65,944,430	$ 292,525	6,210,325	$ 1	$ 9,035	$ —	$ (77,952)	$ (68,916)
Issuance of Series A-1 convertible preferred stock, net of issuance costs of $232	3,222,220	14,269	—	—	—	—	—	—
Issuance of Series A-2 convertible preferred stock as consideration in asset acquisition	743,870	2,343	—	—	—	—	—	—
Vesting of restricted common stock	—	—	2,247,673	—	—	—	—	—
Exercise of stock options			400,801		584			584
Stock-based compensation	—	—	—	—	5,053	—	—	5,053
Other comprehensive loss						(14)		(14)
Net loss	—	—	—	—	—	—	(115,884)	(115,884)
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

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,		
	2020	**2019**	**2018**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (298,665)	$ (174,683)	$ (115,884)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	4,400	3,294	1,618
Amortization of intangible assets	1,042	1,223	1,138
Impairment of intangible assets	832	—	—
Amortization of premiums (accretion of discounts) on investments, net	1,548	(179)	(328)
Noncash lease expense	3,371	—	—
Change in estimated fair value of contingent consideration	38,394	8,330	250
Payment of contingent consideration in excess of acquisition date fair value	(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	95
Preferred stock issued in connection with asset acquisition	—	—	1,750
Common stock issued in connection with license agreement	—	617	—
Change in deferred income taxes	(52)	—	(480)
Stock-based compensation	27,600	8,719	5,053
Loss on write-off and disposal of property and equipment	—	345	198
Other	23	—	—
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	(4,475)	(4,619)	(4,172)
Other assets	(1,100)	(1,881)	151
Accounts payable	(790)	964	1,471
Accrued liabilities and other long-term liabilities	46,614	10,211	7,171
Operating lease liabilities	(3,684)	—	—
Deferred revenue	(7,043)	3,529	7,873
Net cash used in operating activities	(190,941)	(129,632)	(94,096)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchase of property and equipment	(6,549)	(8,940)	(8,192)
Purchases of investments	(403,841)	(643,898)	(123,105)
Maturities of investments	400,348	396,680	72,574
Proceeds from sale of property and equipment	—	—	25
Asset acquisitions	—	—	(1,743)
Proceeds from disposal of an asset held for sale	180	—	—
Net cash used in investing activities	(9,862)	(256,158)	(60,441)
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	206,699	—	—
Proceeds from issuance of convertible preferred stock, net of issuance costs	—	317,335	14,254
Proceeds received from financing lease obligation	—	1,202	—
Payment of contingent consideration	(4,248)	—	—
Payment of principal on financing lease obligations	(250)	(95)	—
Proceeds from repayment of promissory notes	—	3,265	—
Proceeds from exercise of stock options	4,059	1,129	584
Cash paid in lieu of fractional shares related to reverse stock split	—	(3)	—
Advanced proceeds from convertible preferred stock financing	—	—	10,140
Net cash provided by financing activities	529,474	449,244	24,978
Net increase (decrease) in cash, cash equivalents and restricted cash and cash equivalents	328,671	63,454	(129,559)
Cash, cash equivalents and restricted cash and cash equivalents at beginning of period	122,816	59,362	188,921
Cash, cash equivalents and restricted cash and cash equivalents at end of period	$ 451,487	$ 122,816	$ 59,362
NONCASH INVESTING AND FINANCING ACTIVITIES:			
Property and equipment purchases included in accounts payable and accrued liabilities	$ 382	$ 892	$ 1,996
Issuance of preferred stock in connection with asset acquisition	$ —	$ —	$ 593
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	$ 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	$ 436,575	$ 109,335	$ 47,598
Restricted cash and cash equivalents, current	7,993	6,181	10,761
Restricted cash and cash equivalents, noncurrent	6,919	7,300	1,003
Total cash, cash equivalents and restricted cash	$ 451,487	$ 122,816	$ 59,362

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization

Vir Biotechnology, Inc. ("Vir" or the "Company") is a clinical-stage immunology company focused on combining immunologic insights with cutting-edge technologies to treat and prevent serious infectious diseases. Its development pipeline consists of product candidates targeting the current 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.

Reverse Stock Split

On September 16, 2019, the Company's board of directors approved an amendment to the Company's amended and restated certificate of incorporation to effect a 1-for-4.5 reverse split ("Reverse Split") of shares of the Company's common and convertible preferred stock, which was effected on September 27, 2019. The par value per share and authorized shares of common stock and convertible preferred stock were not adjusted as a result of the Reverse Split. All of the share and per share information included in the accompanying consolidated financial statements has been adjusted to reflect the Reverse Split.

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 $20.00 per share. As a result of the IPO, the Company received $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 $20.7 million and offering expenses of $1.1 million, the net proceeds were $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, par value $0.0001 per share, having 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, 2020, no shares have been issued under the Sales Agreement.

Need for Additional Capital

The Company has incurred net losses since inception and expects such losses to continue over the next several years. At December 31, 2020, the Company had an accumulated deficit of $667.2 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, $736.9 million of cash, cash equivalents, and short-term investments at December 31, 2020. Based on the Company's business plans, management believes that its cash,

cash equivalents, and short-term investments as of December 31, 2020 will be sufficient to fund its operations for 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, 2020, 2019 and 2018.

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 has one operating 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

With the global spread of the current COVID-19 pandemic, the Company has implemented a number of plans and policies designed to address and mitigate the impact of the COVID-19 pandemic on its business. The Company anticipates that the COVID-19 pandemic will 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.

In addition, the Company is 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 product candidates, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of the Company's products and protection of proprietary technology. If the Company does not successfully obtain regulatory approval, commercialize or partner any of its product candidates, it will be unable to generate revenue from product sales or achieve profitability. Also, to the extent the current 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 and cash equivalents and short and long-term 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, 2020, the Company has no off-balance sheet concentrations of credit risk.

Effective January 1, 2020, the Company adopted Accounting Standards Update (ASU) 2016-13, Financial Instruments — Credit Losses, (Topic 326): Measurement of Credit Losses on Financial Instruments, which changed the impairment model for most financial assets and certain other instruments. For receivables, the Company uses a new forward-looking expected loss model that generally results in the earlier recognition of allowances for losses. For available-for-sale debt securities with unrealized losses, the losses are recognized as allowances rather than as reductions in the amortized cost of the 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. The adoption of the guidance did not have a material impact on the consolidated financial statements and related disclosures and there was no allowance for losses on available-for-sale debt securities which were attributable to credit risk for the year ended December 31, 2020.

Cash and 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 and cash equivalents. Cash equivalents, which consist of amounts invested in money market funds, are stated at fair value.

Investments

Investments include available-for-sale securities and are carried at estimated fair value. 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 Company, through its investment in Brii Biosciences Limited, holds privately held equity securities in which the Company does not have a controlling interest or significant influence. The Company's investment in Brii Biosciences Limited is recorded at cost and adjusted for impairments and observable price changes with the same or similar security from the same issuer. The valuation of the Company's investment in Brii Biosciences Limited utilizes significant unobservable inputs or data in an inactive market and the valuation requires the Company's judgment due to the absence of market prices and inherent lack of liquidity. Additionally, the determination of whether an orderly transaction is for the same or similar investment requires significant management judgment including the nature of the rights and obligations of its investments, the extent to which differences in those rights and obligations would affect the fair values of those investments, and the impact of any differences based on the stage of operational development of the investee. See Note 7—Collaboration and License Agreements for additional information on the Company's investment in Brii Biosciences Limited.

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, 2020, 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

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.

License and Cont.ract Revenue

In accordance with 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. 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, 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. 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 performance of the licensee.

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 estimated grant-date fair value of the awards. The Company calculates the fair value of stock options using the Black-Scholes valuation model. 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. 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 related to product candidates are recorded within research and development expense.

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. Otherwise, changes in fair values are recorded within other income (expense), net.

Leases

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02, Leases ("ASC 842"). ASC 842 requires lessees to recognize all leases, including operating leases, on the balance sheet as a right-of-use ("ROU") asset

and a lease liability, unless the lease is a short-term lease, defined as having a term of 12 months or less. In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842): Targeted Improvements. In issuing ASU 2018-11, the FASB decided to provide another transition method by allowing entities to initially apply the new leases standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. ASC 842 is effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, with early adoption permitted. The Company early adopted the standard on January 1, 2020 using the optional modified retrospective transition method by recognizing a cumulative effect adjustment to the opening balance of accumulated deficit as of that date. Results for the year ended December 31, 2020 are presented under ASC 842. The prior period amounts were not adjusted and continue to be reported in accordance with previous lease guidance, ASC 840, Leases.

The Company elected the package of practical expedients allowed under ASC 842, which permits the Company to account for its existing operating leases as operating leases under the new guidance, without reassessing the Company's prior conclusions about lease identification, lease classification and initial direct cost.

Adoption of ASC 842 resulted in the recognition of operating lease ROU assets and operating lease liabilities of $16.8 million and $17.5 million, respectively, on the Company's consolidated balance sheet as of January 1, 2020. The difference between the ROU assets and lease liabilities is attributed to the elimination of deferred rent. The adoption of the new standard did not have an impact on the Company's beginning accumulated deficit or statement of operations.

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. 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.

Pension Benefits

Accounting for the defined pension benefit plan for the Company's Swiss subsidiary requires actuarial valuations based on significant assumptions for discount rates and expected long-term rates of return on plan assets. These and other assumptions such as salary growth, retirement, and mortality rates are evaluated and selected based on expectations or actual experience during each remeasurement date. Actual results in any given year may differ from those estimated because of economic and other factors. The Company recognizes a liability for the underfunded status of its defined benefit pension plan as a component of other long-term liabilities. Actuarial gains or losses and prior service costs or credits are deferred in accumulated other comprehensive income (loss) and amortized over the remaining service attribution periods of the employees under the corridor method.

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 Loss Per Share

Basic net loss per common share is computed by dividing the net loss by the weighted-average number of common shares outstanding during the period, without consideration of common stock equivalents. Diluted net loss per common share is computed by dividing the net loss 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. Diluted net loss per share is the same as basic net loss per share since the effect of potentially dilutive securities is anti-dilutive.

Recently Adopted Accounting Pronouncements

In January 2017, the FASB issued ASU No. 2017-04, Intangibles-Goodwill and Other: Simplifying the Test for Goodwill Impairment ("ASU 2017-04"), which simplifies the current requirements for testing goodwill for impairment by eliminating the second step of the two-step impairment test to measure the amount of an impairment loss. ASU 2017-04 is effective for the Company's interim and annual reporting periods beginning after December 31, 2021. The Company early adopted ASU 2017-04 on January 1, 2020 and the adoption had no impact on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820) ("ASU 2018-13"), which modifies, removes and adds certain disclosure requirements on fair value measurements. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the narrative description of measurement uncertainty should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. The Company adopted ASU 2018-13 on January 1, 2020 and the adoption resulted in additional disclosures related to the Company's Level 3 financial instruments. See Note 3—Fair Value Measurements.

In August 2018, the FASB issued ASU No. 2018-14, Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans ("ASU 2018-14"), which removes certain disclosures and added additional disclosures around weighted-average interest crediting rates for cash balance plans and explanation for significant gains and losses related to change in the benefit obligation for the period. The ASU will be effective for fiscal years ending after December 15, 2020 with a retrospective application for all periods presented. The Company adopted ASU 2018-14 at December 31, 2020 and the adoption had no material impact on its notes to consolidated financial statements.

In November 2018, the FASB issued ASU 2018-18, Collaborative Arrangements (Topic 808): Clarifying the Interaction Between Topic 808 and Topic 606 ("ASU 2018-18"). The amended guidance precludes presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. The new guidance is effective for the Company for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company adopted ASU 2018-18 as of January 1, 2020 and the adoption had no impact on the consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"), which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost, including the Company's financial instruments. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss methodology, which is known as the current expected credit loss, or CECL model, which generally results in more timely recognition of credit losses. The CECL model applies to most debt instruments (other than those measured at fair value), trade and other receivables, financial guarantee contracts, and loan commitments. In April 2019, the FASB issued ASU No. 2019-04, Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments ("ASU 2019-04"). ASU 2019-04 modified the accounting for available-for-sale debt securities, which must be individually assessed for credit losses when fair value is less than the amortized cost basis. As the Company is no longer an emerging growth company as of December 31, 2020, the Company is required to adopt Topic 326 in its consolidated financial statements, effective on January 1, 2020. The adoption of the guidance did not have a material impact on the consolidated financial statements and related disclosures and there was no allowance for losses on available-for-sale debt securities attributable to credit risk for the year ended December 31, 2020.

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 accounts payable and accrued liabilities approximate fair value due to their relatively short maturities.

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:

	Valuation Hierarchy	December 31, 2020 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.

	Valuation Hierarchy	December 31, 2019 Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Aggregate Fair Value
			(in thousands)		
Assets:					
Money market funds(1)	Level 1	$ 106,127	$ —	$ —	$ 106,127
U.S. government treasuries (2)	Level 2	298,256	140	(5)	298,391
Bank time deposits	Level 2	2,500	—	—	2,500
Total financial assets		$ 406,883	$ 140	$ (5)	$ 407,018

(1) Includes $13.5 million of restricted cash equivalents.
(2) Includes $24.3 million classified as long-term investments

As of December 31, 2020 and 2019, there were no investments that have been in a continuous unrealized loss position for longer than 12 months. Total net unrealized gains of $0.1 million and $0.1 million were recorded in accumulated other comprehensive income (loss) at December 31, 2020 and 2019, respectively. As of December 31, 2020, no securities have contractual maturities of longer than one year.

Level 3 liabilities consist of contingent consideration and derivative liability as of December 31, 2019. As of December 31, 2020, Level 3 liabilities consist of contingent consideration.

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 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. During the year ended December 31, 2020, the Company achieved two of the specified clinical milestones. As such, the Company paid a total of $20.0 million related to these milestones in 2020. As of December 31, 2020, the Company calculated the estimated fair value of the remaining clinical and regulatory milestones using the following significant unobservable inputs:

Unobservable input	Value or Range (Weighted-Average)[1]
Discount rates	7% - 9% (8%)
Probability of achievement	14% - 32% (27%)

(1) Unobservable inputs were weighted based on the relative fair value of the underlying milestones.

For the commercial milestones, the Company used a Monte Carlo simulation because of the availability of a discrete revenue forecast and the increased likelihood that the clinical trials would commence. As of December 31, 2020, the Monte Carlo simulation assumed a commercial product launch and associated discrete revenue forecast, as well as the following significant unobservable inputs:

Unobservable input	Value or Range (Weighted-Average)[1]
Volatility	60%
Discount rate	11%
Probability of achievement	14% - 32% (28%)

(1) Unobservable inputs were weighted based on the relative fair value of the commercial milestone payments.

The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due. As of December 31, 2020 and December 31, 2019, the estimated fair value of the contingent consideration related to the Humabs acquisition was $29.2 million and $14.9 million, respectively, with changes in the estimated fair value recorded in research and development 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. As of December 31, 2020, the fair value of the contingent consideration was estimated using the following significant unobservable inputs:

Unobservable input	Range (Weighted-Average)[1]
Volatility	85%
Discount rates	0% - 0.1% (0.1%)

(1) Unobservable inputs were weighted based on the relative fair value of the underlying milestones.

As of December 31, 2020 and December 31, 2019, the estimated fair value of the contingent consideration related to the TomegaVax acquisition was $6.8 million and $2.7 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.

Derivative Liability

The derivative liability relates to the Milestone Shares (as defined in Note 7) in connection with the collaboration and license agreement (the "Alnylam Agreement") with Alnylam Pharmaceuticals, Inc. ("Alnylam"). See Note 7—Collaboration and License Agreements.

The estimated fair value of the derivative liability was calculated based on the estimated probabilities of the likelihood and timing to achieve the development milestone, a discount for lack of marketability, and the fair value of the Milestone Shares using the Company's closing stock price as of December 31, 2019 and March 10, 2020, the date the Company achieved the development milestone. As of December 31, 2019, the estimated fair value of the derivative liability was $12.4 million. On March 10, 2020, the Company remeasured and reclassified the derivative liability of $29.2 million to additional paid-in capital upon achievement of the development milestone.

The following table sets forth the changes in the estimated fair value of the Company's Level 3 financial liabilities (in thousands):

	Contingent Consideration	Derivative Liability	Total
Balance at December 31, 2019	$ 17,580	$ 12,449	$ 30,029
Changes in fair value	38,394	16,796	55,190
Payment of contingent consideration related to Humabs acquisition	(20,000)	—	(20,000)
Reclassification of derivative liability to additional paid-in capital upon achievement of development milestone	—	(29,245)	(29,245)
Balance at December 31, 2020	$ 35,974	$ —	$ 35,974

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 ("CMV") vector-based vaccine platform for use in HBV, HIV, and TB. The acquisition was accounted for as an asset purchase and the Company recorded the cash purchase price of $5.2 million in research and development expenses in 2016. The Company incurred transaction costs of $0.5 million.

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 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.

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, 2020, the fair value of the embedded derivative was $6.8 million and is included in the contingent consideration liability on the consolidated balance sheet. In February 2021, the Company achieved the specified share price resulting in a $10.0 million payable to TomegaVax's former stockholders within 90 business days.

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.

In May 2020, the Company achieved one of the specified clinical milestones for the HBV product. As such, the Company paid $10.0 million related to this milestone event in June 2020. In October 2020, the Company achieved another specified clinical milestone for the SARS-CoV-2 product and paid $10.0 million related to this milestone event. The estimated fair value of the remaining contingent consideration was $29.2 million as of December 31, 2020.

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, 2020, 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.

Acquisition of Agenovir

In January 2018, the Company entered into an agreement and plan of merger (the "Agenovir Merger Agreement") with Agenovir Corporation ("Agenovir"), under which the Company purchased all equity interests of Agenovir. The primary assets purchased in the acquisition were IPR&D programs in human papillomavirus ("HPV") and HBV using CRISPR/Cas9. The Company concluded that the assets acquired and liabilities assumed did not meet the definition of a business as a limited number of inputs were acquired but no substantive processes were acquired. As such, the acquisition was accounted for as an asset purchase.

As purchase consideration, the Company paid cash of $11.5 million, issued an aggregate of 555,537 shares of Series A-2 convertible preferred stock valued at $1.8 million on the transaction date, assumed certain liabilities of $1.3 million, and incurred transaction costs of $0.7 million.

The Company allocated the purchase price of $15.3 million between property and equipment of $0.8 million and in-process research and development of $14.5 million, based on the relative fair values of the assets acquired, which was expensed as research and development expenses in the accompanying consolidated statement of operations for the year ended December 31, 2018.

During a specified period following the closing of the Agenovir acquisition, the Company will be required to pay Agenovir's former stockholders additional consideration up to $135.0 million in the aggregate for the achievement of specified development, regulatory and commercial milestones for the first HBV product.

None of the milestones have been achieved as of December 31, 2020, therefore no amounts were recognized relating to the contingent consideration.

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, 2020.

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)
	2020	2019	
Developed technology	$ 7,000	$ 7,000	6.6
Contract-based intangible asset	502	—	14.9
Finite-lived intangible assets, gross	7,502	7,000	
Less accumulated amortization	(3,581)	(2,539)	
Less impairment of intangible assets	(832)	—	
Finite-lived intangible assets, net	$ 3,089	$ 4,461	

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. 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 $1.0 million, $1.2 million and $1.1 million for the years ended December 31, 2020, 2019 and 2018, 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.

Based on the finite-lived intangible assets recorded as of December 31, 2020, the estimated future amortization expense for the next five years is as follows (in thousands):

Year Ending December 31:	
2021	$ 532
2022	532
2023	532
2024	260
2025	213
Total	$ 2,069

Indefinite-Lived Intangible Assets

As of December 31, 2020 and 2019, the Company had indefinite-lived intangible assets of $30.7 million and $31.2 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, 2020 and 2019.

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 zero, $0.9 million and $2.0 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Human Immunodeficiency Virus ("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. Under the amendment, the HIV Grant will remain in effect until December 31, 2021, 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 due to the Company 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 $6.4 million, $3.7 million and $4.4 million for the years ended December 31, 2020, 2019 and 2018, respectively.

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 under which the grant term was extended to February 28, 2021, 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. The Company estimates that $3.5 million of the funds received in advance and previously recorded as deferred revenue would not be earned by February 2021 and is therefore included within accrued and other liabilities as of December 31, 2020.

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, $1.9 million and $2.3 million for the years ended December 31, 2020, 2019 and 2018, respectively.

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 December 31, 2020, the Company has acquired or been awarded grants from NIH totaling $5.1 million. These grants are cost plus fixed fee agreements in which the Company is reimbursed for its direct and indirect costs. Only costs that are 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 $0.6 million, $0.9 million and $1.1 million for the years ended December 31, 2020, 2019 and 2018, respectively.

7. Collaboration and License Agreements

GSK

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 "Preliminary Agreement") (such definitive collaboration agreement, the "GSK Agreement"). Concurrently with the execution of the 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 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 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 will 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 will be 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 will be 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 will 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 will have 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 GSK Agreement, the parties would 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 will pay 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 will have the right to perform up to 20% of details in connection with such antibody product.

The 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 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 GSK Agreement superseded and replaced the Preliminary Agreement between the parties.

The Company considered the ASC 606 criteria for combining contracts and determined that the 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 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 GSK Agreement.

The Company concluded that the 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 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 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. Under ASC 606, the Company will recognize the revenue when the related sales occur as these amounts have been determined to relate predominantly to the Antibody License granted to GSK. The Company will re-evaluate the transaction price in each reporting period.

The remaining units of account of the 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.

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. During the year ended December 31, 2020, the Company recognized $25.4 million as research and development expense under the GSK Agreement. The Company has a payable to GSK of $28.0 million included in accrued liabilities and other liabilities as of December 31, 2020.

Brii Biosciences

In May 2018, the Company entered into a collaboration, option and license agreement (the "Brii Agreement") with Brii Biosciences Limited (previously named BiiG Therapeutics Limited) ("Brii Bio Parent") and Brii Biosciences Offshore Limited ("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 siRNA program being developed under the 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 Alnylam Agreement, as amended, the Company transferred to Alnylam a specified percentage of such equity consideration allocable to such program as discussed below.

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).

The Company has determined that Brii Bio Parent and its wholly-owned subsidiary Brii Bio are variable interest entities due to their reliance on future financing and having insufficient equity at risk. However, the Company does not have the power to direct activities that most significantly impact the economic success of these entities and is not considered the primary beneficiary of these entities. Therefore, the Company does not consolidate Brii Bio Parent or Brii Bio. The Company also determined that it does not exercise significant influence over Brii Bio Parent or Brii Bio. The investment in Brii Bio Parent was recorded at its initial estimated fair value of $6.6 million. The Company also recorded a contract liability of $6.6 million within deferred revenue which represents deferred consideration for the four options that the Company granted to Brii Bio. The deferred consideration will be recognized when Brii Bio exercises its options or the options expire. The Company accounts for its investment in Brii Bio Parent's ordinary shares at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment in Brii Bio Parent.

In February 2020, the Company, Alnylam and Brii Bio Parent executed a share transfer agreement under the terms of the Alnylam Agreement (see Alnylam section below). Under the share transfer agreement, the Company transferred a portion of its ordinary shares held in Brii Bio Parent to Alnylam in connection with the execution of the Brii Agreement. As of December 31, 2020 and 2019, the carrying value of the investment in Brii Bio was $5.7 million and $6.6 million, respectively, which is included in other assets on the consolidated balance sheets.

The Company's maximum exposure to loss under the Brii Agreement is represented by options to acquire licenses to develop and commercialize potential products and future milestone payments. The ultimate expense that the Company incurs under the Brii Agreement cannot be quantified at this time as the amount will vary based on the timing and outcome of research activities.

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. 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 second quarter of 2020, the Company recognized the $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 Alnylam Agreement that was recognized as research and development expense during the same period.

Alnylam

October 2017 Agreement

In October 2017, the Company entered into 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 therapeutic 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, to Alnylam. Accordingly, the Company recognized a liability of $0.8 million which remained outstanding as of December 31, 2019. In February 2020, the Company settled this liability by transferring to Alnylam a specified percentage of its equity consideration received from Brii Bio Parent.

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.

At the inception of the Alnylam Agreement, the Milestone Shares did not meet the net settlement criteria to be accounted for as an embedded derivative. Therefore, there was no liability recorded from the inception of the Alnylam Agreement through September 30, 2019. Upon completion of the Company's IPO in October 2019, the net settlement criteria of the definition of an embedded derivative had been met for the Milestone Shares. The initial fair value of the embedded derivative was estimated to be $13.6 million and was charged to research and development expense in the fourth quarter of 2019. The estimated fair value of the derivative liability was $12.4 million as of December 31, 2019. On March 10, 2020, the Company achieved the specified development milestone relating to the Milestone Shares. Consequently, the Company remeasured and reclassified the derivative liability to additional paid-in capital. The estimated fair value of the derivative liability was $29.2 million as of March 10, 2020. In addition to these Milestone Shares, the Company paid Alnylam $15.0 million in April 2020 in connection with the achievement of the specified development milestone.

Second and Third Amendments

In March and April 2020, the Company and Alnylam entered into a 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").

Under both amendments, the parties agreed to be each responsible for the pre-clinical development costs incurred by each party in performing its allocated responsibilities under an agreed-upon initial pre-clinical development plan for COV Products. Following the completion of initial pre-clinical development activities, the Company had a pre-agreed program option to progress one or more candidates from the COVID Collaboration Targets into further development, subject to Alnylam's right to opt-in, during a specified period, to share equally with the Company the profits and losses in connection with development and commercialization of a coronavirus product.

In December 2020, the Company and Alnylam entered into a letter amendment (the "Letter Agreement"), 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 will be 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 will no longer have the obligation to reimburse Alnylam for any share of costs incurred by Alnylam in conducting activities under the COV Workplan after July 1, 2020.

In connection with the Letter Agreement, the Company will no longer have a pre-agreed program option, but, if Alnylam selects a development candidate arising from the COV Workplan, the Company and Alnylam have agreed to negotiate in good faith an agreement with respect to the COV Target and siRNA products directed thereto. If Alnylam terminates the COV Workplan, does not select a development candidate, or the Company is unable to agree upon the terms of a definitive agreement, then the COV Target and related siRNA program will no longer be included within the Amended Alnylam Agreement and all rights to the siRNA program directed to VIR-2703 will revert to Alnylam.

Research and Development Expenses Recognized for the Period

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 under the Alnylam Agreement of

$11.5 million for the year ended December 31, 2020. For the years ended December 31, 2019 and 2018, the Company incurred expenses under the Alnylam Agreement of $18.1 million and $8.3 million, respectively.

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 antibodies in greater China under an exclusive license granted for the selected 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 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 sixty 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 and in September 2020 (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 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. In addition, for the achievement of specified development and regulatory milestone events, the Company will be required to pay up to $8.5 million for the first infectious disease product for the HIV indication, up to $7.0 million for each of the first four other infectious disease products with specified projected peak worldwide annual net sales, and up to $3.6 million for any other infectious disease product. Following regulatory approval, the Company will be required to pay commercial success milestones of up to $40.0 million in the aggregate for the achievement of specified aggregate worldwide annual net sales of the first infectious disease product for the HIV indication and the first four infectious disease products with specified projected peak worldwide annual net sales. 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.

In May 2020, the Company achieved one of the specified development milestones related to the HBV program. The Company recognized $1.3 million related to this milestone event and annual license maintenance fees as research and development expense for the year ended December 31, 2020. For the year ended December 31, 2019, the Company recognized $1.0 million of license maintenance fees as research and development expense.

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 August 2019, the Company achieved one of the specified development milestones relating to influenza A under the MedImmune Agreement. As such, the Company paid $5.0 million related to this milestone event in September 2019. The milestone payment was expensed to research and development.

Xencor

August 2019 License Agreement

In August 2019, the Company entered into a patent license agreement (the "2019 Xencor Agreement") with Xencor, Inc., ("Xencor"). Under the 2019 Xencor Agreement, the Company obtained a non-exclusive, sublicensable (only to its affiliates and subcontractors) license to incorporate Xencor's half-life extension Fc region-related 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 half-life extension Fc-related technologies, for each of the influenza A and HBV research programs. These technologies are used in the Company's VIR-2482 and VIR-3434 product candidates.

In consideration for the grant of the license, the Company paid Xencor an upfront fee, which was recognized as research and development expenses in the third quarter of 2019. 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 in the low 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 the third quarter of 2019, the Company achieved one of the specified development milestones related to the influenza A program and paid $0.8 million related to the upfront fee and this milestone event. In the second quarter of 2020, the Company achieved one of the specified development milestones related to the HBV program and paid $0.3 million related to this milestone event. The milestone payments were expensed to research and development.

March 2020 License Agreement

In March 2020, the Company entered into a patent license agreement (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 half-life extension Fc region-related 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 half-life extension Fc-related technologies, for each of the coronavirus research programs. These technologies are used in the Company's VIR-7831 and VIR-7832 product candidates.

In consideration for the grant of the license, the Company will be obligated to pay royalties based on net sales of licensed products in 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 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,	
	2020	2019
	(in thousands)	
Laboratory equipment	$ 16,769	$ 11,986
Computer equipment	556	540
Furniture and fixtures	1,444	1,351
Leasehold improvements	7,274	7,121
Construction in progress	1,135	142
Property and equipment, gross	27,178	21,140
Less accumulated depreciation and amortization	(9,232)	(4,832)
Total property and equipment, net	$ 17,946	$ 16,308

Depreciation and amortization expenses were $4.4 million, $3.3 million and $1.6 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Sale-Leaseback Transaction

In August 2019, the Company entered into a lease agreement whereby the Company sold various laboratory instruments, furniture, and other equipment for gross proceeds of $1.2 million to a bank and leased them back for a five-year term, collateralized by the underlying equipment. The Company determined it did not relinquish control of the assets to the buyer-lessor. Therefore, the Company accounted for the transaction as a failed sale-leaseback whereby the Company continues to depreciate the assets and recorded a financing obligation for the consideration received from the buyer-lessor. As of December 31, 2020, the current and long-term portions of the financing obligation were $0.3 million and $0.7 million, respectively.

Accrued and Other Liabilities

Accrued and other liabilities consist of the following:

	December 31,	
	2020	2019
	(in thousands)	
Research and development expenses	$ 49,384	$ 12,530
Payroll and related expenses	17,060	9,410
Excess funds payable under grant agreements	3,467	94
Operating lease liabilities, current	3,625	—
Restricted stock liability	—	1,434
Financing lease obligation, current	265	237
Other professional and consulting expenses	2,595	1,634
Other accrued expenses	540	1,156
Total accrued and other liabilities	$ 76,936	$ 26,495

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 2021 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 three months to five years. Most of these renewal options are not considered in the remaining lease term unless it is reasonably certain that the Company will exercise such options. Under one of the operating lease arrangements in California, the Company is entitled to a tenant improvement allowance of $10.5 million related to the design and construction of certain Company improvements. 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. In addition, the Company entered into a sale-leaseback transaction in August 2019. See further discussion in Note 8—Balance Sheet Components.

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)	Year Ended December 31, 2020
Operating lease cost	$ 4,591
Short-term lease cost	459
Variable lease cost	2,299
Total least cost	$ 7,349
Other Information	
Weighted average remaining lease term (in years)	10.6 years
Weighted average incremental borrowing rate	7.7%

Cash paid for amounts included in the measurement of operating lease liabilities for the year ended December 31, 2020 was $5.1 million and was included in net cash used in operating activities in the Company's consolidated statement of cash flows. During the year ended December 31, 2020, the Company entered into a new facility lease and exercised certain lease extensions, under which the Company obtained $48.5 million of ROU assets in exchange for operating lease liabilities.

The maturity of the Company’s operating lease liabilities as of December 31, 2020 was as follows (in thousands):

	Amounts
2021	$ 6,247
2022	9,725
2023	11,399
2024	10,576
2025	8,054
Thereafter	67,503
Total lease payments	113,504
Less: imputed interest	(40,949)
Less: net tenant improvement allowance yet to be received	(10,287)
Present value of operating lease liabilities	$ 62,268

The following amounts were recorded in the consolidated balance sheet as of December 31, 2020 (in thousands):

Operating Leases	
Current operating lease liabilities, net of tenant improvement allowances (1)	$ 7,913
Operating ROU assets	61,947
Accrued and other liabilities	$ 3,625
Operating lease liabilities, noncurrent	66,556
Total operating lease liabilities	$ 70,181

(1) Current portion of lease liabilities recorded in prepaid expenses and other current assets for which the lease incentives to be received exceed the minimum lease payments to be paid over the next twelve months.

Rent expense under ASC 840 for the years ended December 31, 2019 and 2018 were $4.4 million and $4.0 million, respectively.

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 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 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 GSK Agreement. Per the terms of the 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. Additionally, the Company's Chief Executive Officer and member of the board of directors as well as another member of the Company's board of directors serve 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 June 2018, the Series A-1 and B Preferred Stock Purchase Agreement was amended and restated (the "Amended A&R Series A-1 and B Purchase Agreement"), under which the Company sold an aggregate of 3,222,220 shares of Series A-1 convertible preferred stock at $4.50 per share for gross proceeds of $14.5 million in three closings (the "Additional Closings"): (i) 2,777,776 shares in two closings in June 2018; and (ii) 444,444 shares in July 2018. Under the Amended A&R Series A-1 and B Purchase Agreement, after the Additional Closings, the Company was authorized to sell up to 1,111,121 additional shares of Series A-1 convertible preferred stock in one or more additional closings.

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

2016 Equity Incentive Plan

In September 2016, the Company adopted the 2016 Equity Incentive Plan (the "2016 Plan") for the issuance of incentive stock options ("ISO"), non-qualified stock options ("NSO"), stock appreciation rights ("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 ten 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. For all stock options granted between July 2018 and July 2019, the Company incorporated reassessed fair values using hindsight for calculating stock-based compensation expense.

In conjunction with adopting the 2019 Equity Incentive Plan (the "2019 Plan"), the Company discontinued the 2016 Plan with respect to the new equity awards.

2019 Equity Incentive Plan

In September 2019, the Company's board of directors adopted, with the approval of its stockholders, the 2019 Plan for the issuance of ISO, NSO, 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 ten 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, 2020, there are 6,122,335 shares available for the Company to grant under the 2019 Plan.

2019 Employee Stock Purchase Plan

In September 2019, the Company's board of directors adopted, with the approval of its stockholders, the 2019 Employee Stock Purchase Plan (the "2019 ESPP"). The 2019 ESPP Plan became effective on the completion of the Company's IPO.

The 2019 ESPP authorizes 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 2019 ESPP, the Company may specify offerings with durations of not more than 27 months and may specify shorter purchase periods within each offering. The 2019 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. As of December 31,2020, there are no shares issued under the 2019 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, 2019	7,186,298	$ 5.25	8.5	
Granted	4,893,710	$ 32.94		
Exercised	(1,618,368)	$ 2.51		
Canceled	(663,358)	$ 11.56		
Outstanding at December 31, 2020	9,798,282	$ 19.10	8.6	$ 109,272
Vested and expected to vest at December 31, 2020	9,798,282	$ 19.10	8.6	$ 109,272
Vested and exercisable at December 31, 2020	2,462,133	$ 5.40	7.7	$ 52,773

The aggregate intrinsic value of options exercised during the years ended December 31, 2020 and 2019 was $53.1 million and $5.5 million, respectively. The aggregate intrinsic value of options exercised during the year ended December 31, 2018 was immaterial.

During the years ended December 31, 2020, 2019, and 2018, the estimated weighted-average grant date fair value of the options granted was $25.49, $7.83, and $1.72 per share, respectively.

As of December 31, 2020, the Company expects to recognize the remaining unamortized stock-based compensation expense of $117.5 million related to stock options, over an estimated weighted average period of 2.7 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 using the following assumptions:

	Year Ended December 31,		
	2020	2019	2018
Expected term of options (in years)	5.0 – 6.1	5.9 – 6.1	6.0
Expected stock price volatility	88.8% – 108.6%	86.5% – 89.4%	86.4% – 88.0%
Risk-free interest rate	0.3% – 1.2%	1.5% – 2.5%	2.5% – 3.0%
Expected dividend yield	—	—	—

The valuation assumptions were 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.

Restricted Stock Activity

The following table summarizes restricted stock activity:

	Number of Shares	Weighted Average Fair Value at Date of Grant per Share
Unvested as of December 31, 2019	2,075,511	$ 0.95
Vested	(1,986,250)	0.92
Unvested as of December 31, 2020	89,261	$ 1.48

The shares of restricted stock 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 are non-recourse in nature and are accounted for as in-substance stock options. The Company measured compensation cost for these in-substance options based on their estimated fair value on the grant date using the Black-Scholes pricing model. The Company recognized compensation cost over the requisite service period with an offsetting credit to additional paid-in capital. 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, 2020, there was $0.1 million of total unrecognized compensation cost related to unvested restricted stock, all of which is expected to be recognized over a remaining weighted-average period of 0.4 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 in the Company's consolidated statements of operations:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Research and development	$ 13,663	$ 3,034	$ 1,056
General and administrative	13,937	5,685	3,997
Total stock-based compensation	$ 27,600	$ 8,719	$ 5,053

14. Net Loss Per Share

As the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods as the inclusion of all potential common securities outstanding would have been anti-dilutive.

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,		
	2020	2019	2018
Convertible preferred stock	—	—	69,910,520
Options issued and outstanding	9,798,282	7,186,298	5,044,924
Restricted shares subject to future vesting	89,261	2,075,511	4,814,733
Warrants to purchase convertible preferred stock	—	—	244,444
Warrants to purchase common stock	—	244,444	—
Total	9,887,543	9,506,253	80,014,621

15. Defined Benefit Pension and Other Postretirement Plans

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 $1.8 million, $1.2 million, and $0.7 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Postretirement Benefits (Pension Plans) for Humabs

The Company's subsidiary, Humabs, provides its Swiss employees with mandatory cash balance pension benefits whereby employer and employee contributions are accumulated in individual accounts with interest to retirement or withdrawal, if earlier. The benefits are financed through the Swiss Life Collective BVG Foundation with Swiss Life Asset Management through two separate plans. In addition to retirement benefits, the plans provide benefits on death or long-term disability of its employees.

The first plan is a defined normal benefit plan which is funded 65% by the Company and 35% by employee contribution to a collective foundation with Swiss Life Asset Management. On retirement, the plan participant will receive his/her accumulated savings, which consist of all contributions paid by the employer and the employees, net of any withdrawals, and the interest granted on those savings at the discretion of the pension foundation. Additional funding requirements may be determined by the pension foundation in case of a severe underfunding. The second plan is a defined management plan. This plan is set up as a collective foundation with Swiss Life Asset Management, for which contributions are split up as 40% paid by the employees and 60% paid by the Company. The purpose of this plan is to allow higher saving opportunity (in a tax effective manner) and risk benefits for management.

Contributions are expressed as an age-related percentage of pensionable salary between limits and are shared between Humabs and its employees. The contributions paid by the Company and employees were immaterial for the year ended December 31, 2020. As of December 31, 2020 and 2019, the Company has $2.9 million and $1.9 million, respectively, of net liability under the pension plans recognized in the consolidated balance sheets. All components of net periodic benefit cost recognized in the consolidated statements of operations during 2020, 2019 and 2018 were immaterial.

16. Income Taxes

Loss before provision for (benefit from) income taxes consists of the following (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Domestic	$ (309,697)	$ (138,724)	$ (110,399)
Foreign	11,086	(35,805)	(5,965)
Total loss before provision for (benefit from) income taxes	$ (298,611)	$ (174,529)	$ (116,364)

The components of income tax expense (benefit) consist of the following (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Current:			
Federal	$ —	$ —	$ —
State	—	—	—
Foreign	106	154	20
	106	154	20
Deferred:			
Federal	(21)	—	(445)
State	(31)	—	(55)
Foreign	—	—	—
	(52)	—	(500)
Provision for (benefit from) income taxes	$ 54	$ 154	$ (480)

A reconciliation between the expected income tax provision at the federal statutory rate and the reported income tax benefit is as follows:

	Year Ended December 31,		
	2020	2019	2018
U.S. federal statutory income tax rate	21.0%	21.0%	21.0%
Foreign tax at less than federal statutory rate	0.9	(0.3)	(0.1)
Prior year tax rate adjustment	(1.9)	—	—
State taxes, net of federal benefit	2.7	2.4	2.0
Research and development tax credit	1.8	2.0	2.2
Acquired IPR&D	—	—	(2.9)
Permanent items	1.3	(0.8)	(0.4)
Changes in valuation allowance - Humabs IP transfer	(1.9)	—	—
Changes in valuation allowance	(23.4)	(24.3)	(21.4)
Other	(0.5)	(0.1)	—
Effective income tax rate	0.0%	(0.1)%	0.4%

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, 2020 and 2019, are related to the following:

	December 31,	
	2020	2019
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 117,433	$ 67,493
Research and development tax credit carryforward	12,246	6,978
Equity compensations	4,193	1,514
Reserves and accruals	10,804	6,988
Lease liabilities	16,184	—
Intangible assets	23,006	9,733
Deferred tax assets	183,866	92,706
Deferred tax liabilities:		
ROU assets	(16,147)	—
Property and equipment	(2,570)	(1,553)
IPR&D	(8,511)	(8,647)
Deferred tax liabilities	(27,228)	(10,200)
Valuation allowance	(159,891)	(85,811)
Net deferred tax liabilities	$ (3,253)	$ (3,305)

The Company has incurred significant 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 years ended December 31, 2020, 2019 and 2018, the valuation allowance increased by $74.1 million, $42.3 million, and $26.0 million, respectively. As of December 31, 2020, the Company has net operating loss carryforwards of $483.7 million for federal purposes and $216.8 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 ("NOLs") 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, 2020, the Company also has net operating loss carryforwards of $17.8 million for Swiss tax purposes, which begin expiring in 2022 and no net operating loss carryforward for Australian 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 impact of any limitations that may be imposed due to such ownership changes has not yet been determined.

As of December 31, 2020, the Company has research tax credit carryforwards of $9.1 million and $7.0 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. If not utilized, Oregon carryforward will expire starting 2021. The Company has not undertaken a detailed analysis of all amounts claimed as research credits for federal or state tax purposes. As a result, amounts ultimately realized for research credits were included in the Company's consideration of uncertain tax benefits.

Uncertain Tax Positions

As of December 31, 2020 and 2019, the Company had an unrecognized tax benefit of $4.9 million and $2.7 million, respectively, related to transfer pricing and research and development tax credits. No amount of unrecognized tax benefits as of December 31, 2020, if recognized, would reduce the Company's effective tax rate because the benefits would be in the form of 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, 2020 forward for federal and state purposes.

The Company did not recognize any expense for interest and penalties related to uncertain tax positions during 2020, 2019 and 2018, and the Company does not have any amounts related to interest and penalties accrued at December 31, 2020. 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, 2020, 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,		
	2020	2019	2018
	(in thousands)		
Gross unrecognized tax benefits at January 1	$ 2,725	$ 2,404	$ 272
Addition for tax positions taken in the prior years	—	133	32
Reduction for tax positions taken in the prior years	(588)	(1,596)	(215)
Addition for tax positions taken in current year	2,740	1,784	2,315
Gross unrecognized tax benefits at December 31	$ 4,877	$ 2,725	$ 2,404

17. Selected Quarterly Financial Data (Unaudited)

	Three Months Ended			
	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020
	(in thousands)			
Total revenue	$ 5,718	$ 66,988	$ 1,928	$ 1,734
Total operating expenses	$ (77,628)	$ (96,039)	$ (89,543)	$ (110,138)
Net loss	$ (77,240)	$ (31,167)	$ (84,609)	$ (105,649)
Net loss per share, basic	$ (0.71)	$ (0.27)	$ (0.67)	$ (0.83)
Net loss per share, diluted	$ (0.71)	$ (0.27)	$ (0.67)	$ (0.83)

	Three Months Ended			
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
	(in thousands)			
Total revenue	$ 3,661	$ 2,047	$ 1,403	$ 980
Total operating expenses	$ (34,431)	$ (37,817)	$ (49,083)	$ (64,739)
Net loss	$ (28,670)	$ (33,928)	$ (48,314)	$ (63,771)
Net loss per share, basic	$ (3.19)	$ (3.64)	$ (4.60)	$ (0.69)
Net loss per share, diluted	$ (3.19)	$ (3.64)	$ (4.60)	$ (0.71)

18. Subsequent Events

2021 Expanded GSK Collaboration

Preliminary Collaboration Agreement

On February 14, 2021, the Company and GSK entered into a binding preliminary collaboration agreement (the "Preliminary Collaboration Agreement"), pursuant to which the parties agreed to expand their 2020 collaboration relating to research and development of therapies for coronaviruses, 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; (2) an expansion of the parties' current Functional Genomics Program to focus on functional genomics screens directed to targets associated with respiratory viruses; and (3) additional programs to develop neutralizing mAbs directed to up to three non-influenza target pathogens selected by GSK.

For a period of three years following the effective date of the Preliminary Collaboration Agreement, the parties will conduct certain research and development activities under mutually agreed development plans and associated budgets for the programs within the expanded collaboration.

The parties will continue to negotiate a more detailed collaboration agreement (the "Definitive Collaboration Agreement"), including more detailed financial terms, as well as operational provisions and consequences of any ongoing collaboration program as a result of a change of control of the Company.

GSK will make an upfront payment to the Company of $225 million, 50% of which will become payable at the effective date of the Preliminary Collaboration Agreement and 50% of which will become payable at the effective date of the Definitive Collaboration Agreement.

2021 Stock Purchase Agreement

Concurrently with the execution of the Preliminary Collaboration Agreement, the Company entered into a stock purchase agreement (the "2021 Stock Purchase Agreement") with GGL, pursuant to which GGL will 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 Preliminary Collaboration Agreement and the 2021 Stock Purchase Agreement are 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; provided, however, that in no event will the closing of the transactions under the 2021 Stock Purchase Agreement occur prior to the Data End Date. The "Data End Date" means the tenth trading day immediately following the date that the Company makes a public announcement regarding initial Phase 3 results for the COMET-ICE (COVID-19 Monoclonal antibody Efficacy Trial—Intent to Care Early) trial for VIR-7831.

Xencor amendments

In February 2021, the Company and Xencor executed amendments to the 2019 Xencor Agreement and the 2020 Xencor Agreement primarily to expand the scope of the licensed technology under each agreement, which may increase the Company's royalty payment obligations in certain circumstances. Under the amended agreements, the Company will be obligated to pay Xencor tiered royalties on net sales ranging from low- to mid-single-digits under the amended 2019 Xencor Agreement and at the mid-single-digits under the amended 2020 Xencor Agreement.

Milestone Payable under the TomegaVax Letter Agreement

In February 2021, pursuant to the TomegaVax Letter Agreement, the Company achieved the specified share price resulting in a $10.0 million payable to TomegaVax's former stockholders within 90 business days.

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'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 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, 2020.

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, 2020.

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, 2020 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, 2020, 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, 2020, 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, 2020 and 2019, the related

consolidated statements of operations, comprehensive loss, convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and our report dated February 25, 2021 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 25, 2021

Item 9B. Other Information.

None.

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 “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,” “Information Regarding the Board of Directors and Corporate Governance – Audit Committee” and “Information Regarding the Board of Directors and Corporate Governance – Compensation Committee” in our definitive proxy statement for our 2021 Annual Meeting of Stockholders to be filed with the SEC by April 29, 2021, 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,” “Director Compensation” and “Compensation Committee Interlocks and Insider Participation” 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 “Equity-Based Incentive Awards” 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 “Certain Related Party Transactions” 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 “Principal Accountant Fees and Services” 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.

(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.
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).

Exhibit Number	Description
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.
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 Michael Kamarck, dated August 28, 2019 (incorporated herein by reference to Exhibit 10.11 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.12+	First Amendment to Amended and Restated Employment Letter Agreement between the Company and Michael Kamarck, dated March 13, 2020 (incorporated herein by reference to Exhibit 10.12 to the Company's Form 10-K (File No. 001-39083), filed with the SEC on March 26, 2020).
10.13+	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).
10.14+	Amended and Restated Employment Letter Agreement between the Company and Jay Parrish, dated August 27, 2019 (incorporated herein by reference to Exhibit 10.13 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.15+	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).
10.16+	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).
10.17+	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).
10.18+	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).
10.19†	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).
10.20†	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).

Exhibit Number	Description
10.21†	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).
10.22†	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).
10.23†	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).
10.24†	Letter Agreement between the Company and Alnylam Pharmaceuticals, Inc., dated December 23, 2020.
10.25†	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).
10.26†	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).
10.27†	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).
10.28†	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).
10.29†	Amendment No. 1 to License Agreement between the Company and MedImmune, LLC, dated September 1, 2020.
10.30†	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).
10.31†	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).
10.32†	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).
10.33†	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).

Exhibit Number	Description
10.34†	Letter Agreement between the Company and the Bill & Melinda Gates Foundation, dated December 23, 2016 (incorporated herein by reference to Exhibit 10.25 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.35†	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).
10.36†	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).
10.37†	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).
10.38†	Amendment No. 3 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated May 22, 2020.
10.39†	Amendment No. 4 to the Grant Agreement between the Company and the Bill & Melinda Gates Foundation, dated December 8, 2020.
10.40†	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).
10.41†	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).
10.42†	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).
10.43†	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).
10.44†	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).
10.45†	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).
10.46†	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).
10.47	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).

Exhibit Number	Description
10.48†	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).
10.49†	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).
10.50†	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).
10.51†	Second Amendment to Exclusive License Agreement between the Company and The Rockefeller University, dated September 28, 2020.
10.52†	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).
10.53†	Amendment 1 to Sub-License and Collaboration Agreement, dated April 19, 2013, between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.36 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 2 to Sub-License and Collaboration Agreement, dated April 27, 2015, between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.37 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.55†	Amendment 3 to Sub-License and Collaboration Agreement, dated December 31, 2015, between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.38 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.56†	Amendment 4 to Sub-License and Collaboration Agreement, dated August 29, 2016, between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.39 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.57†	Amendment 5 to Sub-License and Collaboration Agreement, dated July 15, 2017, between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.40 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 6 to Sub-License and Collaboration Agreement, dated September 7, 2018, between the Company (as successor in interest to Humabs BioMed SA) and MedImmune, LLC, dated March 20, 2012 (incorporated herein by reference to Exhibit 10.41 to the Company's Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).
10.59	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).
10.60	First Amendment to Lease 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' Registration Statement on Form S-1 (File No. 333-233604), filed with the SEC on September 3, 2019).

Exhibit Number	Description
10.61	Sublease Agreement between the Company and Dropbox, Inc., dated November 4, 2020.
10.62†	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).
10.63†	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).
10.64†	Preliminary Collaboration Agreement between the Company, GlaxoSmithKline Intellectual Property Development Limited and GlaxoSmithKline Biologicals SA, dated April 5, 2020 (incorporated herein by reference to Exhibit 10.53 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.65†	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).
10.66	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).
10.67†	Clinical Development and Manufacturing Agreement between the Company and Biogen Inc., dated May 22, 2020 (incorporated herein by reference to Exhibit 10.56 to the Company's Registration Statement on Form S-1 (File No. 333-239689), filed with the SEC on July 6, 2020).
10.68†	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).
10.69	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).
10.70†	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).
10.71†	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).
10.72	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).
10.73	Sales Agreement, dated as of November 10, 2020, by and between the registrant 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

Exhibit Number	Description
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.
† Certain portions of this exhibit (indicated by "[***]") have been omitted pursuant to confidential treatment.
* 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 25, 2021

By: /s/ **George Scangos**

George Scangos, Ph.D.
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: February 25, 2021

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 25, 2021
/s/ Howard Horn Howard Horn	Chief Financial Officer and Secretary *(Principal Financial and Accounting Officer)*	February 25, 2021
/s/ Vicki Sato Vicki Sato, Ph.D.	Chairman of the Board of Directors	February 25, 2021
/s/ Janet Napolitano Janet Napolitano	Director	February 25, 2021
/s/ Robert More Robert More	Director	February 25, 2021
/s/ Robert Nelsen Robert Nelsen	Director	February 25, 2021
/s/ Dipchand Nishar Dipchand Nishar	Director	February 25, 2021
/s/ Robert Perez Robert Perez	Director	February 25, 2021
/s/ Saira Ramasastry Saira Ramasastry	Director	February 25, 2021
/s/ Phillip Sharp Phillip Sharp, Ph.D.	Director	February 25, 2021
/s/ Elliott Sigal Elliott Sigal, M.D., Ph.D.	Director	February 25, 2021
/s/ Jeffrey S. Hatfield Jeffrey S. Hatfield	Director	February 25, 2021

Exhibit 10.5

VIR BIOTECHNOLOGY, INC.

2019 EQUITY INCENTIVE PLAN
RESTRICTED STOCK UNIT GRANT NOTICE

Vir Biotechnology, Inc. (the "***Company***"), pursuant to its 2019 Equity Incentive Plan (the "***Plan***"), hereby awards to Participant a Restricted Stock Unit Award for the number of shares of the Company's Common Stock ("***Restricted Stock Units***") set forth below (the "***Award***"). The Award is subject to all of the terms and conditions as set forth in this notice of grant (this "***Restricted Stock Unit Grant Notice***"), and in the Plan and the Restricted Stock Unit Award Agreement (the "***Award Agreement***"), both of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein shall have the meanings set forth in the Plan or the Award Agreement. In the event of any conflict between the terms in this Restricted Stock Unit Grant Notice or the Award Agreement and the Plan, the terms of the Plan shall control.

Participant:
Date of Grant:
Vesting Commencement Date:
Number of Restricted Stock Units:

Vesting Schedule: [_____], subject to Participant's Continuous Service through each such vesting date.

Issuance Schedule: Subject to any Capitalization Adjustment, one share of Common Stock (or its cash equivalent, at the discretion of the Company) will be issued for each Restricted Stock Unit that vests at the time set forth in Section 6 of the Award Agreement.

Mandatory Sale to Cover Withholding Taxes (if applicable):

By accepting the Award, to the fullest extent permitted under the Plan and applicable law, Participant is electing to satisfy any applicable withholding taxes through the sale of a number of the shares subject to the Award as determined in accordance with the procedures specified in Section 11(b) of the Award Agreement ("***Sell to Cover***"). The Company is authorized and directed by Participant to make payment from the cash proceeds of this sale directly to the appropriate taxing authorities in an amount equal to the taxes required to be withheld.

Additional Terms/Acknowledgements: Participant acknowledges receipt of, and understands and agrees to, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan. Participant acknowledges and agrees that this Restricted Stock Unit Grant Notice and the Award Agreement may not be modified, amended, or revised except as provided in the Plan. Participant further acknowledges that as of the Date of Grant, this Restricted Stock Unit Grant Notice, the Award Agreement and the Plan set forth the entire understanding between Participant and the Company regarding the acquisition of the Common Stock pursuant to the Award specified above and supersede all prior oral and written agreements on the terms of this Award, with the exception, if applicable, of (i) equity awards previously granted and delivered to Participant, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement or other written agreement

entered into between the Company and Participant specifying the terms that should govern this Award upon the terms and conditions set forth therein.

By accepting this Award, Participant acknowledges having received and read the Restricted Stock Unit Grant Notice, the Award Agreement and the Plan and agrees to all of the terms and conditions set forth in these documents. Participant consents to receive Plan and related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

VIR BIOTECHNOLOGY, INC. **PARTICIPANT**

By:
Signature Signature

Title: Date:

Date:

ATTACHMENTS: Award Agreement and 2019 Equity Incentive Plan

ATTACHMENT I

VIR BIOTECHNOLOGY, INC.

2019 EQUITY INCENTIVE PLAN
RESTRICTED STOCK UNIT AWARD AGREEMENT

Pursuant to the Restricted Stock Unit Grant Notice (the "***Grant Notice***") and this Restricted Stock Unit Award Agreement (the "***Agreement***"), Vir Biotechnology, Inc. (the "***Company***") has awarded you ("***Participant***") a Restricted Stock Unit Award (the "***Award***") pursuant to the Company's 2019 Equity Incentive Plan (the "***Plan***") for the number of Restricted Stock Units/shares indicated in the Grant Notice. Capitalized terms not explicitly defined in this Agreement or the Grant Notice shall have the same meanings given to them in the Plan. The terms of your Award, in addition to those set forth in the Grant Notice, are as follows.

1. GRANT OF THE AWARD. This Award represents the right to be issued on a future date one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 below) as indicated in the Grant Notice. As of the Date of Grant, the Company will credit to a bookkeeping account maintained by the Company for your benefit (the "***Account***") the number of Restricted Stock Units/shares of Common Stock subject to the Award. Notwithstanding the foregoing, the Company reserves the right to issue you the cash equivalent of Common Stock, in part or in full satisfaction of the delivery of Common Stock in connection with the vesting of the Restricted Stock Units, and, to the extent applicable, references in this Agreement and the Grant Notice to Common Stock issuable in connection with your Restricted Stock Units will include the potential issuance of its cash equivalent pursuant to such right. This Award was granted in consideration of your services to the Company.

2. VESTING. Subject to the limitations contained herein, your Award will vest, if at all, in accordance with the vesting schedule provided in the Grant Notice. Vesting will cease upon the termination of your Continuous Service and the Restricted Stock Units credited to the Account that were not vested on the date of such termination will be forfeited at no cost to the Company and you will have no further right, title or interest in or to such Award or the shares of Common Stock to be issued in respect of such portion of the Award.

3. NUMBER OF SHARES. The number of Restricted Stock Units subject to your Award may be adjusted from time to time for Capitalization Adjustments, as provided in the Plan. Any additional Restricted Stock Units, shares, cash or other property that becomes subject to the Award pursuant to this Section 3, if any, shall be subject, in a manner determined by the Board, to the same forfeiture restrictions, restrictions on transferability, and time and manner of delivery as applicable to the other Restricted Stock Units and shares covered by your Award. Notwithstanding the provisions of this Section 3, no fractional shares or rights for fractional shares of Common Stock shall be created pursuant to this Section 3. Any fraction of a share will be rounded down to the nearest whole share.

4. SECURITIES LAW COMPLIANCE. You may not be issued any Common Stock under your Award unless the shares of Common Stock underlying the Restricted Stock Units are either (i) then registered under the Securities Act, or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Your Award must also comply with other applicable laws and regulations governing the Award, and you shall not receive such Common Stock if the Company determines that such receipt would not be in material compliance with such laws and regulations.

5. **Transfer Restrictions**. Prior to the time that shares of Common Stock have been delivered to you, you may not transfer, pledge, sell or otherwise dispose of this Award or the shares issuable in respect of your Award, except as expressly provided in this Section 5. For example, you may not use shares that may be issued in respect of your Restricted Stock Units as security for a loan. The restrictions on transfer set forth herein will lapse upon delivery to you of shares in respect of your vested Restricted Stock Units.

(a) **Death**. Your Award is transferable by will and by the laws of descent and distribution. At your death, vesting of your Award will cease and your executor or administrator of your estate shall be entitled to receive, on behalf of your estate, any Common Stock or other consideration that vested but was not issued before your death.

(b) **Domestic Relations Orders.** Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your right to receive the distribution of Common Stock or other consideration hereunder, pursuant to a domestic relations order, marital settlement agreement or other divorce or separation instrument as permitted by applicable law that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this Award with the Company General Counsel prior to finalizing the domestic relations order or marital settlement agreement to verify that you may make such transfer, and if so, to help ensure the required information is contained within the domestic relations order or marital settlement agreement.

6. **Date of Issuance.**

(a) The issuance of shares in respect of the Restricted Stock Units is intended to comply with Treasury Regulations Section 1.409A-1(b)(4) and will be construed and administered in such a manner. Subject to the satisfaction of the withholding obligations set forth in this Agreement, in the event one or more Restricted Stock Units vests, the Company shall issue to you one (1) share of Common Stock for each Restricted Stock Unit that vests on the applicable vesting date(s) (subject to any adjustment under Section 3 above). Each issuance date determined by this paragraph is referred to as an "***Original Issuance Date***".

(b) If the Original Issuance Date falls on a date that is not a business day, delivery shall instead occur on the next following business day. In addition, if:

(i) the Original Issuance Date does not occur (1) during an "open window period" applicable to you, as determined by the Company in accordance with the Company's then-effective policy on trading in Company securities, or (2) on a date when you are otherwise permitted to sell shares of Common Stock on an established stock exchange or stock market, *and*

(ii) either (1) a Withholding Obligation does not apply, or (2) the Company decides, prior to the Original Issuance Date, (A) not to satisfy the Withholding Obligation by withholding shares of Common Stock from the shares otherwise due, on the Original Issuance Date, to you under this Award, and (B) not to permit Sell to Cover and (C) not to permit you to pay your Withholding Obligation in cash,

then the shares that would otherwise be issued to you on the Original Issuance Date will not be delivered on such Original Issuance Date and will instead be delivered on the first business day when you are not prohibited from selling shares of the Company's Common Stock in the open public market, but in no event later than December 31 of the calendar year in which the Original Issuance Date occurs (that is,

the last day of your taxable year in which the Original Issuance Date occurs), or, if and only if permitted in a manner that complies with Treasury Regulations Section 1.409A-1(b)(4), no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the shares of Common Stock under this Award are no longer subject to a "substantial risk of forfeiture" within the meaning of Treasury Regulations Section 1.409A-1(d).

(c) The form of delivery (*e.g.*, a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

7. Dividends. You shall receive no benefit or adjustment to your Award with respect to any cash dividend, stock dividend or other distribution that does not result from a Capitalization Adjustment; provided, however, that this sentence will not apply with respect to any shares of Common Stock that are delivered to you in connection with your Award after such shares have been delivered to you.

8. Restrictive Legends. The shares of Common Stock issued in respect of your Award shall be endorsed with appropriate legends as determined by the Company.

9. Execution of Documents. You hereby acknowledge and agree that the manner selected by the Company by which you indicate your consent to your Grant Notice is also deemed to be your execution of your Grant Notice and of this Agreement. You further agree that such manner of indicating consent may be relied upon as your signature for establishing your execution of any documents to be executed in the future in connection with your Award.

10. Award not a Service Contract.

(a) Nothing in this Agreement (including, but not limited to, the vesting of your Award or the issuance of the shares in respect of your Award), the Plan or any covenant of good faith and fair dealing that may be found implicit in this Agreement or the Plan shall: (i) confer upon you any right to continue in the employ or service of, or affiliation with, the Company or an Affiliate; (ii) constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or affiliation; (iii) confer any right or benefit under this Agreement or the Plan unless such right or benefit has specifically accrued under the terms of this Agreement or Plan; or (iv) deprive the Company of the right to terminate you at will and without regard to any future vesting opportunity that you may have.

(b) By accepting this Award, you acknowledge and agree that the right to continue vesting in the Award pursuant to the vesting schedule provided in the Grant Notice may not be earned unless (in addition to any other conditions described in the Grant Notice and this Agreement) you continue as an employee, director or consultant at the will of the Company and affiliate, as applicable (not through the act of being hired, being granted this Award or any other award or benefit) and that the Company has the right to reorganize, sell, spin-out or otherwise restructure one or more of its businesses or Affiliates at any time or from time to time, as it deems appropriate (a "***reorganization***"). You acknowledge and agree that such a reorganization could result in the termination of your Continuous Service, or the termination of Affiliate status of your employer and the loss of benefits available to you under this Agreement, including but not limited to, the termination of the right to continue vesting in the Award. You further acknowledge and agree that this Agreement, the Plan, the transactions contemplated hereunder and the vesting schedule set forth herein or any covenant of good faith and fair dealing that may be found implicit in any of them do not constitute an express or implied promise of continued engagement as an employee or consultant for the term of this Agreement, for any period, or at all, and shall not interfere in any way with the Company's right to terminate your Continuous Service at any time, with or without your cause or notice, or to conduct a reorganization.

11. WITHHOLDING OBLIGATIONS.

(a) On each vesting date, and on or before the time you receive a distribution of the shares underlying your Restricted Stock Units, and at any other time as reasonably requested by the Company in accordance with applicable tax laws, you hereby authorize any required withholding from the Common Stock issuable to you and/or otherwise agree to make adequate provision, including in cash, for any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or any Affiliate that arise in connection with your Award (the "***Withholding Obligation***").

(b) By accepting your Award as set forth in the Grant Notice, you hereby (x) acknowledge and agree that you have elected a Sell to Cover (as defined in the Grant Notice) to permit you to satisfy the Withholding Obligation and that the Withholding Obligation shall be satisfied pursuant to this Section 11(b) and (y) further acknowledge and agree to the following provisions:

(i) You hereby irrevocably appoint E*TRADE Financial Corporate Services, Inc. or such other registered broker-dealer that is a member of the Financial Industry Regulatory Authority as the Company may select, as your agent (the "***Agent***"), and you authorize and direct the Agent to:

(1) Sell on the open market at the then prevailing market price(s), on your behalf, as soon as practicable on or after the date on which the shares of Common Stock are delivered to you pursuant to Section 6 hereof in connection with the vesting of the Restricted Stock Units, the number (rounded up to the next whole number) of shares of Common Stock sufficient to generate proceeds to cover (A) the satisfaction of the Withholding Obligation arising from the vesting of those Restricted Stock Units and the related issuance of shares of Common Stock to you and (B) all applicable fees and commissions due to, or required to be collected by, the Agent with respect thereto;

(2) Remit directly to the Company and/or any Affiliate the proceeds necessary to satisfy the Withholding Obligation;

(3) Retain the amount required to cover all applicable fees and commissions due to, or required to be collected by, the Agent, relating directly to the sale of the shares of Common Stock referred to in clause (1) above; and

(4) Remit any remaining funds to you.

(ii) You hereby authorize the Company and the Agent to cooperate and communicate with one another to determine the number of shares of Common Stock that must be sold pursuant to Section 11(b)(i) to satisfy your obligations hereunder.

(iii) You acknowledge that the Agent is under no obligation to arrange for the sale of Common Stock at any particular price hereunder and that the Agent may effect sales hereunder in one or more sales and that the average price for executions resulting from bunched orders may be assigned to your account. You further acknowledge that you will be responsible for all brokerage fees and other costs of sale associated with this Agreement, and you agree to indemnify and hold the Company harmless from any losses, costs, damages, or expenses relating to any such sale. In addition, you acknowledge that it may not be possible to sell shares of Common Stock as provided herein due to (i) a legal or contractual restriction applicable to you or the Agent, (ii) a market disruption, (iii) a sale effected pursuant hereto that would not comply (or in the reasonable opinion of the Agent's counsel is likely not to comply) with the Securities Act, (iv) the Company's determination that sales may not be effected hereunder or (v) rules governing order execution priority on the national exchange where the Common Stock may be traded. In the event of the Agent's inability to sell shares of Common Stock, you will continue to be responsible for

the timely payment to the Company of all federal, state, local and foreign taxes that are required by applicable laws and regulations to be withheld.

(iv) You acknowledge that regardless of any other term or condition of this Agreement, the Agent will not be liable to you for (A) special, indirect, punitive, exemplary, or consequential damages, or incidental losses or damages of any kind, or (B) any failure to perform or for any delay in performance that results from a cause or circumstance that is beyond its reasonable control.

(v) You hereby agree to execute and deliver to the Agent any other agreements or documents as the Agent reasonably deems necessary or appropriate to carry out the purposes and intent of this Agreement. The Agent is a third-party beneficiary of this Section 11(b).

(vi) Your Sell to Cover election is irrevocable. You have elected to Sell to Cover, and you acknowledge that you may not change this election at any time in the future.

(c) Unless the Withholding Obligation is satisfied, the Company shall have no obligation to deliver to you any Common Stock or any other consideration pursuant to this Award.

(d) In the event the Withholding Obligation arises prior to the delivery to you of Common Stock or it is determined after the delivery of Common Stock to you that the amount of the Withholding Obligation was greater than the amount withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

12. **Tax Consequences.** The Company has no duty or obligation to minimize the tax consequences to you of this Award and shall not be liable to you for any adverse tax consequences to you arising in connection with this Award. You are hereby advised to consult with your own personal tax, financial and/or legal advisors regarding the tax consequences of this Award and by signing the Grant Notice, you have agreed that you have done so or knowingly and voluntarily declined to do so. You understand that you (and not the Company) shall be responsible for your own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

13. **Lock-Up Period.** By accepting your Award, you agree that you will not sell, dispose of, transfer, 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 with respect to any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2241 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided*, *however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 13. The underwriters of the Company's stock are intended third party beneficiaries of this Section 13 and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

14. **Unsecured Obligation.** Your Award is unfunded, and as a holder of a vested Award, you shall be considered an unsecured creditor of the Company with respect to the Company's obligation, if any, to issue shares or other property pursuant to this Agreement. You shall not have voting or any other

rights as a stockholder of the Company with respect to the shares to be issued pursuant to this Agreement until such shares are issued to you pursuant to Section 6 of this Agreement. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this Agreement, and no action taken pursuant to its provisions, shall create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

15. **Notices**. Any notice or request required or permitted hereunder shall be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this Award by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this Award, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

16. **Headings**. The headings of the Sections in this Agreement are inserted for convenience only and shall not be deemed to constitute a part of this Agreement or to affect the meaning of this Agreement.

17. **Miscellaneous**.

(a) The rights and obligations of the Company under your Award shall be transferable by the Company to any one or more persons or entities, and all covenants and agreements hereunder shall inure to the benefit of, and be enforceable by, the Company's successors and assigns.

(b) You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your Award.

(c) You acknowledge and agree that you have reviewed your Award in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your Award and fully understand all provisions of your Award.

(d) This Agreement shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

(e) All obligations of the Company under the Plan and this Agreement shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

18. **Governing Plan Document**. Your Award is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your Award, and is further subject to all interpretations, amendments, rules and regulations which may from time to time be promulgated and adopted pursuant to the Plan. Your Award (and any compensation paid or shares issued under your Award) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law. No recovery of compensation under such a clawback policy will be an event giving rise to a right to voluntarily terminate employment upon a resignation for "good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

19. **Effect on Other Employee Benefit Plans.** The value of the Award subject to this Agreement shall not be included as compensation, earnings, salaries, or other similar terms used when calculating benefits under any employee benefit plan (other than the Plan) sponsored by the Company or any Affiliate except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any or all of the employee benefit plans of the Company or any Affiliate.

20. **Severability**. If all or any part of this Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of this Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

21. **Other Documents**. You hereby acknowledge receipt or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

22. **Amendment.** This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by you and by a duly authorized representative of the Company. Notwithstanding the foregoing, this Agreement may be amended solely by the Board by a writing which specifically states that it is amending this Agreement, so long as a copy of such amendment is delivered to you, and provided that, except as otherwise expressly provided in the Plan, no such amendment materially adversely affecting your rights hereunder may be made without your written consent. Without limiting the foregoing, the Board reserves the right to change, by written notice to you, the provisions of this Agreement in any way it may deem necessary or advisable to carry out the purpose of the Award as a result of any change in applicable laws or regulations or any future law, regulation, ruling, or judicial decision, provided that any such change shall be applicable only to rights relating to that portion of the Award which is then subject to restrictions as provided herein.

23. **Compliance with Section 409A of the Code**. This Award is intended to be exempt from the application of Section 409A of the Code, including but not limited to by reason of complying with the "short-term deferral" rule set forth in Treasury Regulation Section 1.409A-1(b)(4) and any ambiguities herein shall be interpreted accordingly. Notwithstanding the foregoing, if it is determined that the Award fails to satisfy the requirements of the short-term deferral rule and is otherwise not exempt from, and determined to be deferred compensation subject to Section 409A of the Code, this Award shall comply with Section 409A to the extent necessary to avoid adverse personal tax consequences and any ambiguities herein shall be interpreted accordingly. If it is determined that the Award is deferred compensation subject to Section 409A and you are a "Specified Employee" (within the meaning set forth in Section 409A(a)(2)(B)(i) of the Code) as of the date of your "Separation from Service" (as defined in Section 409A), then the issuance of any shares that would otherwise be made upon the date of your Separation from Service or within the first six (6) months thereafter will not be made on the originally scheduled date(s) and will instead be issued in a lump sum on the date that is six (6) months and one day after the date of the Separation from Service, with the balance of the shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the shares is necessary to avoid the imposition of adverse taxation on you in respect of the shares under Section 409A of the Code. Each installment of shares that vests is intended to constitute a "separate payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2).

* * * * *

This Restricted Stock Unit Award Agreement shall be deemed to be signed by the Company and the Participant upon the signing by the Participant of the Restricted Stock Unit Grant Notice to which it is attached.

ATTACHMENT II

2019 EQUITY INCENTIVE PLAN

VIR BIOTECHNOLOGY, INC.

Non-Employee Director Compensation Policy

Each member of the Board of Directors (the "***Board***") of Vir Biotechnology, Inc. (the "***Company***") who is not also serving as an employee of the Company or any of its subsidiaries (each such member, an "***Eligible Director***") will receive the compensation described in this Non-Employee Director Compensation Policy (this "***Policy***"). An Eligible Director may decline all or any portion of his or her compensation by giving notice to the Company prior to the date cash is to be paid or equity awards are to be granted, as the case may be. This Policy may be amended at any time in the sole discretion of the Board, or by the Compensation Committee of the Board at the recommendation of the Board.

Annual Cash Compensation

The annual cash compensation amount set forth below is payable to Eligible Directors in equal quarterly installments, payable in arrears on the last day of each fiscal quarter in which the service occurred. If an Eligible Director joins the Board or a committee of the Board at a time other than effective as of the first day of a fiscal quarter, each annual retainer set forth below will be pro-rated based on days served in the applicable fiscal year, with the pro-rated amount paid for the first fiscal quarter in which the Eligible Director provides the service, and regular full quarterly payments to be paid thereafter. All annual cash fees are vested upon payment.

1. Annual Board Service Retainer:
   a. All Eligible Directors: $40,000
   b. Non-executive chairperson of the Board: $75,000 (inclusive of Annual Board Service Retainer)

2. Annual Committee Member Service Retainer:
   a. Member of the Audit Committee: $10,000
   b. Member of the Compensation Committee: $7,500
   c. Member of the Nominating and Corporate Governance Committee: $5,000
   d. Member of the Science and Technology Committee: $7,500

3. Annual Committee Chair Service Retainer (inclusive of Committee Member Service Retainer):
   a. Chairperson of the Audit Committee: $20,000
   b. Chairperson of the Compensation Committee: $15,000
   c. Chairperson of the Nominating and Corporate Governance Committee: $10,000
   d. Chairperson of the Science and Technology Committee: $15,000

The Company will also reimburse each of the Eligible Directors for his or her travel expenses incurred in connection with his or her attendance at Board and committee meetings. Such reimbursements shall be paid on the same date as the annual cash fees are paid.

Equity Compensation

The equity compensation set forth below will be granted under the Company's 2019 Equity Incentive Plan (the "***Plan***"). All stock options granted under this Policy will be nonstatutory stock options, with an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying common stock on the date of grant, and a term of 10 years from the date of grant (subject to earlier termination in connection with a termination of service as provided in the Plan).

1. Initial Grant: For each Eligible Director who is first elected or appointed to the Board following the effective date of this Policy, on the date of such Eligible Director's initial election or appointment to the Board (or, if such date is not a market trading day, the first market trading day thereafter), the Eligible Director will be automatically, and without further action by the Board or Compensation Committee of the Board, granted two equity awards (the "***Initial Grants***") with a value of $400,000 in the aggregate comprised of (i) a stock option to purchase shares of the Company's common stock (the "***Initial Option Grant***") and (ii) a restricted stock unit award covering shares of the Company's common stock (the "***Initial RSU Grant***"). The total number of shares subject to the Initial Option Grant will be initially calculated in accordance with the Black-Scholes valuation methodology and the total number of shares subject to the Initial RSU Grant will be initially calculated in accordance with the Fair Market Value as of the grant date, and such resulting number of shares shall be divided between the Initial Grants based on a fixed ratio of two shares subject to the Initial Option Grant for every one share subject to the Initial RSU Grant, with the number of shares subject to the Initial Option Grant rounded down to the nearest whole share and in no event exceeding 16,000 shares and the number of shares subject to the Initial RSU Grant rounded down to the nearest whole share and in no event exceeding 8,000 shares.

   One-third of the shares subject to each Initial Option Grant will vest on the one-year anniversary of the Eligible Director's initial election or appointment to the Board and thereafter the remainder of the shares subject to each such Initial Grant will vest monthly over a two-year period, subject to the Eligible Director's Continuous Service (as defined in the Plan) on each vesting date, and will vest in full upon a Change in Control (as defined in the Plan), subject to the Eligible Director's Continuous Service (as defined in the Plan) on such date. The Initial RSU Grant will vest in three equal installments on the first, second and third anniversaries of the Eligible Director's initial election or appointment to the Board, subject to the Eligible Director's Continuous Service (as defined in the Plan) on each vesting date, and will vest in full upon a Change in Control (as defined in the Plan), subject to the Eligible Director's Continuous Service (as defined in the Plan) on such date.

   In addition, on the date of such Eligible Director's initial election or appointment to the Board (or, if such date is not a market trading day, the first market trading day thereafter), the Eligible Director will be automatically, and without further action by the Board or Compensation Committee of the Board, granted the additional awards on the same terms as the Annual Grants (as defined below), except (i) the $400,000 aggregate value of the additional awards shall first be multiplied by a fraction, the numerator of which equals 12 minus the number of calendar months that have occurred since the last annual meeting of stockholders and the denominator of which equals 12, and (ii) such additional awards will vest in full upon the earlier of (i) the one-year anniversary of the date the Annual Grants to the Eligible Directors were last made and (ii) the next annual meeting of stockholders, subject to the Eligible Director's Continuous Service (as defined in the Plan) on the vesting date, and will vest in full upon a Change in Control (as defined in the Plan), subject to the Eligible Director's Continuous Service (as defined in the Plan) on such date.

2. Annual Grant: On the first market trading day after each annual stockholders meeting of the Company, each Eligible Director who continues to serve as a member of the Board following such stockholders meeting will be automatically, and without further action by the Board or Compensation Committee of the Board, granted two equity awards (collectively, the "***Annual Grants***") with a value of $400,000 in the aggregate comprised of (i) a stock option to purchase shares of the Company's common stock (the "***Annual Option Grant***"); and (ii) a restricted stock unit award covering shares of the Company's common stock (the "***Annual RSU Grant***"). The shares subject to each

Annual Grant will vest in full on the one-year anniversary of the grant date, subject to the Eligible Director's Continuous Service (as defined in the Plan) on the vesting date, and will vest in full upon a Change in Control (as defined in the Plan), subject to the Eligible Director's Continuous Service (as defined in the Plan) on such date. The total number of shares subject to the Annual Option Grant will be initially calculated in accordance with the Black-Scholes valuation methodology as of the grant date and the total number of shares subject to the Annual RSU Grant will be initially calculated in accordance with the Fair Market Value as of the grant date, and such resulting number of shares shall be divided between the Annual Grants based on a fixed ratio of two shares subject to the Annual Option Grant for every one share subject to the Annual RSU Grant, with the number of shares subject to the Annual Option Grant rounded down to the nearest whole share and in no event exceeding 16,000 shares and the number of shares subject to the Annual RSU Grant rounded down to the nearest whole share and in no event exceeding 8,000 shares.

Eligible Director Compensation Limit

Notwithstanding anything herein to the contrary, the cash compensation and equity compensation that each Eligible Director is entitled to receive under this Policy shall be subject to the limits set forth in Section 3(d) of the Plan.

Approved by the Board of Directors: December 9, 2020
Effective: January 1, 2021

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE CO

December 23, 2020
George Scangos, Ph.D.
CEO & Director
Vir Biotechnology, Inc.
499 Illinois Street, Suite 500

San Francisco, CA 94158

RE: Collaboration and License Agreement by and among Vir Biotechnology, Inc. and Alnylam Pharmaceuticals, Inc. effective October 16, 2017, as amended by letter agreement dated November 13, 2018, Amendment No. 1 to the Collaboration and License Agreement effective December 17, 2019, Amendment No. 2 to the Collaboration and License Agreement effective March 3, 2020 ("**Amendment No. 2**") and Amendment No. 3 to the Collaboration and License Agreement effective April 1, 2020 ("**Amendment No. 3**") (the "**Collaboration Agreement**").

Dear George,

Pursuant to Amendment No. 2 and Amendment No. 3 the Parties agreed to add the COV Target and the Host Factor Targets (collectively, the "**COV ID Collaboration Targets**") to the Collaboration. Until completion by Alnylam of additional pre-clinical studies of the lead RNAi Product(s) Directed to the COV Target, the Parties desire to modify the funding and governance provisions of the Collaboration Agreement as they pertain to the Programs for the COV Target and the Host Factor Targets. This letter memorializes Alnylam's and Vir's agreement with respect thereto.

In consideration of the respective covenants and agreements in this letter, Alnylam and Vir agree as follows:

1. Capitalized terms used in this letter and not otherwise defined have the meanings ascribed to such terms in the Collaboration Agreement.

2. The Parties acknowledge and agree that commencing on July 1, 2020 Alnylam has borne all the Program Costs for the Development Plans for the ID Programs for the COV ID Collaboration Targets (the "COV Programs") in effect prior to the date of this letter.

3. From the date of this letter, Alnylam will perform the pre-clinical research activities for the COV Target set forth in the DC Workplan attached hereto as Appendix A (the "**COV Workplan**"). Alnylam will bear 100% of the Program Costs for the COV Workplan from the date of this letter. Vir will not be responsible for activities or deliverables under the COV Workplan unless and to the extent explicitly agreed in writing by the Parties.

4. The JSC will have no oversight responsibilities with respect to the COV Workplan, however Alnylam may consult the JSC from time to time regarding the COV Workplan and will report to the JSC from time to time on progress and results with respect to the COV Workplan. Alnylam may amend the COV Workplan or may suspend or terminate work under the COV Workplan at

any time in its sole discretion upon notice to the JSC. For the avoidance of doubt, Vir will not have a Program Option with respect to any COV ID Collaboration Target.

5. Alnylam will notify the JSC of completion of the COV Workplan and provide the JSC with all data and information generated under the COV Workplan not previously provided to the JSC. Within [***] after completion of the COV Workplan Alnylam will notify the JSC if Alnylam selects an RNAi Product Directed to the COV Target as a Development Candidate ("**DC Notice**").

6. If Alnylam selects an RNAi Product directed to the COV Target as a Development Candidate, then the Parties will negotiate in good faith for a [***] after the DC Notice date (the "**Negotiation Period**") an agreement between the Parties with respect to the COV Target.

7. If (a) Alnylam terminates the COV Workplan prior to completion or (b) after completion of the COV Workplan Alnylam notifies Vir that it will not select an RNAi Product Directed to the COV Target as a Development Candidate or (c) the Parties are unable to agree upon a definitive agreement with respect to the COV Target within the Negotiation Period, then (notwithstanding that Vir does not have a Program Option with respect to the COV ID Collaboration Targets) the second sentence of Section 4.1(b) of the Collaboration Agreement will apply to the COV Programs, it being understood and agreed that no Program Costs with respect to the COV Programs are reimbursable to Alnylam after July 1, 2020 and that Vir's obligation in clause (z) of Section 4.1(b) of the Collaboration Agreement shall apply for [***] from the date of termination of the COV Workplan, the date of Alnylam's notice in clause (b) above or the expiration of the Negotiation Period, as the case may be.

8. Nothing in this letter agreement is intended to operate as a waiver of any claims either Party may have against the other Party arising prior to the date of this letter agreement, including any claims arising prior to the date of this letter agreement with respect to the performance of the Parties under the Collaboration Agreement. Any delay in enforcing a party's rights under this letter agreement or the Collaboration Agreement, or any waiver as to a particular default or other matter, will not constitute a waiver of such Party's rights to the future enforcement of its rights under this letter agreement or the Collaboration Agreement, except with respect to an express written waiver relating to a particular matter for a particular period of time signed by an authorized representative of the waiving Party, as applicable.

9. This letter agreement will be governed by and interpreted in accordance with the law of the State of New York, U.S.A., without reference to any principles of conflicts of laws to the contrary. The United Nations Convention on Contracts for the International Sale of Goods will not apply to the transactions contemplated by this letter agreement. Except as specifically amended by this letter agreement, the terms and conditions of the Collaboration Agreement shall remain in full force and effect. This letter agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Signatures transmitted by PDF shall be treated as original signatures. Except to the extent expressly provided herein, the Collaboration Agreement, as amended by this letter agreement, together with the Commitment Letter between the Parties entered into on the Commitment Letter Date and the Stock Purchase Agreement, including all appendices, exhibits and schedules to each of the foregoing, constitute the entire agreement between the Parties relating to the subject matter of the Collaboration Agreement and supersedes all previous oral and written communications, including all previous agreements, between the Parties.

If you agree with the foregoing, please sign below and return a copy to my attention.

Sincerely,

ALNYLAM PHARMACEUTICALS, INC.

By: */s/ Yvonne Greenstreet*
Yvonne Greenstreet
Chief Operating Officer

Acknowledged and agreed by

VIR BIOTECHNOLOGY, INC.

By:
Name: George Scangos
Title: CEO and President
Date:

If you agree with the foregoing, please sign below and return a copy to my attention.

Sincerely,

ALNYLAM PHARMACEUTICALS, INC.

By: _____
Yvonne Greenstreet
Chief Operating Officer

Acknowledged and agreed by

VIR BIOTECHNOLOGY, INC.

By: */s/ George Scangos*
Name: George Scangos
Title: CEO and President
Date:

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.

Amendment Number One to License Agreement

This Amendment Number One ("**Amendment No. 1**") to the License Agreement dated September 7, 2018 (the "**Agreement**"), is entered into as of September 1, 2020 ("**Amendment No. 1 Effective Date**") by and between MedImmune, LLC, having a principal place of business at One MedImmune Way, Gaithersburg, MD 20878 ("**MedImmune**") and Vir Biotechnology, Inc., having a principal place of business at 499 Illinois Street, Suite 500, San Francisco, CA 94158 ("**Licensee**"). MedImmune and Licensee may be referred to herein individually as a "**Party**" and collectively as the "**Parties**".

WHEREAS, the Parties previously entered into that License Agreement dated September 7, 2018 and;

WHEREAS, the Parties desire to amend the License Agreement in order to extend the Target Nomination Period under Section 4.1.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. **Definitions**. Capitalized terms used and not defined in this Amendment No. 1 have the respective meanings assigned to them in the Agreement.

2. **No Cost Extension**. Section 4.1 of the Agreement shall be replaced with the following:

> '**4.1 Target Nomination Period.** Licensee shall have [***] after the Effective Date (the "**Target Nomination Period**") to nominate two (2) Targets to be considered for a license in relation to Exploitation of HLE Products under the terms of this Agreement (such a Target, an "**Exclusive Target**").'

3. **Full Force and Effect.** Except as expressly provided herein, the Agreement remains unmodified and in full force and effect.

4. **Modifications.** This Amendment No. 1 may only be modified by a written document, signed by both Parties.

5. **Counterparts.** This Amendment No. 1 may be executed in any number of counterparts, each of which (including copies hereof) shall be deemed an original, but all of which together shall constitute one and the same instrument. The Parties agree that the execution of this Amendment No. 1 by industry standard electronic signature software and/or by exchanging PDF signatures shall have the same legal force and effect as the exchange of original signatures, and that in any proceeding arising under or relating to this Amendment No. 1, each Party hereby waives any right to raise any defense or waiver based upon execution of this Amendment No. 1 by means of such electronic signatures or maintenance of the executed agreement electronically.

THIS AMENDMENT NO. 1 IS EXECUTED by the authorized representatives of the Parties as of the Amendment No. 1 Effective Date.

MedImmune, LLC		**Vir Biotechnology, Inc.**	
By:	/s/ Scott Alban	By:	/s/ Jennifer Watt
Name:	Scott Alban	Name:	Jennifer Watt
Title:	Senior Vice President, Global IP	Title:	Vice President, Alliance Mgmt
Date:	03 September 2020	Date:	03 September 2020

Exhibit 10.38

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.

AMENDMENT INFORMATION	
Agreement to be Amended:	Grant agreement between the Bill & Melinda Gates Foundation and Vir Biotechnology Inc, effective January 26, 2018, as amended, and bearing Investment ID INV-010344 (OPP1187970)
Amendment Purpose:	Change in Payment and Deliverable Table
Amendment Date:	Date of this email

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				
[***]	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
[***]	[***]	[***]		
	[***]	[***]	[***]	[***]
	[***]		[***]	[***]
[***]	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]		
			Amended Total Grant Amount	**Up to $20,776,349.00**

Exhibit 10.39

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE

AMENDMENT INFORMATION	
Agreement to be Amended:	Grant agreement between the Bill & Melinda Gates Foundation and Vir Biotechnology, Inc. effective January 26, 2018, as amended, and bearing Investment ID INV-010344 (formerly OPP1187970)
Amendment Purpose:	Update Reporting & Payment Schedule
Amendment Date:	Date of this email

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				
[***]	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
[***]	[***]	[***]		
	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]
	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]	
			Amended Total Grant Amount	**Up to $20,776,349.00**

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED.

SECOND AMENDMENT TO EXCLUSIVE LICENSE AGREEMENT

This SECOND AMENDMENT TO EXCLUSIVE LICENSE AGREEMENT (this "**Amendment 2**"), entered into as of September 28th, 2020 (the "**Amendment Date**"), and effective as of the **Effective Date**, is made and entered into by and between The Rockefeller University, a New York not-for-profit education corporation, with a principal place of business at 1230 York Avenue, New York, NY 10065 ("**Rockefeller**", also referred to herein as "**Licensor**") and Vir Biotechnology, Inc. a Delaware corporation, with a principal place of business at 499 Illinois Street, Suite 500, San Francisco, CA 94158 (referred to herein as "**Licensee**").

WHEREAS, Licensor and Licensee entered into a certain Exclusive License Agreement, effective as of July 31, 2018 (the "**Agreement**", as amendment by Amendment dated May 17th, 2019); and

WHEREAS, the parties wish to amend the Agreement to include additional intellectual property developed at Rockefeller under a Collaborative Research Agreement dated as of April 1, 2017 between the parties.

NOW THEREFORE, in consideration of the mutual obligations contained in this Agreement, and intending to be legally bound, the parties agree as follows:

1. Amendment. The Exhibit-B of the License Agreement will be deleted and replaced with the following:

EXHIBIT B
Licensed Patents

- [***]

- [***]

2. All provisions of the Agreement not expressly modified by this Amendment shall remain in full force and effect.

3. This Amendment may be executed in counterparts with the same effect as if each of the Parties had signed the same document. All such counterparts shall be deemed an original, shall be construed together and shall constitute one and the same instrument. Signatures to this Amendment transmitted by facsimile, by email in "portable document format" (".pdf"), or by any other electronic means intended to preserve the original graphic and pictorial appearance of this Amendment shall have the same effect as physical delivery of the paper document bearing original signature.

(*Signature page follows*)

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the Amendment Date.

VIR BIOTECHNOLOGY, INC.:			THE ROCKEFELLER UNIVERSITY:		
BY:	/s/ Jay Parrish	9/29/2020	BY:	/s/ Jeanne Ferrell	9/28/2020
NAME:	Jay Parrish		NAME:	Jeanne Farrell, PhD	
TITLE:	CBO		TITLE:	Associate VP Technology Transfer	

[Signature Page to Amendment to Exclusive License Agreement]

Exhibit 10.61

SUBLEASE

BETWEEN

DROPBOX, INC.

AND

VIR BIOTECHNOLOGY, INC.

1800 Owens Street,
San Francisco, California

North Tower

8th, 9th, 10th, 11th and 12th Floors

SUBLEASE

THIS SUBLEASE ("**Sublease**") is entered into as of November 4, 2020 (the "**Effective Date**"), by and between **DROPBOX, INC.**, a Delaware corporation ("**Sublandlord**"), and **VIR BIOTECHNOLOGY, INC.**, a Delaware corporation ("**Subtenant**"), with reference to the following facts:

A. Pursuant to that certain Office Lease dated as of October 6, 2017 (the "**Original Master Lease**"), as the same has been amended by that certain First Amendment to Office Lease dated May 18, 2018 (the "**First Amendment**"), that certain Second Amendment to Office Lease dated May 25, 2018 (the "**Second Amendment**"), that certain Third Amendment to Office Lease dated September 19, 2018 (the "**Third Amendment**"), that certain Fourth Amendment to Office Lease dated November 9, 2018 (the "**Fourth Amendment**"), that certain Fifth Amendment to Office Lease dated April 25, 2019 (the "**Fifth Amendment**") that certain Sixth Amendment to Office Lease dated August 16, 2019 (the "**Sixth Amendment**") and that certain Seventh Amendment to Office Lease dated August 25, 2020 (the "**Seventh Amendment**", and together with the Original Master Lease, First Amendment, Second Amendment, Third Amendment, Fourth Amendment, Fifth Amendment and Sixth Amendment, collectively, the "**Master Lease**"), whereby KR Mission Bay, LLC, a Delaware limited liability company ("**Landlord**"), as landlord, leases to Sublandlord, as tenant, certain space (the "**Master Lease Premises**") consisting of 738,081 rentable square feet ("**RSF**") comprising of all of the rentable space (except for certain retail space) in (i) the twelve (12) story building located at 1800 Owens, Sector 1, San Francisco, California (the "**North Tower**"), (ii) the six (6) story building located at 1800 Owens, Sector 2, San Francisco, California (the "**North Building**"), (iii) the twelve (12) story building located at 1800 Owens, Sector 3, San Francisco, California (the "**South Tower**"), and (iv) the six (6) story building located at 1800 Owens, Sector 4, San Francisco, California (the "**South Building**", and together with the North Tower, North Building and South Tower, collectively, the "**Complex**"). A redacted copy of the Master Lease is attached hereto as **Exhibit A**. The City and County of San Francisco is sometimes referred to herein as the "**City**." Capitalized terms used but not otherwise defined herein shall have the meaning given to any such terms in the Master Lease.

B. Subtenant wishes to sublease from Sublandlord, and Sublandlord wishes to sublease to Subtenant, a portion of Master Lease Premises containing 133,896 RSF (said portion of the Master Lease Premises being more particularly identified and described on the floor plans attached hereto as **Exhibit B** and hereinafter referred to as the "**Subleased Premises**"), said Subleased Premises being located on the eighth (8th) floor (26,577 RSF) (the "**8th Floor Subleased Premises")**, the ninth (9th) floor (26,577 RSF) (the "**9th Floor Subleased Premises")**, the tenth (10th) floor (26,914 RSF) (the "**10th Floor Subleased Premises")**, the eleventh (11th) floor (26,914 RSF) (the "**11th Floor Subleased Premises")** and the twelfth (12th) floor (26,914 RSF) (the "**12th Floor Subleased Premises")** of the North Tower. In addition to the sublease of the Subleased Premises by Subtenant, Subtenant shall have the Right of First Refusal to sublease certain space on the 7th floor of the North Tower, as provided for in **Exhibit C** attached hereto.

NOW, THEREFORE, in consideration of the foregoing recitals, which by this reference are incorporated herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged by the parties, Sublandlord and Subtenant hereby agree as follows:

1. Sublease. Sublandlord hereby subleases to Subtenant, and Subtenant hereby subleases from Sublandlord, the Subleased Premises for the term, at the rental, and upon all of the terms and conditions set forth herein; provided, however, that Sublandlord and Subtenant acknowledge that, in accordance with the terms of the Master Lease, Landlord must consent to this Sublease (the "**Consent**") and the effectiveness of this Sublease is conditioned upon such consent being given by Landlord on or before January 31, 2021, on terms that are acceptable to Sublandlord (the date upon which Sublandlord procures such Consent being the "**Consent Date**").

2. Commencement Date; Term of Sublease.. The term of this Sublease (the "**Term**") (i) shall commence on the later of the Effective Date and the day following the Consent Date ("**Commencement Date**"), and (ii) shall end on August 30, 2033 (the "**Expiration Date**"), unless sooner terminated pursuant to any provision hereof. Sublandlord shall deliver possession of the Subleased Premises to Subtenant on the Commencement Date. Upon the determination of the Commencement Date, Sublandlord and Subtenant will enter into a letter agreement in the form of **Exhibit F** attached hereto confirming the Commencement Date and the corresponding Rent Commencement Dates for each portion of the Subleased Premises (see Section 3(a) below). During the period between the Commencement Date and the Rent Commencement Date for each portion of the Subleased Premises, Subtenant's possession and occupancy thereof shall be upon and subject to the terms, conditions and requirements of this Sublease other than Subtenant's obligation to pay Base Rent and Subtenant's Percentage Share of Operating Costs with respect to such portion of the Subleased Premises. From and after the Commencement Date, Subtenant and Subtenant's representatives shall, in accordance with the terms of the Work Agreement attached hereto as **Exhibit E** (the "**Work Agreement**"), have the right to construct the Subtenant Initial Improvements (as defined in the Work Agreement). Notwithstanding the foregoing, if, as of the date that Sublandlord would otherwise deliver possession of the Subleased Premises to Subtenant as described above, Subtenant has not delivered to Sublandlord (A) the prepaid Base Rent pursuant to the provisions of Section 3(a)(i) below, (B) the Letter of Credit pursuant to the provisions of Section 4 below, and/or (C) evidence of Subtenant's procurement of all insurance coverage required hereunder, then Sublandlord will have no obligation to deliver possession of the Subleased Premises to Subtenant, but the failure on the part of Sublandlord to so deliver possession of the Subleased Premises to Subtenant in such event will not serve to delay the occurrence of the Commencement Date and the commencement of Subtenant's obligations to pay Rent (defined below) hereunder for the Subleased Premises.

3. Rent.

(a) Base Rent Payments.

(i) Rent Commencement Date. The Rent Commencement Date with respect to each portion of the Subleased Premises shall be as follows, assuming that the Commencement Date is December 1, 2020:

[THE CHARTS BELOW ARE SUBJECT TO REVISION PER EXHIBIT F ONCE THE COMMENCEMENT DATE IS DETERMINED.]

Portion of Subleased Premises	Rent Commencement Date
8th Floor Subleased Premises	The date that is 60 days following the Commencement Date, estimated to be February 1, 2021
9th Floor Subleased Premises	The date that is 240 days following the Commencement Date, estimated to be August 1, 2021
10th Floor Subleased Premises	The date that is 790 days following Commencement Date, estimated to be December 1, 2022
11th Floor Subleased Premises	The date that is 396 days following the Commencement Date, estimated to be January 1, 2022
12th Floor Subleased Premises	The date that is 396 days following the Commencement Date, estimated to be January 1, 2022

(ii) Generally. Subtenant shall pay to Sublandlord base rent for the Subleased Premises during the Term ("**Base Rent**") at the rate per square foot per annum set forth below. The following schedule sets forth the rent schedule based on the estimated dates, but shall be subject to the determination of the actual Rent Commencement Dates as set forth above based upon the occurrence of the Commencement Date:

Period of Term	Rate Per RSF Per Annum	RSF	Monthly Base Rent
2/1/21 - 7/31/21	$47.77	26,577[1]	$105,798.61
8/1/21 - 11/31/21	$47.77	53,154[2]	$211,597.22
12/1/21 - 12/31/21	$49.20	53,154	$217,945.13
1/1/22 - 11/31/22	$49.20	106,982[3]	$438,653.84
12/1/22 - 11/31/23	$50.68	133,896[4]	$565,478.44
12/1/23 - 11/31/24	$52.20	133,896	$582,442.79
12/1/24 - 11/31/25	$53.77	133,896	$599,916.07
12/1/25 - 11/31/26	$55.38	133,896	$617,913.55
12/1/26 - 11/31/27	$57.04	133,896	$636,450.96
12/1/27 - 11/31/28	$58.75	133,896	$655,544.49
12/1/28 - 11/31/29	$60.51	133,896	$675,210.82
12/1/29 - 11/31/30	$62.33	133,896	$695,467.15
12/1/30 - 11/31/31	$64.20	133,896	$716,331.16
12/1/31 - 11/31/32	$66.12	133,896	$737,821.10
12/1/32 - 8/30/33	$68.11	133,896	$759,955.73

[1] RSF based on 8th Floor Subleased Premises.
[2] RSF reflects the addition of the 9th Floor Subleased Premises as of August 1, 2021.
[3] RSF reflects the addition of the 11th and 12th Floor Subleased Premises as of January 1, 2022.
[4] RSF reflects the addition of the 10th Floor Subleased Premises as of December 1, 2022.

Base Rent shall be paid in advance on the first day of each month of the Term; except that upon Subtenant's execution and delivery of this Sublease to Sublandlord, Subtenant shall pay to Sublandlord a total of $545,970.90, such amount equaling one month's rent in advance for each portion of the Subleased Premises to be applied as follows:

(A) $105,798.61 with respect to the 8th Floor Subleased Premises which will be applied to the Base Rent due and payable for the month of February, 2021;

(B) $105,798.61 with respect to the 9th Floor Subleased Premises which will be applied to the Base Rent due and payable for the month of August, 2021;

(C) $113,664.98 with respect to the 10th Floor Subleased Premises which will be applied to the Base Rent due and payable for the month of December, 2022;

(D) $110,354.35 with respect to the 11th Floor Subleased Premises which will be applied to the Base Rent due and payable for the month of December, 2021; and

(E) $110,354.35 with respect to the 12th Floor Subleased Premises which will be applied to the Base Rent due and payable for the month of December, 2021.

If for any reason any Commencement Date or Base Rent Commencement Date for any portion of the Subleased Premises does not begin on the first day of a calendar month or if the Term of this Sublease does not end on the last day of a month, the Base Rent and Additional Rent (hereinafter defined), as applicable, for any such partial month shall be prorated by multiplying the applicable monthly Base Rent and Additional Rent by a fraction, the numerator of which is the number of days of the partial month included in the Term and the denominator of which is the total number of days in the full calendar month. All Rent shall be payable to Sublandlord by wire transfer in immediately available lawful money of the United States in accordance with the wire instructions attached hereto as **Exhibit G** or to such person and/or in such manner as Sublandlord may hereafter from time to time specify by notice to Subtenant.

(b) Operating Costs.

(i) Definitions. For purposes of this Sublease and in addition to the terms defined elsewhere in this Sublease, the following terms shall have the meanings set forth below:

(A) "**Additional Rent**" shall mean the sums payable pursuant to Section 3(b)(ii) below.

(B) "**Operating Costs**" shall mean Direct Expenses (as defined in the Master Lease) charged by Landlord to Sublandlord pursuant to the Master Lease (inclusive of any so-called "Proposition C" taxes, gross receipts taxes and other taxes provided for in the Master Lease). Notwithstanding the foregoing, Operating Costs shall not include (i) any fees, taxes or other charges for any service or utility that is separately metered to portions of the Master Premises retained by Sublandlord ("**Reserved Premises**") or for which Subtenant is separately charged; (ii) any charges that apply exclusively to any portion of the Reserved Premises; (iii) late fees or penalties assessed against Sublandlord as a result of Sublandlord's acts or omissions; (iv) charges incurred as a result of excess or additional services specifically requested by Sublandlord for the Reserved Premises or for or including the Sublease Premises without Subtenant's consent; and (v) any costs for the installation, maintenance or repair of Subtenant's Supplemental HVAC (as defined in Section 6(g)), which costs shall be payable directly by Subtenant.

(C) "**Rent**" shall mean, collectively, Base Rent, Additional Rent and all other sums payable by Subtenant to Sublandlord under this Sublease, whether or not expressly designated as "rent", all of which are deemed and designated as rent pursuant to the terms of this Sublease.

(D) "**Subtenant's Percentage Share**" shall mean the following percentages, as applicable:

(1) **100%** with respect to Operating Costs allocated by Landlord to: (aa) the Subleased Premises as a whole; (bb) the 8th Floor Subleased Premises; (cc) the 9th Floor Subleased Premises; (dd) the 10th Floor Subleased Premises; (ee) the 11th Floor Subleased Premises; and (ff) the 12th Floor Subleased Premises;

(2) **44.74%** (133,896RSF/299,255RSF) with respect to Operating Costs allocated by Landlord to the North Tower (provided, however, that such percentage shall be appropriately adjusted in the event of any such allocation of Operating Costs by Landlord prior to the Rent Commencement Date for the 10th Floor Subleased Premises [i.e., the date upon which Subtenant begins paying Additional Rent for the entire Subleased Premises]);

(3) **18.14%** (133,896RSF/738,081RSF) with respect to Operating Costs allocated by Landlord to the Complex as a whole and not to any particular building; and

(4) Such percentage as is reasonably calculated with respect to Operating Costs allocated by Landlord to portions of the Complex that include

the Subleased Premises and consist of less than the entire Complex but more than the North Tower

Provided, however, that with respect to the period prior to the Rent Commencement Date for the 10th Floor Subleased Premises (i.e., the date upon which Subtenant begins paying Additional Rent for the entire Subleased Premises) the percentages set forth in clauses (1)(aa), (2) and (3) above shall be appropriately adjusted to account for RSF of the Subleased Premises with respect to which Subtenant is then currently required to pay Additional Rent.

(ii) Payment of Additional Rent. In addition to the Base Rent payable pursuant to Section 3(a) above, from and after the Rent Commencement Date for each portion of the Subleased Premises and thereafter for each calendar year of the Term, Subtenant shall pay, as Additional Rent, the applicable Subtenant's Percentage Share of Operating Costs payable by Sublandlord for the then current calendar year or applicable portion thereof. Sublandlord shall provide Subtenant with written notice of Sublandlord's estimate of the amount of Additional Rent per month payable pursuant to this Section 3(b)(ii) for each calendar year promptly following the Sublandlord's receipt of Landlord's estimate of the Operating Costs payable under the Master Lease. Thereafter, the Additional Rent payable shall be determined and adjusted in accordance with the provisions set forth below.

(iii) Procedure. The determination and adjustment of Additional Rent payable hereunder shall be made in accordance with the following procedures:

(A) Delivery of Estimate; Payment. Upon receipt of a statement from Landlord specifying the estimated Operating Costs to be charged to Sublandlord under the Master Lease (the "**Landlord's Estimate Statement**") with respect to each calendar year, or as soon after receipt of such statement as practicable, Sublandlord shall give Subtenant written notice (the "**Sublandlord's Estimate Statement**") of Sublandlord's estimate of Additional Rent payable for the ensuing calendar year, which will be prepared based on the Landlord's Estimate Statement, together with a copy of the Landlord's Estimate Statement on which Sublandlord's Estimate Statement is based. On or before the first day of each month during each calendar year or applicable portion thereof, Subtenant shall pay to Sublandlord as Additional Rent one-twelfth (1/12th) of such estimated amount (together with, if then payable, the Base Rent due hereunder).

(B) Sublandlord's Failure to Deliver Sublandlord's Estimate Statement. In the event Sublandlord's Estimate Statement is not given on or before December 31 of the calendar year preceding the calendar year for which Sublandlord's Estimate Statement would be applicable, then until the calendar month after such notice is delivered by Sublandlord, Subtenant shall continue to pay to Sublandlord monthly, during the ensuing calendar year, estimated payments equal to the amounts payable hereunder during the calendar year just ended. Upon receipt of any such post-December Sublandlord's Estimate Statement Subtenant shall (i) commence as of the immediately following calendar month, and continue for the remainder of the calendar year, to pay to Sublandlord monthly such new estimated payments and (ii) if the monthly installment of the new estimate of such Additional Rent is greater than the monthly installment of the estimate for the previous calendar year, pay to Sublandlord within thirty (30) days of the receipt of such notice an amount equal to the difference of such monthly installment multiplied by the number of full and partial calendar months of such year preceding the delivery of such notice.

(iv) Year End Reconciliation. Following the receipt by Sublandlord of a final Statement (as defined in the Master Lease) from Landlord with respect to each calendar year (the "**Landlord's Annual Statement**"), Sublandlord shall deliver to Subtenant a statement ("**Sublandlord's Annual Statement**") of the adjustment to be made pursuant to Section 3(b) above for the calendar year just ended, together with a copy of any corresponding Landlord's Annual Statement received by Sublandlord from Landlord. If on the basis of Sublandlord's Annual Statement Subtenant owes an amount that is less than the estimated payments actually made by Subtenant for the calendar year just ended, Sublandlord shall credit such excess to the next payments of Rent coming due or, if the term of this Sublease is about to expire, promptly refund such excess to Subtenant. Under and overpayments of Subtenant's Operating Expense shall be reconciled pursuant to the third sentence of Section 4.4.1 of the Original Master Lease.

(v) Audit. If, within sixty (60) days following receipt of both the Landlord's Annual Statement and Sublandlord's Annual Statement, Subtenant reasonably believes that an audit is necessary, it shall deliver written notice to Sublandlord ("Audit Notice") that it desires Sublandlord to exercise its audit right pursuant to Section 4.6 of the Master Lease. If Sublandlord has not yet initiated an audit for such year pursuant to Section 4.6 of the Master Lease, it shall do so promptly following receipt of the Audit Notice. Unless Sublandlord has already initiated an audit prior to the receipt of the Audit Notice, Subtenant shall pay for the costs of such audit, subject to the reimbursement rights set forth in Section 4.6 of the Master Lease. If Sublandlord exercises its audit rights following receipt of an Audit Notice, it shall work with Subtenant in good faith to finalize such audit. Regardless of who initiates the audit pursuant to Section 4.6 of the Master Lease, any reimbursements shall be shared equitably between Subtenant and Sublandlord.

(vi) Survival. The expiration or earlier termination of this Sublease shall not affect the obligations of Sublandlord and Subtenant pursuant to Subsection 3(b)(iv), and such obligations shall survive, and remain to be performed after, any expiration or earlier termination of this Sublease.

(c) Costs Attributable to Laboratory Use. In addition to the payment of Subtenant's Percentage Share of Operating Costs provided for hereinabove, Subtenant shall be solely responsible for the payment of 100% of any costs (whether or not otherwise included in Operating Costs) attributable to, or incurred or payable by Sublandlord as a consequence of, Subtenant's use of any portion of the Subleased Premises for the Laboratory Use, as determined by Sublandlord in its reasonable judgement and following the delivery of reasonable documentation supporting said additional costs. If not otherwise included as a special allocation to Subtenant of any such costs in the Operating Cost payments made by Subtenant, Sublandlord will invoice Subtenant, on a periodic basis, for any such costs, and Subtenant shall pay such costs as additional Rent hereunder within fifteen (15) days following Sublandlord's delivery of any such invoice to Subtenant.

4. Letter of Credit.

(a) Initial Letter of Credit. Following execution of this Sublease, Subtenant shall work diligently to deliver to Sublandlord, but in any event within fifteen (15) days following the Effective Date, as collateral for the full performance by Subtenant of all of

Subtenant's obligations under this Sublease and for all losses and damages Sublandlord may suffer as a result of Subtenant's failure to comply with one or more provisions of this Sublease, including, but not limited to, any post lease termination damages under section 1951.2 of the California Civil Code, an unconditional, irrevocable, transferable standby letter of credit (the "**Initial Letter of Credit**") in the form attached hereto as **Exhibit H** in the amount of $5,708,655.96 (the "**Letter of Credit Amount**"), issued by a financial institution (the "**Issuing Bank**") acceptable to Sublandlord; provided that Sublandlord hereby approves Silicon Valley Bank as an Issuing Bank. The Letter of Credit shall be "callable" at sight, permit partial draws and multiple presentations and drawings, and be otherwise subject to the International Standby Practices-ISP 98, International Chamber of Commerce Publication #590. Subtenant shall cause the Letter of Credit to be continuously maintained in effect (whether through a Replacement Letter of Credit (defined below), amendment, renewal or extension) through the date (the "**Final Letter of Credit Expiration Date**") that is the later to occur of (i) the date that is sixty (60) days after the scheduled Expiration Date and (ii) the date that is sixty (60) days after Subtenant vacates the Subleased Premises and completes all removal, restoration and repair obligations.

(b) Drawing Under Letter of Credit. Without prejudice to any other remedy available to Sublandlord under this Sublease or at law, Sublandlord may draw upon the Initial Letter of Credit or any Replacement Letter of Credit on or after the occurrence of either: (i) any Default (as defined in Section 9); (ii) any failure by Subtenant to deliver to Sublandlord a Replacement Letter of Credit as and when required pursuant to this Section 4; (iii) an uncured failure by Subtenant to perform one or more of its obligations under this Sublease and the existence of circumstances in which Sublandlord is enjoined or otherwise prevented by operation of law from delivering a written notice to Subtenant which would be necessary for such failure of performance to constitute a Default, or (iv) the appointment of a receiver to take possession of all or substantially all of the assets of Subtenant, or an assignment of Subtenant for the benefit of creditors, or any action taken or suffered by Subtenant under any insolvency, bankruptcy, reorganization or other debtor relief proceedings, whether now existing or hereafter amended or enacted; provided that in the event of the circumstances described in either of clause (i) or (iii) above, Sublandlord may, at Sublandlord's sole option, draw upon a portion of the face amount of the Initial Letter of Credit or any Replacement Letter of Credit, as applicable, as required to compensate Sublandlord for damages incurred (with subsequent demands at Sublandlord's sole election as Sublandlord incurs further damage). Subtenant will not interfere in any way with payment to Sublandlord of the proceeds of the Letter of Credit, either prior to or following a draw by Sublandlord of any portion of the Letter of Credit, regardless of whether any dispute exists between Subtenant and Sublandlord as to Sublandlord 's right to draw upon the Letter of Credit. No condition or term of this Sublease shall be deemed to render the Letter of Credit conditional to justify the issuer of the Letter of Credit in failing to honor a drawing upon such Letter of Credit in a timely manner.

(c) Delivery of Replacement Letter of Credit. Subtenant shall deliver to Sublandlord a new letter of credit (a "**Replacement Letter of Credit**") (the Initial Letter of Credit and/or any Replacement Letter of Credit being referred to herein as a "**Letter of Credit**") at least thirty (30) days prior to the expiry date of the Initial Letter of Credit or of any Replacement Letter of Credit held by Sublandlord. Each Replacement Letter of Credit delivered by Subtenant to Sublandlord shall: (i) be issued by a banking institution acceptable to Sublandlord; (ii) be in the same form as the letter of credit attached to this Sublease as **Exhibit H**; (iii) bear an initial expiry date not earlier than one (1) year from the date when such Replacement Letter of Credit is delivered

to Sublandlord; (iv) be in an amount not less than the Letter of Credit Amount; and (v) otherwise comply with the provisions of this Section 4. Upon the delivery to Sublandlord of a Replacement Letter of Credit as described in this Section 4(c), Sublandlord shall return to Subtenant the Initial Letter of Credit or any previous Replacement Letter of Credit then held by Sublandlord.

(d) Proceeds of Draw. Subtenant acknowledges that (i) the Letter of Credit constitutes a separate and independent contract between Sublandlord and the Issuing Bank, (ii) Subtenant is not a third party beneficiary of such contract, (iii) Subtenant has no property interest whatsoever in the Letter of Credit or the proceeds thereof, and (iv) in the event Subtenant becomes a debtor under any chapter of the U.S. Bankruptcy Code (the "**Bankruptcy Code**"), neither Subtenant, any trustee, nor Subtenant's bankruptcy estate shall have any right to restrict or limit Sublandlord's claim and/or rights to the Letter of Credit and/or the proceeds thereof by application of Section 502(b)(6) of the Bankruptcy Code or otherwise. Sublandlord may immediately upon any draw permitted hereunder (and without notice to Subtenant except as may be expressly provided in this Sublease) apply or offset the proceeds of the Letter of Credit: (i) against any Rent payable by Subtenant under this Sublease that is not paid when due following any applicable notice and cure periods; (ii) against all losses and damages that Sublandlord has suffered or that Sublandlord reasonably estimates that it may suffer as a result of Subtenant's failure to comply with one or more provisions of this Sublease, including any damages arising under section 1951.2 of the California Civil Code following termination of this Sublease, to the extent permitted by this Sublease; (iii) against any costs incurred by Sublandlord permitted to be reimbursed pursuant to this Sublease (including attorneys' fees); and (iv) against any other amount that Sublandlord may spend or become obligated to spend by reason of Subtenant's Default for which Sublandlord shall be entitled to seek reimbursement in accordance with this Sublease. Subtenant (I) agrees that the proceeds of any draw by Sublandlord will not be deemed to be or treated as a "security deposit" under the Security Deposit Laws (defined below), 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. The amount of any proceeds of a draw upon the Letter of Credit received by Sublandlord, and not (a) applied against any Rent payable by Subtenant under this Sublease that was not paid when due or (b) used to pay for any losses and/or damages suffered by Sublandlord (or reasonably estimated by Sublandlord that it will suffer) as a result of any breach or Default by Subtenant (the "**Unused L-C Proceeds**"), shall be paid by Sublandlord to Subtenant (x) upon receipt by Sublandlord of a Replacement Letter of Credit in the full Letter of Credit Amount, which Replacement Letter of Credit shall comply in all respects with the requirements of this Section 4, or (y) within thirty (30) days after the Final Letter of Credit Expiration Date; provided, however, that if prior to the Final Letter of Credit Expiration Date a voluntary petition is filed by Subtenant, or an involuntary petition is filed against Subtenant by any of Subtenant's creditors, under the Bankruptcy Code, then Sublandlord 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 Sublease have been resolved in such bankruptcy or reorganization case or such bankruptcy or reorganization case has been dismissed.

(e) Sublandlord's Transfer. If Sublandlord conveys or transfers its interest in the Subleased Premises and, as a part of such conveyance or transfer, Sublandlord assigns its interest in this Sublease: (i) any Letter of Credit shall be transferred to Sublandlord's successor; (ii) Sublandlord shall be released and discharged from any further liability to Subtenant with respect to such Letter of Credit; and (iii) any Replacement Letter of Credit thereafter delivered by Subtenant shall state the name of the successor to Sublandlord as the beneficiary of such

Replacement Letter of Credit and shall contain such modifications in the text of the Replacement Letter of Credit as are required to appropriately reflect the transfer of the interest of Sublandlord in the Subleased Premises.

(f) Additional Covenants of Subtenant. If, as result of any application or use by Sublandlord of all or any part of the Letter of Credit, the amount of the Letter of Credit plus any cash proceeds previously drawn by Sublandlord and not applied pursuant to this Section 4 shall be less than the Letter of Credit Amount (subject to any reduction permitted in accordance with Section 4(h) below), Subtenant shall, within fifteen (15) days thereafter, provide Sublandlord with additional letter(s) of credit in an amount equal to the deficiency (or a replacement or amended letter of credit in the total Letter of Credit Amount), and any such additional (or replacement or amended) letter of credit shall comply with all of the provisions of this Section 4; if Subtenant fails to timely comply with the foregoing, then notwithstanding anything to the contrary contained in this Sublease, the same shall constitute a Default by Subtenant. Subtenant further covenants and warrants that it will neither assign nor encumber the Letter of Credit or any part thereof and that neither Sublandlord nor its successors or assigns will be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance.

(g) Nature of Letter of Credit. Sublandlord and Subtenant (i) acknowledge and agree that in no event or circumstance shall the Letter of Credit or any renewal thereof or substitute therefor or any proceeds thereof be deemed to be or treated as a "security deposit" under any law applicable to security deposits in the commercial context including Section 1950.7 of the California Civil Code (as now existing or hereafter amended or succeeded, "**Security Deposit Laws**"), (ii) acknowledge and agree that the Letter of Credit (including any renewal thereof or substitute therefor or any proceed thereof) is not intended to serve as a security deposit, and the Security Deposit Laws shall have no applicability or relevancy thereto, and (iii) 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.

(h) Reduction in Letter of Credit Amount. Provided that Subtenant has not previously been in Default prior to the effective date of the reduction request and further provided that Subtenant is not in Default at the time of such request, upon written request by Subtenant given at any time after the first day of the forty-ninth (49th) full calendar month of the Term, the Letter of Credit Amount shall be reduced to $3,805,770.64. Such reduction in the Letter of Credit Amount shall be accomplished by Subtenant providing Sublandlord with a Replacement Letter of Credit or an amendment to the then-current Letter of Credit in the reduced amount, in either case in form and substance satisfactory to Sublandlord.

5. Use and Occupancy.

(a) Use. The Subleased Premises shall be used and occupied for general office use. In addition, subject to the requirements of Landlord in effect from time to time and subject to and in accordance with the provisions of **Exhibit I** attached hereto, Subtenant may use portions of the Subleased Premises for laboratory research and development purposes ("**Laboratory Use**") (provided, however, that with respect to any portion of the 8th Floor Subleased Premises that Subtenant converts from office use to Laboratory Use, Subtenant must remove all Laboratory Use improvements at the end of the Term or earlier termination of this

Sublease and restore the prior office use tenant improvements in place thereof if required by Landlord).

(b) Compliance with Master Lease. Subtenant will occupy the Subleased Premises in accordance with the terms of the Master Lease and will not suffer to be done, or omit to do, any act which may result in a violation of or a default under the Master Lease, or render Sublandlord liable for any damage, charge or expense thereunder. Subtenant will indemnify, defend, protect and hold Sublandlord harmless from and against any loss, cost, damage or liability (including attorneys' fees) of any kind or nature arising out of, by reason of, or resulting from, Subtenant's failure to perform or observe any of the terms and conditions of the Master Lease or this Sublease. Any other provision in this Sublease to the contrary notwithstanding, Subtenant shall pay to Sublandlord as Rent hereunder any and all sums which Sublandlord may be required to pay the Landlord arising out of a request by Subtenant for, or the use by Subtenant of, additional or over-standard Building services from Landlord (for example, but not by way of limitation, charges associated with HVAC usage and electrical charges).

(c) Access. Subject to the terms of the Master Lease and this Sublease, Subtenant and each of its authorized employees and invitees ("**Subtenant Parties**") shall have access to the North Lobby, the Parking Facility and the Bicycle Storage Area in common with other occupants of the Complex. Subtenant shall not have the right to access to or use any other areas within the Complex except as may be designated in writing by Sublandlord from time to time. Sublandlord shall be the sole determinant of the type and amount of any access control or guard services to be provided to the Complex, if any.

(d) Stairwells. Subject to Section 5.5 of the Original Master Lease, Subtenant shall be permitted to utilize the stairwells between the floors of the Subleased Premises for the purpose of movement from one floor of the Subleased Premises to another. Subject to Sublandlord and Landlord's approval, Subtenant may additionally securitize the stairwells between the floors of the Subleased Premises and make cosmetic alterations, so long as such alterations comply with Applicable Laws and Subtenant receives all necessary Governmental Approvals for such alterations.

(e) Black Box Theatre. So long as Subtenant is not in Default hereunder, Sublandlord shall use commercially reasonable efforts to make available the auditorium located on the first (1st) floor of the South Building (the "**Black Box Theatre**") for Subtenant's use for special events to be held by Subtenant, with the mutual expectation that Subtenant anticipates that it will want to use the Black Box Theater once per month. 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 Sublandlord may reasonably establish from time to time for use of the Black Box Theatre (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 Sublandlord's costs and expenses reasonably incurred in facilitating such use by Subtenant, and cleaning/security deposits); provided, however, that once Subtenant has properly booked the use of the Black Box Theater for a particular date and time, such booking may not be cancelled without Subtenant's prior consent; provided, further, that if requested by Subtenant, Sublandlord will provide a schedule of available dates and times for use of the Black Box Theater. In connection with each use of the Black Box Theatre Subtenant shall enter into Sublandlord's then-current form of Facility License Agreement for the Black Box Theatre. Subtenant's use of

the Black Box Theatre shall be at Subtenant's sole risk and Subtenant acknowledges and agrees that Sublandlord shall have no liability whatsoever to Subtenant, its employees and/or visitors for personal injury or property damage or theft relating to or connected with any use of the Black Box Theatre by Subtenant or its employees and/or visitors. Sublandlord specifically reserves the right to change the location, size, configuration, design, layout and all other aspects of the Black Box Theatre at any time and Subtenant acknowledges and agrees that Sublandlord may from time to time, on a temporary basis, or on a permanent basis, close, close-off or restrict access to the Black Box Theatre. The right to use the Black Box Theatre may not be assigned or in any other way transferred to any other person or entity. Subtenant acknowledges that the waiver of claims and indemnification provided in this Sublease apply to the use of the Black Box Theatre by Subtenant and Subtenant Parties.

6. Services.

(a) Landlord's Obligations. Subtenant agrees that Sublandlord shall not be required to perform any of the covenants, agreements and/or obligations of Landlord under the Master Lease, and, insofar as any of the covenants, agreements and obligations of Sublandlord hereunder are required to be performed under the Master Lease by Landlord thereunder, Subtenant acknowledges and agrees that Sublandlord shall be entitled to look to Landlord for such performance. In addition, Sublandlord shall have no obligation to perform any repairs or any other obligation of Landlord under the Master Lease, nor shall any representations or warranties made by Landlord under the Master Lease be deemed to have been made by Sublandlord. Sublandlord shall not be responsible for any failure or interruption, for any reason whatsoever, of the services or facilities that may be appurtenant to or supplied at the Building by Landlord or otherwise, including, without limitation, heat, air conditioning, ventilation, life-safety, water, electricity, elevator service and cleaning service, if any; and no failure to furnish, or interruption of, any such services or facilities shall give rise to any (i) abatement, diminution or reduction of Subtenant's obligations under this Sublease, or (ii) liability on the part of Sublandlord. Notwithstanding the foregoing, Sublandlord shall use good faith efforts, under the circumstances, to secure such performance upon Subtenant's request to Sublandlord to do so and shall thereafter diligently prosecute such performance on the part of Landlord, provided that in no event will this sentence be construed to require Sublandlord to commence any litigation or similar proceeding against Landlord.

(b) Janitorial Services. During the Term, Subtenant will be responsible for providing janitorial services to the Subleased Premises at its sole cost and expense, using a janitorial contractor approved by Sublandlord, such approval not to be unreasonably withheld, conditioned or delayed (provided, however, that Sublandlord hereby preapproves AC Janitorial Service and CW Maintenance as janitorial contractors that may be retained by Subtenant). Subtenant shall determine the scope, level of service and frequency of service that it desires to be provided by such janitorial contractor; provided; however, that such janitorial service shall at least be consistent with the standards of other first-class, institutionally owned office buildings in San Francisco.

(c) Electricity. Pursuant to the Master Lease, the cost of all electrical consumption in the Master Lease Premises is borne by Sublandlord. From and after the Commencement Date for each portion of the Subleased Premises and thereafter throughout the Term, Subtenant shall be obligated to pay for the cost of electrical consumption in the applicable

portion of the Subleased Premises, as reflected by the "Submetering Equipment" installed by Sublandlord for the Subleased Premises and portions thereof. Sublandlord will invoice Subtenant, on a monthly basis, for the cost of the electrical consumption as shown on such Submetering Equipment, based on any invoice received by Sublandlord from Landlord, and Subtenant shall pay such costs as additional Rent hereunder within fifteen (15) days following Sublandlord's delivery of any such invoice to Subtenant. Sublandlord reserves the right at its sole election to (i) reasonably estimate Subtenant's consumption of electricity in the Subleased Premises or any portion thereof or any equipment serving the Subleased Premises, or (ii) install additional submetering equipment to monitor energy usage in the Subleased Premises or any portion thereof or any equipment serving the Subleased Premises, in which case the cost of such additional submetering equipment shall be borne solely by Subtenant.

(d) Gas. Pursuant to the Master Lease, Landlord causes gas to be supplied to the Project and the cost thereof is included in Operating Expenses. Landlord's approval shall be required if Subtenant desires gas service within the Subleased Premises. In the event that Landlord approves such request, the cost of installing any equipment and lines necessary for such service shall be at Subtenant's sole cost and expense, including, without limitation, the cost of installing and maintaining submeters to monitor such gas usage within the Subleased Premises. Sublandlord will invoice Subtenant periodically for such direct gas use as shown on such submeters (as a direct expense and not part of Operating Costs) and Subtenant shall be paid by Subtenant within fifteen (15) days following Sublandlord's delivery of any such invoice to Subtenant.

(e) HVAC. Under the Master Lease, Landlord provides HVAC services for the Master Lease Premises (including the Subleased Premises) for normal comfort for normal office use, assuming an office occupancy density no greater than one (1) person for any 125 RSF of space, from 8:00 A.M. to 6:00 P.M. Monday through Friday (the "**Building Hours**"), except for Holidays (as defined in the Master Lease). Subtenant shall cooperate fully with Sublandlord and Landlord at all times and abide by all regulations and requirements that Landlord and Sublandlord may reasonably prescribe for the proper functioning and protection of the HVAC System (as defined in the Master Lease). If Subtenant desires to use HVAC during hours other than Building Hours, Subtenant shall give Sublandlord and Landlord's property management office such prior notice (which shall be via telephone or an on-line system), if any, as Landlord reasonably shall from time to time establish as appropriate, of Subtenant's desired after-hours use of HVAC, and Subtenant shall endeavor to cause Landlord to supply such HVAC to Subtenant at such hourly cost to Subtenant (which shall be treated as Additional Rent).

(f) Building System. During the Term, Subtenant, at its sole cost and expense, will be responsible for maintaining and repairing (i) the Building Systems serving the Subleased Premises and located within the Subleased Premises, and (ii) the Building Systems solely serving the Subleased Premises and located outside of the Subleased Premises (including any Supplemental HVAC Equipment (defined below)). Such maintenance and repair service must be provided by contractors approved by Sublandlord pursuant to separate contracts between Subtenant and such contractors, which contracts must be in form and substance satisfactory to Sublandlord and copies of which must be delivered to Sublandlord promptly following the execution thereof. Such maintenance will be provided in a manner reasonably commensurate in scope, level of maintenance and frequency of maintenance as, and not less than the scope, level of maintenance and frequency of maintenance than, the maintenance provided by Sublandlord to the

portions of the Master Lease Premises occupied by Sublandlord and in any event consistent with the operation of a LEED Platinum Building. Notwithstanding the foregoing, Sublandlord warrants that the Subleased Premises, improvements and Building Systems serving the Sublease Premises are in good, clean, safe, and usable condition as of the Commencement Date. If a material breach of the foregoing representation exists, and Subtenant, within sixty (60) days following the Commencement Date, delivers written notice to Sublandlord setting forth in reasonable detail a description of such material breach, Sublandlord shall, as Subtenant's sole and exclusive remedy, rectify the same at Sublandlord's sole cost and expense.

(g) Supplemental HVAC Equipment. Subject to Landlord and Sublandlord's prior consent, Subtenant shall have the right to install supplemental HVAC equipment serving all or any portion of the Subleased Premises ("**Supplement HVAC Equipment**"). Any such Supplemental HVAC Equipment shall be installed pursuant to the terms of the Work Agreement and shall be subject to Section 6.4 of the Original Master Lease. Subtenant shall be solely responsible for the cost of maintaining and repairing such Supplement HVAC Equipment pursuant to Section 6(f) above. Subject to the Master Lease, Subtenant will have 24/7 use and control of the Supplemental HVAC Equipment at Subtenant's sole cost and expense, which shall not be subject to the charges set forth in section (e) above.

(h) Security System. Sublandlord currently has a security system monitoring access to the Master Lease Premises. Subtenant acknowledges that there are card readers installed throughout the Subleased Premises which are part of Sublandlord's security system. Sublandlord shall leave all such card readers in place during the Term, and Subtenant shall not interfere with, adjust or damage any such card readers. Notwithstanding the foregoing, Subtenant shall have the right to use such existing card readers governing access to the Subleased Premises. To the fullest extent permitted under applicable law, Subtenant hereby acknowledges that except for making the card key reader system available for Subtenant's use and except for servicing and maintaining the system, Sublandlord shall not be responsible for providing security services to Subtenant, and that Subtenant shall be solely responsible for providing its own security service for the Subleased Premises, if any. Sublandlord shall provide such cards for the sole purpose of providing Subtenant with access to the Subleased Premises. Sublandlord may from time to time adopt systems and procedures for the security and safety of the Building and Complex, its occupants, entry, use and contents. Subtenant, its agents, employees, contractors, guests and invitees shall comply with Sublandlord's systems and procedures, including those certain systems and procedures set forth on **Exhibit J** attached hereto. Notwithstanding the foregoing, Subtenant shall have the right, at Subtenant's sole cost and expense, to provide such supplemental security services and to install its own security system and security cameras for the Subleased Premises, provided that Subtenant's security system is compatible with Sublandlord's security system and such security system and security cameras shall be considered Subtenant Improvements and subject to the terms of this Sublease; and Sublandlord agrees to reasonably cooperate and confer with Subtenant in connection therewith. The determination of the extent to which such alternative or supplemental security equipment, systems and procedures are reasonably required shall be made in the sole judgment, and shall be the sole responsibility, of Subtenant. Subtenant acknowledges that it has neither received nor relied upon any representation or warranty made by or on behalf of Sublandlord with respect to the safety or security of the Subleased Premises or the Complex or any part thereof or the extent or effectiveness of any security measures or procedures now or hereafter provided by Sublandlord, and further acknowledges that Subtenant has made its own independent determinations with respect to all such matters.

(i) Loading Dock. Subject to the terms and conditions of Section 6.1.12 of the Original Master Lease, Subtenant shall have the right to use the loading dock in the North Tower; provided, that (i) Subtenant shall schedule Subtenant's use of such loading dock with Sublandlord at least 24 hours in advance (provided, however, in the event that Subtenant has not given such advance notice, Subtenant'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 Sublandlord; provided, however, if Subtenant requests access to the loading dock outside of the Loading Dock Hours, Subtenant shall pay Sublandlord an after-hours charge of $50 per visit for Sublandlord to engage its security personnel in connection with such loading dock access (such after-hours charge subject to adjustment by Sublandlord from time to time). The foregoing restrictions set forth in subsection (ii) shall not apply to Subtenant's initial move-in to the Subleased Premises and the loading dock shall be made available for Subtenant's initial move-in without charge; provided, that Subtenant shall reasonably coordinate such initial move-in with Sublandlord and Landlord.

(j) Mailrooms. Subtenant shall have no access rights to any of the Sublandlord's mailrooms located in the Complex. Subtenant shall have reasonable access rights to the USPS mailroom serving the entire Complex. Subtenant shall be solely responsible for (i) securing an address with the post office for the Subleased Premises, and (ii) developing and implementing a system to collect mail, packages and other deliveries from the loading dock in the North Tower (such loading dock access shall be subject to Section 6(i) above).

(k) Cabling. Subject to Section 15 below, Subtenant shall have the right to install within the Subleased Premises, at Subtenant's sole cost and expense, electronic, fiber, phone and data cabling and related equipment for the exclusive benefit of Subtenant (collectively, "**Cable**"). Sublandlord and Landlord may designate specific contractors with respect to oversight, installation, repair, connection to, and removal of any Cable. All Cable installed by Subtenant shall be marked and coded, in a manner reasonably acceptable to Sublandlord, to identify such facilities as belonging to Subtenant and the point of commencement and termination of such facilities. Subject to the foregoing and Section 6.1.8 of the Original Master Lease, Sublandlord shall permit Subtenant to utilize the Buildings risers, raceways, shafts and conduit, provided that there is available space in the Buildings risers, raceways, shafts and/or conduit for Sublandlord's reasonable use, which availability shall be determined by Sublandlord. Sublandlord shall have the right to reroute the planned location of Subtenant's cabling in such risers, raceways, shafts and conduit, as reasonably determined by Sublandlord.

(l) MicroKitchen. Subtenant acknowledges that the Subleased Premises will include a "microkitchen". Subtenant, at Subtenant's sole cost and expense, shall be responsible for ensuring that the operation of such microkitchen complies with all Applicable Laws during the Term, including, but not limited to, obtaining any health permits necessary to operate such microkitchen.

(m) Waste Disposal System. Subtenant acknowledges that Landlord and/or Sublandlord may impose a coordinated waste disposal system for the Complex. Subtenant shall comply with the rules and regulations set forth by Landlord and/or Sublandlord with respect to such coordinated waste disposal system.

(n) Tenant Generators. As described in Section 2 of the Seventh Amendment, the Master Lease Premises (including the Subleased Premises) is served by Tenant Generators. During the Term, Sublandlord shall operate and maintain the Tenant Generators in accordance with the terms of Section 2 of the Seventh Amendment, and the cost thereof will be deemed to be an Operating Cost and Subtenant will pay to Sublandlord Subtenant's Percentage Share of such costs in the manner generally provided for in Section 3(b) above.

7. Master Lease and Sublease Terms.

(a) Subject to Master Lease. This Sublease is and shall be at all times subject and subordinate to the Master Lease. Subtenant acknowledges that Subtenant has reviewed and is familiar with all of the terms, agreements, covenants and conditions of the Master Lease. During the Term and for all periods subsequent thereto with respect to obligations which have arisen prior to the termination of this Sublease, Subtenant agrees to perform and comply with, for the benefit of Sublandlord and Landlord, the obligations of Sublandlord under the Master Lease which pertain to the Subleased Premises and/or this Sublease, except for those provisions of the Master Lease which are directly contradicted by this Sublease, in which event the terms of this Sublease document shall control over the Master Lease.

(b) Incorporation of Terms of Master Lease. The terms, conditions and respective obligations of Sublandlord and Subtenant to each other under this Sublease shall be the terms and conditions of the Master Lease, except for those provisions of the Master Lease which are directly contradicted by this Sublease, in which event the terms of this Sublease shall control over the Master Lease. Therefore, for the purposes of this Sublease, wherever in the Master Lease the word "Landlord" is used it shall be deemed to mean Sublandlord and wherever in the Master Lease the word "Tenant" is used it shall be deemed to mean Subtenant. Additionally, wherever in the Master Lease the word "Premises" is used it shall be deemed to mean the Subleased Premises and all references to Tenant's Share shall be deemed to be references to the Subtenant's Percentage Share as the same may be applicable to the Sublease Premises only. Any non-liability, release, indemnity or hold harmless provision in the Master Lease for the benefit of Landlord that is incorporated herein by reference, shall be deemed to inure to the benefit of Sublandlord, Landlord, and any other person intended to be benefited by said provision, for the purpose of incorporation by reference in this Sublease. Any right of Landlord under the Master Lease (i) of access or inspection, (ii) to do work in the Master Lease Premises or in the Building, (iii) in respect of rules and regulations, which is incorporated herein by reference, shall be deemed to inure to the benefit of Sublandlord, Landlord, and any other person intended to be benefited by said provision, for the purpose of incorporation by reference in this Sublease.

(c) Modifications. For the purposes of incorporation herein, the terms of the Master Lease are subject to the following additional modifications:

(i) Approvals. In all provisions of the Master Lease (under the terms thereof and without regard to modifications thereof for purposes of incorporation into this Sublease) requiring the approval or consent of Landlord, Subtenant shall be required to obtain the approval or consent of both Sublandlord and Landlord. Sublandlord shall act diligently and use Sublandlord's commercially reasonable efforts to obtain Landlord's approval or consent when the same is requested by Subtenant; provided, however, that such efforts by Sublandlord shall be at

no expense to Sublandlord, and Subtenant shall be solely responsible for any costs or expenses incurred or charged by Landlord in connection with such approval or consent.

(ii) Deliveries. In all provisions of the Master Lease requiring Tenant to submit, exhibit to, supply or provide Landlord with evidence, certificates or any other matter or thing, Subtenant shall be required to submit, exhibit to, supply or provide, as the case may be, the same to both Landlord and Sublandlord.

(iii) Damage; Condemnation. Sublandlord shall have no obligation to restore or rebuild any portion of the Subleased Premises after any destruction or taking by eminent domain and any such restoration or repair shall be governed by the terms and provisions of the Master Lease. Any rights of Subtenant to abatement of Rent shall be conditioned upon Sublandlord's ability to abate rent for the Subleased Premises under the terms of the Master Lease.

(iv) Insurance. In all provisions of the Master Lease requiring Tenant to designate Landlord, and any other party specified by Landlord, as additional or named insureds on its insurance policy, Subtenant shall be required to so designate Landlord, Sublandlord and any other parties specified by either Landlord or Sublandlord on its insurance policy. Sublandlord shall have no obligation to maintain the insurance to be maintained by Landlord under the Master Lease. In addition to the insurance coverages required to be maintained by Subtenant pursuant to the requirements of the Master Lease, Subtenant's CGL insurance will include a Medical and Biotechnology endorsement (Traveler's form CG D4 30 02 19 or equivalent) (the "Medical and Biotech Coverage"); provided, however, that Sublandlord reserves the right to require Subtenant to carry such additional Medical and Biotech Coverage as Sublandlord may reasonably require from time to time in the event that there is a material change in the type or extent of Subtenant's Laboratory Use in the Subleased Premises.

(d) Exclusions. Notwithstanding the terms of Section 7(b) above, Subtenant shall have no rights or obligations under the following parts, Sections and Exhibits of the Master Lease:

(i) Original Master Lease: Summary of Basic Lease Information, Section 1.1.1, Article 2, Article 3, Sections 4.2.4 (last paragraph), 4.2.6, 4.4.1, 4.4.2, 4.4.4 and 4.6 (each of section 4.4.2, 4.4.4 and 4.6 superseded by Subsection 3(b)(iv) and (v) above), Section 5.4, Section 6.1.7 (superseded by Section 6(i) above), Sections 6.1.10, 6.1.11, 6.1.12 and 6.1.13, Section 7.1, Section 8.1 (penultimate sentence only), Sections 10.2 and 10.6, Sections 14.2 (provisions regarding deemed consent only) and 14.4.1, Article 16 (superseded by section 16 below), Article 18, Sections 19.1.1, 19.1.2 (superseded by clause (a) of Section 9 below), 19.1.4 (superseded by clause (b) of Section 9 below), 19.5.2 (provided that if Sublandlord is entitled to an abatement of rent payable under the Master Lease pursuant to said Section 19.5.2 as a consequence of an Abatement Event which affects the Subleased Premises, Subtenant will be entitled to a corresponding abatement of Rent payable hereunder) and 19.6, Article 21, Article 22, Sections 23.1, 23.3 (superseded by Section 18 below), 23.5 and 23.7, Section 24.2, Article 28 (superseded by Section 17 below), Sections 29.13, 29.18, 29.21, 29.22, 29.24, 29.40 and 29.42, Article 30, Exhibit B, Exhibit C, Exhibit G, Exhibits I and I-1, Exhibits J and J-1, and Exhibit K.

(ii) First Amendment. All excluded.

(iii) Second Amendment. All excluded.

(iv) Third Amendment. None excluded.

(v) Fourth Amendment. All excluded.

(vi) Fifth Amendment. All excluded.

(vii) Sixth Amendment. None excluded.

(viii) Seventh Amendment. All excluded.

8. Assignment and Subletting. Subtenant shall not assign this Sublease or further sublet all or any part of the Subleased Premises except subject to and in compliance with all of the terms and conditions of the Master Lease, and Sublandlord (in addition to Landlord) shall have the same rights with respect to assignment and subleasing as Landlord has under the Master Lease. Subtenant shall pay all fees and costs payable to Landlord pursuant to the Master Lease (not to exceed $2,500) in connection with all of Sublandlord's reasonable out-of-pocket costs relating to any proposed assignment, sublease or transfer of the Subleased Premises regardless of whether any required consent is granted, and the effectiveness of any such consent shall be conditioned upon Landlord's and Sublandlord's receipt of all such fees and costs. Notwithstanding anything to the contrary in the Master Lease or this Sublease, Subtenant shall not have the right to Transfer (i) to any Transferee that is a competitor of Sublandlord (such list of current competitors is attached hereto as **Exhibit K** and may be updated from time to time in Sublandlord's reasonable discretion, but not more than once per year and which list shall not name more than 12 entities at any given time**)**, (ii) to any Transferee that is a news or media organization, or (iii) to any Transferee that is a "vice" company (such as Juul and PAX) as reasonably determined by Sublandlord.

9. Default. It shall constitute a "**Default**" hereunder if Subtenant fails to perform any obligation hereunder (including, without limitation, the obligation to pay Rent), or any obligation under the Master Lease which has been incorporated herein by reference and, in each instance, Subtenant has not remedied such failure (a) in the case of any monetary Default, three (3) business days after delivery of written notice and (b) in the case of any other Default, ten (10) calendar days after delivery of written notice; provided, however, that if the Default is incapable of cure within ten (10) days, then for so long as Sublandlord has not received notice from Landlord stating that Landlord will treat such Default as a "Default" under the Master Lease, Subtenant shall not be in Default hereunder if Subtenant commences the cure within the ten (10) day period and thereafter diligently prosecutes the cure to completion; however, if at any time Sublandlord receives notice from Landlord that the Default will be treated as a "Default" under the Master Lease, Subtenant's cure period will immediately be deemed to expire ten (10) days before the date of expiration of Sublandlord's cure period as set forth in Landlord's notice of default to Sublandlord.

10. Remedies. In the event of any Default hereunder by Subtenant, Sublandlord shall have all remedies provided to the "Landlord" in the Master Lease as if a default had occurred thereunder and all other rights and remedies otherwise available at law and in equity. Sublandlord may resort to its remedies cumulatively or in the alternative.

11. Right to Cure Defaults. If Subtenant fails to perform any of its obligations under this Sublease after expiration of applicable grace or cure periods, then Sublandlord may, but shall not be obligated to, perform any such obligations for Subtenant's account. All costs and expenses incurred by Sublandlord in performing any such act for the account of Subtenant shall be deemed Rent payable by Subtenant to Sublandlord upon demand, together with interest thereon at the lesser of (a) ten percent (10%) per annum or (b) the maximum rate allowable under law from the date of the expenditure until repaid. If Sublandlord undertakes to perform any of Subtenant's obligations for the account of Subtenant pursuant hereto, the taking of such action shall not constitute a waiver of any of Sublandlord's remedies. Subtenant hereby expressly waives its rights under any statute to make repairs at the expense of Sublandlord.

12. Consents and Approvals. In any instance when Sublandlord's consent or approval is required under this Sublease, Sublandlord's refusal to consent to or approve any matter or thing shall be deemed reasonable if, among other matters, such consent or approval is required under the provisions of the Master Lease incorporated herein by reference but has not been obtained from Landlord. Except as otherwise provided herein, Sublandlord shall not unreasonably withhold, or delay its consent to or approval of a matter if such consent or approval is required under the provisions of the Master Lease and Landlord has consented to or approved of such matter.

13. Sublandlord's Liability. Notwithstanding any other term or provision of this Sublease, the liability of Sublandlord to Subtenant for any default in Sublandlord's obligations under this Sublease shall be limited to actual, direct damages, and under no circumstances shall Subtenant, its partners, members, shareholders, directors, agents, officers, employees, contractors, sublessees, successors and/or assigns be entitled to recover from Sublandlord (or otherwise be indemnified by Sublandlord) for (a) any losses, costs, claims, causes of action, damages or other liability incurred in connection with a failure of Landlord, its partners, members, shareholders, directors, agents, officers, employees, contractors, successors and/or assigns to perform or cause to be performed Landlord's obligations under the Master Lease, (b) lost revenues, lost profit or other consequential, special or punitive damages arising in connection with this Sublease for any reason, or (c) any damages or other liability arising from or incurred in connection with the condition of the Subleased Premises or suitability of the Subleased Premises for Subtenant's intended uses. Subtenant shall, however, have the right to seek any injunctive or other equitable remedies as may be available to Subtenant under applicable law. Further, Sublandlord shall not be liable to Subtenant, and Subtenant hereby waives any claim against Sublandlord, for any losses, costs, claims, causes of action, damages or other liability incurred or suffered as a consequence of any unauthorized or criminal entry of third parties into the Subleased Premises, the North Tower or the Complex, including, without limitation, any harm to persons or loss or theft of, or damage to, property, regardless of any action, inaction, failure, malfunction and/or insufficiency of any access controls or security guard services provided by Sublandlord, if any. Notwithstanding any other term or provision of this Sublease, no personal liability shall at any time be asserted or enforceable against Sublandlord's shareholders, directors, officers or partners on account of any of Sublandlord's obligations or actions under this Sublease. In the event of any assignment or transfer of Sublandlord's interest under this Sublease, which assignment or transfer may occur at any time in Sublandlord's sole discretion, Sublandlord shall be and hereby is entirely relieved of all covenants and obligations of Sublandlord hereunder accruing subsequent to the date of the transfer and it shall be deemed and construed, without further agreement between the parties hereto, that any transferee has assumed and shall carry out all covenants and obligations thereafter

to be performed by Sublandlord hereunder. Sublandlord may transfer and deliver any then existing Letter of Credit to the transferee of Sublandlord's interest under this Sublease, and thereupon Sublandlord shall be discharged from any further liability with respect thereto.

14. Attorneys' Fees. If Sublandlord or Subtenant brings an action to enforce the terms hereof or to declare rights hereunder, the prevailing party who recovers substantially all of the damages, equitable relief or other remedy sought in any such action on trial and appeal shall be entitled to receive from the other party its costs associated therewith, including, without limitation, reasonable attorneys' fees and costs from the other party. Without limiting the generality of the foregoing, if Sublandlord utilizes the services of an attorney for the purpose of collecting any Rent due and unpaid by Subtenant, or in connection with any other breach of this Sublease by Subtenant, Subtenant agrees to pay Sublandlord reasonable actual attorneys' fees as determined by Sublandlord for such services, irrespective of whether any legal action may be commenced or filed by Sublandlord.

15. Delivery of Possession.

(a) Generally. Sublandlord shall deliver, and Subtenant shall accept, possession of the Subleased Premises in their "AS IS" condition as the Subleased Premises exists on the Effective Date, except for those punchlist items set forth on **Exhibit D** which Sublandlord shall use commercially reasonable efforts to complete promptly following the Effective Date. Sublandlord shall have no obligation to furnish, render or supply any work, labor, services, materials, furniture other than the Furniture (as defined below), fixtures, equipment, decorations or other items to make the Subleased Premises ready or suitable for Subtenant's occupancy. In entering into this Sublease, Subtenant has relied solely on such investigations, examinations and inspections as Subtenant has chosen to make or has made and has not relied on any representation or warranty concerning the Subleased Premises or the Complex, except as expressly set forth in this Sublease. Subtenant acknowledges that Sublandlord has afforded Subtenant the opportunity for full and complete investigations, examinations and inspections of the Subleased Premises and the common areas of the Complex. Subtenant acknowledges that it is not authorized to make or do any alterations or improvements in or to the Subleased Premises except as permitted by the provisions of this Sublease and the Master Lease and that, upon termination of this Sublease, Subtenant shall deliver the Subleased Premises to Sublandlord in the same condition as the Subleased Premises were at the commencement of the Term, reasonable wear and tear excepted; provided, that Subtenant shall have no obligation to remove any of the Subtenant Initial Improvements constructed in accordance with this Sublease unless expressly stated otherwise in this Sublease. Notwithstanding the foregoing, if Subtenant enters into a direct lease agreement with Landlord with respect to the Subleased Premises and the term of such lease extends beyond Sublandlord's term under the Sublease, then Subtenant shall be solely responsible for any and all restoration obligations under the Sublease with respect to the Subleased Premises.

(b) Subtenant Improvements.

(i) Generally. The Subtenant Initial Improvements shall be constructed in accordance with the Work Agreement. Following the completion thereof, if Subtenant at any time desires to construct other improvements within the Subleased Premises ("**Subtenant Improvements**"), all Subtenant Improvements shall be carried out in accordance with the applicable provisions of the Master Lease. Sublandlord will have the right to approve the

plans and specifications for any proposed Subtenant Improvements, as well as any contractors whom Subtenant proposes to retain to perform such work. Subtenant will submit all such information for Sublandlord's review and written approval prior to commencement of any such work; Sublandlord will similarly submit such plans to Landlord for review and approval. Promptly following the completion of any Subtenant Improvements or subsequent alterations or additions by or on behalf of Subtenant, Subtenant will deliver to Sublandlord a reproducible copy of "as built" drawings of such work together with a CAD file of the "as-built" drawings in the then-current version of AutoCad.

(ii) Code-Required Work. If the performance of any Subtenant Improvements or other work by Subtenant within the Subleased Premises "triggers" a requirement for code-related upgrades to or improvements of any portion of the Building, Subtenant shall be responsible for the cost of such code-required upgrade or improvements; provided, however, in no event shall Subtenant be responsible for correcting any building code or other violations which were violations prior to the Commencement Date.

(c) In addition to the terms, restrictions and obligations set forth in the Master Lease (including, but not limited to, Articles 8 and 15 of the Original Master Lease), the following shall apply to any Subtenant Improvements:

(i) The Subtenant Improvements shall not affect the Base Building except with prior written approval of Sublandlord and Landlord;

(ii) With respect to any work related to the Subtenant Improvements that is expected to be unusually disruptive to other occupants of the Complex (including, but not limited to, any core drilling or work related to the concrete flooring), such work shall be scheduled at such times and undertaken in such manner as shall be reasonably approved by Sublandlord, but in any event Sublandlord shall approve such work taking place between the hours of 6pm and 7am. If Sublandlord reasonably believes that any of the work related to the Subtenant Improvements being done is unusually disruptive and it has not approved a schedule of the same, it shall provide notice thereof to Subtenant after which such work shall thereafter be subject to the scheduling requirements of this Section 15(c)(ii);

(iii) Subtenant shall, and shall cause its contractors and subcontractors, to use commercially reasonable efforts to minimize any disruption to Sublandlord's, or any other occupant's, use and enjoyment of the Master Lease Premises;

(iv) Notwithstanding anything in the Master Lease to the contrary (including, but not limited to, Section 8.1 of the Original Master Lease), Sublandlord's prior consent is required for any and all Subtenant Improvements;

(v) If Sublandlord incurs any additional costs related to after-hours security provided to the Complex in connection with the construction of any Subtenant Improvements, Subtenant shall be solely responsible for such additional costs.

(vi) Notwithstanding anything in the Master Lease to the contrary (including, but not limited to Sections 8.5 and 15.2 of the Original Master Lease), upon the expiration of the Term, or any earlier termination of this Sublease, Subtenant shall remove or caused to be removed from the Premises (i) any Subtenant Improvements (other than the Subtenant

Initial Improvements constructed in accordance with the Work Agreement) that Sublandlord designates for removal concurrently with Sublandlord's approval of such Subtenant Improvements, and (ii) any Lab Equipment. As used herein "**Lab Equipment**" shall mean laboratory related equipment, fixtures and furnishings, including, but not limited to, laboratory benches and vented fume hoods and biosafety cabinets.

(d) Subtenant's Initial Improvements. Subtenant shall construct the Subtenant Initial Improvements as set forth in the Work Agreement.

16. Holding Over. If Subtenant fails to surrender the Subleased Premises at the expiration or earlier termination of this Sublease, occupancy of the Subleased Premises after the termination or expiration shall be that of a tenancy at sufferance. Subtenant's occupancy of the Subleased Premises during the holdover shall be subject to all the terms and provisions of this Sublease and Subtenant shall pay an amount (on a per month basis without reduction for partial months during the holdover) equal to 150% of the sum of the Base Rent and Additional Rent due for the period immediately preceding the holdover. No holdover by Subtenant or payment by Subtenant after the expiration or early termination of this Sublease shall be construed to extend the Term or prevent Sublandlord from immediate recovery of possession of the Subleased Premises by summary proceedings or otherwise. In addition to the payment of the amounts provided above, if Sublandlord is unable to deliver possession of the Subleased Premises to a new subtenant or to Landlord, as the case may be, or to perform improvements for a new subtenant, as a result of Subtenant's holdover, Subtenant shall be liable to Sublandlord for all damages, including, without limitation, consequential damages, that Sublandlord suffers from the holdover. Subtenant expressly acknowledges that such damages may include all of the holdover rent charged by Landlord under the Master Lease as a result of Subtenant's holdover, which Master Lease holdover rent may apply to the entire Master Lease Premises.

17. Parking. Subject to the terms of this Article 17, commencing on the applicable Commencement Date for each portion of the Subleased Premises and continuing thereafter on a monthly basis throughout the Term of this Sublease, Subtenant shall be obligated to rent from Sublandlord one (1) Parking Pass for every 1,000 RSF of such portion of the Subleased Premises. Such Parking Passes shall be for the parking of standard size passenger automobiles, on an unassigned, unreserved basis, within the Parking Facility in the Project. The charge for each such Parking Pass shall be the prevailing rate charged from time to time by Landlord or Landlord's Parking Operator, as applicable (the current charge for each Parking Pass as of the Effective Date is $345.00 plus tax), and shall be paid monthly in advance to the Parking Operator or Landlord, as applicable, either by the particular employee of Subtenant who holds a Parking Pass or directly by Subtenant. The use of such Parking Passes shall be subject to and in accordance with such rules and requirements as may be imposed from time to time by Landlord or Landlord's Parking Operator; and contracts for Parking Passes shall be entered into by each employee of Subtenant who holds a Parking Pass or directly by Subtenant with the Landlord or Landlord's Parking Operator, as applicable, and shall contain such terms and conditions as are typically contained in contracts with other users of the Parking Facility. Sublandlord does not assume any responsibility, and shall not be held liable, for any damage or loss to any automobile or personal property in or about the Parking Facility, or for any injury sustained by any person in or about the Parking Facility.

18. Signage. Subject to Landlord's consent, Subtenant will be entitled to Building-standard identification signage in the elevator lobby or lobbies serving the Subleased Premises as well as in any ground floor Building lobby directory. Subtenant shall be solely responsible, at Subtenant's sole cost and expense, for the installation and removal of such signage. Subtenant's signage in any ground floor Building Lobby will be limited to 9" x 18", and will be the monochromatic/black and white lettering or logo for Subtenant. Additionally, with the prior written consent of Sublandlord and Landlord, and in compliance with the provisions of the Master Lease, Subtenant may, at Subtenant'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 Subtenant 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 Sublease.

19. Notices: Any notice by either party to the other required, permitted or provided for herein shall be valid only if in writing and shall be deemed to be duly given only if (a) delivered personally, or (b) sent by means of Federal Express, UPS Next Day Air or another reputable express mail delivery service guaranteeing next day delivery, or (c) sent by United States certified mail, return receipt requested, addressed: (i) if to Sublandlord, at the following addresses:

Dropbox, Inc.
1800 Owens Street, Suite 200
San Francisco, California 94158
Attn: Legal Department

with a copy to:

Dropbox, Inc.
1800 Owens Street, Suite 200
San Francisco, California 94158
Attn: Head of Real Estate and Workplace

with a copy by electronic mail to: contract.notices@dropbox.com

and (ii) if to Subtenant, at the following address:

Vir Biotechnology, Inc.
499 Illinois Street, Suite 500
San Francisco, CA 94158
Attn: 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, CA 94158
Attn: Head of Real Estate and Facilities

with a copy to (which shall not constitute, nor be required for effective, notice):

Cooley LLP
101 California St, 5th Fl
San Francisco, California 94111
Attn: Marlena C. Schultz

or at such other address for either party as that party may designate by notice to the other. A notice shall be deemed given and effective, if delivered personally, upon hand delivery thereof (unless such delivery takes place after hours or on a holiday or weekend, in which event the notice shall be deemed given on the next succeeding business day), if sent via overnight courier, on the business day next succeeding delivery to the courier, and if mailed by United States certified or registered mail, three (3) business days following such mailing in accordance with this Section.

20. Furniture.

(a) Generally. During the Term, at no charge to Subtenant, Subtenant shall be permitted to use the modular and office furniture to be located in the 8th Floor Subleased Premises and 9th Floor Subleased Premises provided by Sublandlord and described in more detail in **Exhibit L** attached hereto (the "**Furniture**"). Subtenant shall accept the Furniture in its current condition without any warranty of fitness from Sublandlord (Subtenant expressly acknowledges that no warranty is made by Sublandlord with respect to the condition of any cabling currently located in or serving the Subleased Premises). For purposes of documenting the current condition of the Furniture, Subtenant and Sublandlord shall, prior to the Commencement Date, conduct a joint walk-through of the Subleased Premises in order to inventory items of damage or disrepair. Subtenant shall use the Furniture only for the purposes for which such Furniture is intended and shall be responsible for the proper maintenance, insurance, care and repair of the Furniture, at Subtenant's sole cost and expense.

(b) Automatic Transfer of Furniture to Subtenant. In consideration of Subtenant's performance of its obligations under this Sublease, as of the date that is thirty (30) days prior to the Expiration Date (the "**Furniture Transfer Date**"), all of Sublandlord's right, title and interest in and to the Furniture shall automatically be transferred to Subtenant. The Furniture shall be so transferred to Subtenant on an "as is" basis with no representation or warranty of any kind from, and no recourse against, Sublandlord; provided, however, that Sublandlord represents and warrants as of the Effective Date that it owns all of the Furniture free and clear of all liens and encumbrances and has the authority to so transfer the Furniture. Thereafter, Subtenant shall be solely responsible for the proper removal of the Furniture from the Subleased Premises and the Building in accordance with the terms and provisions of the Master Lease. The transfer of ownership of the Furniture shall occur automatically on the Furniture Transfer Date and this Sublease shall constitute a bill of sale evidencing the transfer of the Furniture on the Furniture Transfer Date, unless otherwise agreed to in a writing signed by both Sublandlord and Subtenant. Notwithstanding the foregoing provisions of this Section 20 to the contrary, if this Sublease is terminated due to a Default of Subtenant hereunder, then at Sublandlord's election, the automatic transfer of all of Sublandlord's right, title and interest in and to the Furniture shall be voidable by Sublandlord. If Sublandlord so elects to void such transfer, then Sublandlord shall provide notice of such election to Subtenant. In such event, (i) prior to or promptly following the expiration or earlier termination of this Sublease, Sublandlord shall conduct a walk-through of the Subleased Premises to catalog any items of damage, disrepair, misuse or loss among the Furniture (reasonable wear and tear excepted), and (ii) Subtenant shall be responsible, at Subtenant's sole cost and expense, for curing any such items (including, with respect to loss, compensating Sublandlord for the cost of such lost item taking into account depreciation of such item). Notwithstanding the foregoing, if Subtenant chooses to convert the 8th Floor Premises and/or the 9th Floor Premises to lab use and decides it no longer has use for all or any portion of the Furniture, it shall so notify Sublandlord and Sublandlord shall retain possession of such Furniture identified in Subtenant's notice and remove such Furniture from the 8th Floor Premises and/or 9th Floor Premises, as applicable, at Subtenant's cost.

21. Brokers. Subtenant represents that it has dealt directly with and only with Newmark Knight Frank ("**Subtenant's Broker**"), as a broker in connection with this Sublease. Sublandlord represents that it has dealt directly with and only with CBRE, Inc. ("**Sublandlord's Broker**"), as a broker in connection with this Sublease. Sublandlord and Subtenant shall

indemnify and hold each other harmless from all claims of any brokers other than Subtenant's Broker and Sublandlord's Broker claiming to have represented Sublandlord or Subtenant in connection with this Sublease. Subtenant and Sublandlord agree that Subtenant's Broker and Sublandlord's Broker shall be paid commissions by Sublandlord in connection with this Sublease pursuant to a separate agreement.

22. No Press Release. Each party agrees, on behalf of itself, its employees, agents, brokers, attorneys and advisors, that they will not issue any press release or other similar public communication about this Sublease or the fact of Subtenant taking space at the Subleased Premises without first obtaining the other party's prior written consent. Each party will take the appropriate actions to ensure that its employees, agents, brokers, attorneys and advisors will abide by these requirements.

23. Sublandlord Representations, Warranties and Covenants. As a material inducement to Subtenant entering into this Sublease, Sublandlord hereby represents, warrants and covenants to Subtenant as follows:

(a) Sublandlord shall pay, prior to delinquency, all Base Rent, Additional Rent and other charges payable by Sublandlord to Landlord under the Master Lease, unless such charges are reasonably contested by Sublandlord.

(b) Sublandlord covenants that it will maintain the Master Lease in full force and effect during the entire Sublease Term (except in the event of an occurrence that gives Sublandlord the right to terminate the Master Lease in accordance with the terms thereof or in the event that Landlord agrees to recognize this Sublease as a direct lease of the Subleased Premises between Landlord and Subtenant) and to comply with or perform or cause to be performed Sublandlord's obligations with respect to the Reserved Premises and with any obligations with respect to the Sublease Premises that are not otherwise Subtenant's responsibility hereunder (collectively, "**Sublandlord's Remaining Obligations**"), and to indemnify Subtenant against and hold Subtenant harmless from all claims, demands, actions, proceedings, suits, liabilities, losses, judgements, expenses (including reasonable attorney's fees) and damages of any kind whatsoever (collectively, "**Claims**"), arising out of (1) Sublandlord's failure to comply with or perform Sublandlord's Remaining Obligations, (2) Sublandlord's use and occupancy of or occurrence in, the Reserved Premises, and (3) termination or forfeiture of the Master Lease resulting from Sublandlord's default thereunder.

(c) Sublandlord covenants (1) not to voluntarily surrender the Sublease Premises to Master Landlord (except in the event that Landlord agrees to recognize this Sublease as a direct lease of the Subleased Premises between Landlord and Subtenant), and (2) not to enter into any amendment or other agreement with respect to the Master Lease which will prevent to a material extent or materially adversely affect Subtenant's use of the Sublease Premises in accordance with the terms of this Sublease, increase Subtenant's obligations or decrease Subtenant's rights under this Sublease to a material extent, or shorten the term of this Sublease or increase the rental or any other sums Subtenant is required to pay under this Sublease to a material extent.

(d) Sublandlord represents and warrants that it has full power and authority to enter into this Sublease, subject to the consent of Landlord.

(e) As of the Effective Date hereof, Sublandlord has no current actual knowledge of any material noncompliance with applicable laws and codes affecting the Sublease Premises.

(f) To Sublandlord's current actual knowledge, as of the Effective Date: (i) Sublandlord is not in default under the Master Lease, (ii) Landlord is not in default under the Master Lease, and (iii) no event has occurred which but for the passage of time or the giving of notice would result in a default by either Sublandlord or Landlord under the Master Lease.

(g) Attached as **Exhibit A** is a full and complete copy of the Master Lease (with the redactions noted therein) and all other agreements between Landlord and Sublandlord relating to the leasing, use, and occupancy of the Sublease Premises as of the Effective Date hereof.

24. Complete Agreement. There are no representations, warranties, agreements, arrangements or understandings, oral or written, between the parties or their representatives relating to the subject matter of this Sublease which are not fully expressed in this Sublease. This Sublease cannot be changed or terminated nor may any of its provisions be waived orally or in any manner other than by a written agreement executed by both parties.

25. Interpretation. Irrespective of the place of execution or performance, this Sublease shall be governed by and construed in accordance with the laws of the State of California. If any provision of this Sublease or the application thereof to any person or circumstance shall, for any reason and to any extent, be invalid or unenforceable, the remainder of this Sublease and the application of that provision to other persons or circumstances shall not be affected but rather shall be enforced to the extent permitted by law. The table of contents, captions, headings and titles, if any, in this Sublease are solely for convenience of reference and shall not affect its interpretation. This Sublease shall be construed without regard to any presumption or other rule requiring construction against the party causing this Sublease or any part thereof to be drafted. If any words or phrases in this Sublease shall have been stricken out or otherwise eliminated, whether or not any other words or phrases have been added, this Sublease shall be construed as if the words or phrases so stricken out or otherwise eliminated were never included in this Sublease and no implication or inference shall be drawn from the fact that said words or phrases were so stricken out or otherwise eliminated. Each covenant, agreement, obligation or other provision of this Sublease shall be deemed and construed as a separate and independent covenant of the party bound by, undertaking or making same, not dependent on any other provision of this Sublease unless otherwise expressly provided. All terms and words used in this Sublease, regardless of the number or gender in which they are used, shall be deemed to include any other number and any other gender as the context may require. The word "person" as used in this Sublease shall mean a natural person or persons, a partnership, a corporation or any other form of business or legal association or entity.

26. Civil Code Section 1938. The Subleased Premises have not been issued a disability access inspection certificate or undergone inspection by a Certified Access Specialist ("**CASp**"). The following notice is given pursuant to California Civil Code Section 1938: "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 the 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." Sublandlord and Subtenant hereby agree that if Subtenant elects to perform a CASp inspection of the Subleased Premises, Subtenant will provide written notice to Sublandlord, and Sublandlord may elect, in Sublandlord's reasonable discretion, to retain a CASp to perform the inspection. If Sublandlord does not so elect, the time and manner of the CASp inspection is subject to the prior written approval of Sublandlord. In either event, the payment of the fee for the CASp inspection shall be borne by Subtenant. The cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises shall be borne by Subtenant.

27. USA Patriot Act Disclosures. Subtenant is currently in compliance with and shall at all times during the Term remain in compliance with the regulations of the Office of Foreign Asset Control ("**OFAC**") of the Department of the Treasury (including those named on OFAC's Specially Designated and Blocked Persons List) and any 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 relating thereto.

28. Counterparts. This Sublease may be executed in multiple counterparts, each of which is deemed an original but which together constitute one and the same instrument. This Sublease shall be fully executed when each party whose signature is required has signed and delivered to each of the parties at least one counterpart, even though no single counterpart contains the signatures of all of the parties hereto. This Sublease 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.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto hereby execute this Sublease as of the Effective Date.

SUBLANDLORD:	DROPBOX, INC., a Delaware corporation
By:	*/s/ Tim Regan*
Print Name:	Tim Regan
Title:	CFO
SUBTENANT:	VIR BIOTECHNOLOGY, INC., a Delaware corporation
By:	*/s/ George Scangos*
Print Name:	George Scangos
Title:	CEO
By:	*/s/ Howard Horn*
Print Name:	Howard Horn
Title:	CFO

[PLEASE REVIEW AND COMPLY WITH THE FOLLOWING SIGNATURE GUIDELINES]

Unless evidence of actual signature authority is provided for a corporate Subtenant (a "**Corporation**"), this Sublease must be executed by the appropriate combination of signatories. Accordingly, the individuals signing above hereby represent and warrant that at least one of the individuals signing above is one of the following:

(x) the chairman of the board, the president or a vice president of the Corporation; and

that the other individual is one of the following:

(y) the secretary, assistant secretary, the chief financial officer or assistant treasurer of the Corporation.

However, a single individual signing alone for the Corporation is deemed to represent and warrant that such individual holds at least two corporate offices with one office in each of the two categories listed above (i.e., subsections (x) and (y) above).

EXHIBIT A

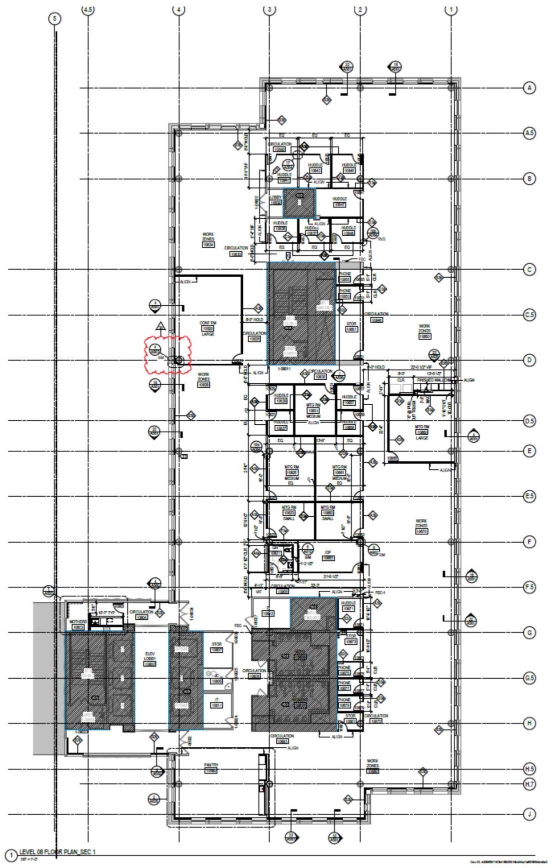
Master Lease

[SEE ATTACHED]

EXHIBIT B

Subleased Premises

[SEE ATTACHED]



LEVEL 08 FLOOR PLAN_SEC 1

GENERAL NOTES - CONSTRUCTION PLAN

A. ALL INTERIOR PARTITIONS SHALL BE "A3a" UNLESS NOTED OTHERWISE. ALL INTERIOR PARTITIONS AT CONFERENCE, HUDDLE AND PHONE ROOMS ABUTTING ANOTHER ROOM OF THE SAME TYPE OR ABUTTING A TOILET ROOM SHALL BE "D3a" UNLESS NOTED OTHERWISE.
B. PLAN DIMENSIONS ARE FROM FACE OF FINISH WHERE "HOLD" OR "CLEAR" ARE INDICATED. ALL OTHER PLAN DIMENSIONS ARE FROM FACE OF PARTITION TYPE AND DO NOT INCLUDE APPLIED FINISHES UNLESS NOTED OTHERWISE.
C. ENSURE FINISH SURFACES ARE FLUSH AND SEAMLESS WHERE PARTITIONS AND/OR FURRING ARE COPLANAR.
D. ALL PIPING, CONDUITS AND RELATED MECHANICAL AND ELECTRICAL ITEMS SHALL BE CONCEALED WITHIN PARTITION/WALL ASSEMBLY IN FINISHED AREAS UNLESS NOTED OTHERWISE.
E. PROVIDE BACKING/BLOCKING TO SUPPORT ALL WALL-MOUNTED ITEMS.
F. ALL MECHANICAL EQUIPMENT PADS TO BE 4" HIGH MINIMUM, UNLESS NOTED OTHERWISE. SIZE OF PADS TO BE VERIFIED BY CONTRACTOR.
G. REFER TO DETAIL 2/1A304 FOR DETAIL OF TYPICAL DOOR JAMB AT ABUTTING WALLS OR PARTITIONS.
H. ALL EXISTING FLOOR OPENINGS AND DEPRESSIONS IN THE WORK AREA SHALL BE FILLED OR CLOSED, UNLESS NOTED OTHERWISE, WITH MATERIALS TO MATCH ADJACENT SURFACES, FINISHES AND FIRE RATINGS.
J. REFER TO SHEETS A621-625 FOR TYPICAL PHONE, HUDDLE, MEETING ROOM AND PRINT STATIONS INFORMATION.
K. PROVIDE ASSISTED LISTENING DEVICES PER CBC 11B219.10 & 11B219.2
L. PROVIDE LACTATION ROOM COMPLIANCE PER SFBC 1210.6
M. PROVIDE WALL FURRING AT EXTERIOR WALLS AS REQUIRED AT ALL FLOORS AND ALL SECTORS.

KEYNOTES - FLOOR PLAN

#	DESCRIPTION
1	HATCHED AREA NOT IN SCOPE
2	ALL WORKOUT EQUIPMENT N.I.C.
3	ACCESS PANEL
4	MODIFY EXISTING OPENING TO SWING DOOR TO EXTERIOR. PROVIDE NEW DOOR HARDWARE WITH ELECTRIFIED LOCKSET AT EXTERIOR AND EXIT DEVICE AT INTERIOR OF DOOR.
5	NEW OPENING WITHIN EXISTING EXTERIOR ENVELOPE SYSTEM WITH EGRESS DOOR, REFER TO DEMO PLANS AND DOOR SCHEDULE
6	REMOVE EXISTING 1 HR WALL AND REPLACE WITH 2 HOUR WALL AS SHOWN
7	NEW FIRE DEPT VALVE CABINET
8	DEMOLISH EXISTING DOOR. PROVIDE NEW LEVEL 3 BULLET RESISTANT DOOR.
9	DEMOLISH WALL SHEATHING. PROVIDE <FRP-2> AND <GYP BD-2>.
11	EXISTING BUILDING SEISMIC JOINT
12	EXISTING EXPOSED CONCRETE CURB OR WALL PROVIDE CONDUITS
13	EXISTING BEAM ABOVE
14	MODIFY EXISTING DOOR HARDWARE. DEACTIVATE CARD READER FUNCTION. BLANK OFF EXTERIOR DOOR HARDWARE.
15	BULKHEAD ABOVE
16	REMOVE EXISTING DOOR AND FRAME, PROVIDE NEW DOOR AND FRAME AS REQUIRED FOR CLEARANCE OF THE NEW FLOORING, DOOR AND FRAME TO MATCH EXISTING
17	EQUIPMENT DASHED FOR FUTURE INSTALLATION IN BAKERY + CATERING PREP COOKING. REFER TO FOOD SERVICE CONSULTANTS DRAWINGS FOR ADDITIONAL INFORMATION.
19	STUD TO SIT ON EXISTING CONCRETE CURB, INSTALL GYP BOARD PAST FRONT FACE
20	SOLID GRAY HATCHED AREA NOT IN PACKAGE OR PREVIOUSLY ISSUED
21	PATCH WALL AT REMOVED DISPLAY BOX AS REQUIRED
22	EXISTING "GREEN PIPE" STORM WATER DRAIN
23	JOG WALL ABOVE CEILING IF IT EXISTS AS REQUIRED TO MISS FIRE SMOKE DAMPER AND DUCT WORK SEE SECTION
24	REFER TO KRBS DRAWINGS. PROVIDE BLOCKING FOR SHELVING AS REQUIRED
25	EXISTING "BLUE PIPE(S)"
26	ALL HARDWARE TO BE MATTE BLACK
27	FOR AV IN THIS ROOM SEE AV PLANS AND ELEVATIONS
28	NO VISIBLE JOGS AT THE VENTILATION DUCTWORK
29	COORDINATE COL. LOCATION WITH GRILLE AT WALL.

HGA

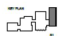
JOHNSTONMARKLEE

1545 PONTIUS AVENUE
LOS ANGELES, CA 90025
310.442.4886

DROPBOX

1800 Owens St
San Francisco,
CA 94117

KEY PLAN



S1

NO	DESCRIPTION	DATE
30	BULLETIN 30	1/6/2020

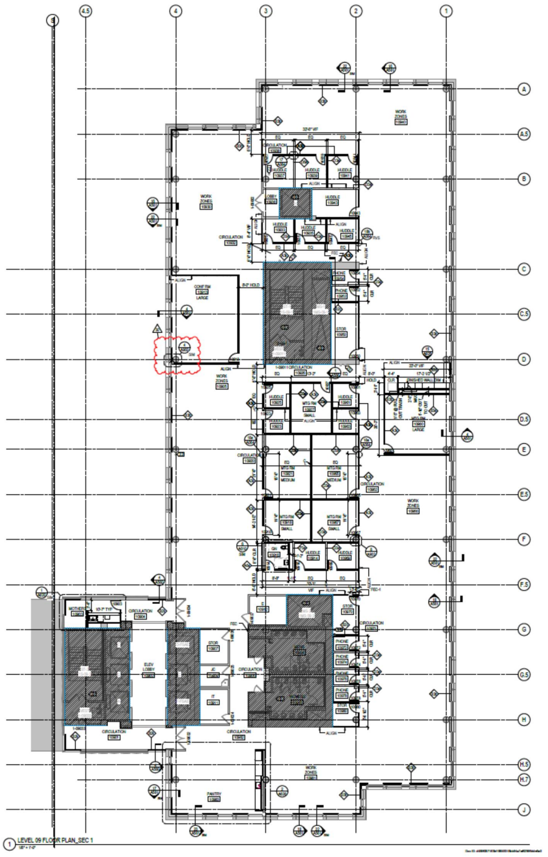
HGA NO: 4190-001-00

LEVEL 08 FLOOR PLAN - S1

DATE: DECEMBER 24, 2019

CONSTRUCTION DOCUMENTS

A208.1



1 LEVEL 09 FLOOR PLAN_SEC 1

GENERAL NOTES - CONSTRUCTION PLAN

A. ALL INTERIOR PARTITIONS SHALL BE "A3a" UNLESS NOTED OTHERWISE. ALL INTERIOR PARTITIONS AT CONFERENCE, HUDDLE AND PHONE ROOMS ABUTTING ANOTHER ROOM OF THE SAME TYPE OR ABUTTING A TOILET ROOM SHALL BE "D3a" UNLESS NOTED OTHERWISE.
B. PLAN DIMENSIONS ARE FROM FACE OF FINISH WHERE "HOLD" OR "CLEAR" ARE INDICATED. ALL OTHER PLAN DIMENSIONS ARE FROM FACE OF PARTITION TYPE AND DO NOT INCLUDE APPLIED FINISHES UNLESS NOTED OTHERWISE.
C. ENSURE FINISH SURFACES ARE FLUSH AND SEAMLESS WHERE PARTITIONS AND/OR FURRING ARE COPLANAR.
D. ALL PIPING, CONDUITS AND RELATED MECHANICAL AND ELECTRICAL ITEMS SHALL BE CONCEALED WITHIN PARTITION/WALL ASSEMBLY IN FINISHED AREAS UNLESS NOTED OTHERWISE.
E. PROVIDE BACKING/BLOCKING TO SUPPORT ALL WALL-MOUNTED ITEMS.
F. ALL MECHANICAL EQUIPMENT PADS TO BE 4" HIGH MINIMUM, UNLESS NOTED OTHERWISE. SIZE OF PADS TO BE VERIFIED BY CONTRACTOR.
G. REFER TO DETAIL 27 / A584 FOR DETAIL OF TYPICAL DOOR JAMB AT ABUTTING WALLS OR PARTITIONS.
H. ALL EXISTING FLOOR OPENINGS AND DEPRESSIONS IN THE WORK AREA SHALL BE FILLED OR CLOSED, UNLESS NOTED OTHERWISE, WITH MATERIALS TO MATCH ADJACENT SURFACES, FINISHES AND FIRE RATINGS.
J. REFER TO SHEETS A621-625 FOR TYPICAL PHONE, HUDDLE, MEETING ROOM AND PRINT STATIONS INFORMATION.
K. PROVIDE ASSISTED LISTENING DEVICES PER CBC 11B216.10 & 11B219.2
L. PROVIDE LACTATION ROOM COMPLIANCE PER SFBC 1210.6
M. PROVIDE WALL FURRING AT EXTERIOR WALLS AS REQUIRED AT ALL FLOORS AND ALL SECTORS.

KEYNOTES - FLOOR PLAN

#	DESCRIPTION
1	HATCHED AREA NOT IN SCOPE
2	ALL WORKOUT EQUIPMENT N.I.C.
3	ACCESS PANEL
4	MODIFY EXISTING OPENING TO SWING DOOR TO EXTERIOR. PROVIDE NEW DOOR HARDWARE WITH ELECTRIFIED LOCKSET AT EXTERIOR AND EXIT DEVICE AT INTERIOR OF DOOR.
5	NEW OPENING WITHIN EXISTING EXTERIOR ENVELOPE SYSTEM WITH EGRESS DOOR, REFER TO DEMO PLANS AND DOOR SCHEDULE
6	REMOVE EXISTING 1 HR WALL AND REPLACE WITH 2 HOUR WALL AS SHOWN
7	NEW FIRE DEPT VALVE CABINET
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9	DEMOLISH WALL SHEATHING. PROVIDE <FRP-2> AND <GYP BD-2>.
11	EXISTING BUILDING SEISMIC JOINT
12	EXISTING EXPOSED CONCRETE CURB OR WALL. PROVIDE CONDUITS
13	EXISTING BEAM ABOVE
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26	ALL HARDWARE TO BE MATTE BLACK
27	FOR AV IN THIS ROOM SEE AV PLANS AND ELEVATIONS
28	NO VISIBLE JOGS AT THE VENTILATION DUCTWORK
29	COORDINATE COL. LOCATION WITH GRILLE AT WALL

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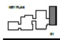

NO	DESCRIPTION	DATE
30	BULLETIN 30	1/8/2020

HGA NO: 4190-001-00

LEVEL 09 FLOOR PLAN - S1

DATE: DECEMBER 24, 2019

CONSTRUCTION DOCUMENTS

A209.1

1 LEVEL 10 FLOOR PLAN_SEC 1

GENERAL NOTES - CONSTRUCTION PLAN

A. ALL INTERIOR PARTITIONS SHALL BE "A3a" UNLESS NOTED OTHERWISE. ALL INTERIOR PARTITIONS AT CONFERENCE, HUDDLE AND PHONE ROOMS ABUTTING ANOTHER ROOM OF THE SAME TYPE OR ABUTTING A TOILET ROOM SHALL BE "D3a" UNLESS NOTED OTHERWISE.
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C. ENSURE FINISH SURFACES ARE FLUSH AND SEAMLESS WHERE PARTITIONS AND/OR FURRING ARE COPLANAR.
D. ALL PIPING, CONDUITS AND RELATED MECHANICAL AND ELECTRICAL ITEMS SHALL BE CONCEALED WITHIN PARTITION/WALL ASSEMBLY IN FINISHED AREAS UNLESS NOTED OTHERWISE.
E. PROVIDE BACKING/BLOCKING TO SUPPORT ALL WALL-MOUNTED ITEMS.
F. ALL MECHANICAL EQUIPMENT PADS TO BE 4" HIGH MINIMUM, UNLESS NOTED OTHERWISE. SIZE OF PADS TO BE VERIFIED BY CONTRACTOR.
G. REFER TO DETAIL 27/A584 FOR DETAIL OF TYPICAL DOOR JAMB AT ABUTTING WALLS OR PARTITIONS.
H. ALL EXISTING FLOOR OPENINGS AND DEPRESSIONS IN THE WORK AREA SHALL BE FILLED OR CLOSED, UNLESS NOTED OTHERWISE, WITH MATERIALS TO MATCH ADJACENT SURFACES, FINISHES AND FIRE RATINGS.
J. REFER TO SHEETS A621-625 FOR TYPICAL PHONE, HUDDLE, MEETING ROOM AND PRINT STATIONS INFORMATION.
K. PROVIDE ASSISTED LISTENING DEVICES PER CBC 11B216.10 & 11B219.2
L. PROVIDE LACTATION ROOM COMPLIANCE PER SFBC 1210.6
M. PROVIDE WALL FURRING AT EXTERIOR WALLS AS REQUIRED AT ALL FLOORS AND ALL SECTORS.

KEYNOTES - FLOOR PLAN

#	DESCRIPTION
1	HATCHED AREA NOT IN SCOPE
2	ALL WORKOUT EQUIPMENT N.I.C.
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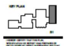
CA 94117

KEY PLAN



NO	DESCRIPTION	DATE

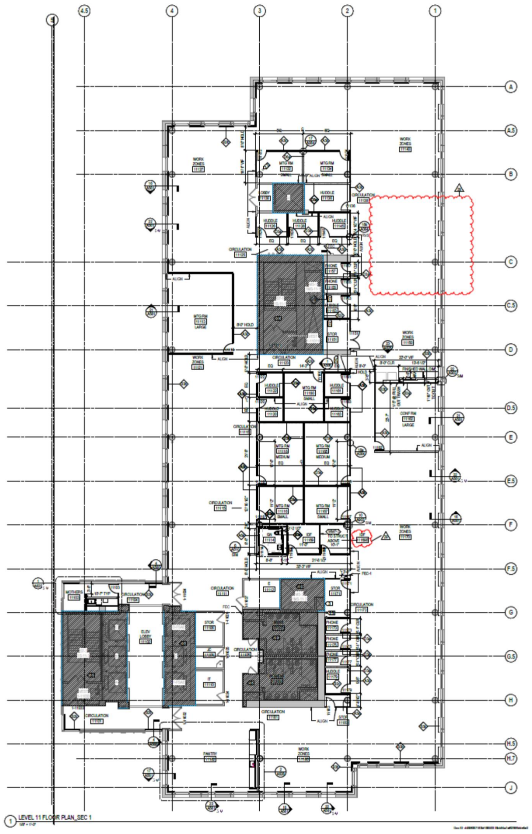
HGA NO: 4190-001-00

LEVEL 10 FLOOR PLAN - S1

DATE: OCTOBER 3, 2019

CONSTRUCTION DOCUMENTS

A210.1



LEVEL 11 FLOOR PLAN_SEC 1

GENERAL NOTES - CONSTRUCTION PLAN

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G. REFER TO DETAIL 27/A37a FOR DETAIL OF TYPICAL DOOR JAMB AT ABUTTING WALLS OR PARTITIONS.
H. ALL EXISTING FLOOR OPENINGS AND DEPRESSIONS IN THE WORK AREA SHALL BE FILLED OR CLOSED, UNLESS NOTED OTHERWISE, WITH MATERIALS TO MATCH ADJACENT SURFACES, FINISHES AND FIRE RATINGS.
J. REFER TO SHEETS A601-605 FOR TYPICAL PHONE, HUDDLE, MEETING ROOM AND PRINT STATIONS INFORMATION.
K. PROVIDE ASSISTED LISTENING DEVICES PER CBC 11B219 & 11B706.
L. PROVIDE LACTATION ROOM COMPLIANCE PER SFBC 1210.6.
M. PROVIDE WALL FURRING AT EXTERIOR WALLS AS REQUIRED AT ALL FLOORS AND ALL SECTORS.

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HGA

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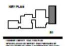
KEY PLAN



NO	DESCRIPTION	DATE
29	BULLETIN 29	11/26/2019

HGA NO: 4190-001-00

LEVEL 11 FLOOR PLAN - S1

DATE: NOVEMBER 26, 2019

CONSTRUCTION DOCUMENTS

A211.1

GENERAL NOTES - CONSTRUCTION PLAN

- A. ALL INTERIOR PARTITIONS SHALL BE "A3a" UNLESS NOTED OTHERWISE. ALL INTERIOR PARTITIONS AT CONFERENCE, HUDDLE AND PHONE ROOMS ABUTTING ANOTHER ROOM OF THE SAME TYPE OR ABUTTING A TOILET ROOM SHALL BE "D3a" UNLESS NOTED OTHERWISE.
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- H. ALL EXISTING FLOOR OPENINGS AND DEPRESSIONS IN THE WORK AREA SHALL BE FILLED OR CLOSED, UNLESS NOTED OTHERWISE, WITH MATERIALS TO MATCH ADJACENT SURFACES, FINISHES AND FIRE RATINGS.
- J. REFER TO SHEETS A821-825 FOR TYPICAL PHONE, HUDDLE, MEETING ROOM AND PRINT STATIONS INFORMATION.
- K. PROVIDE ASSISTED LISTENING DEVICES PER CBC 11B219.10 & 11B219.2
- L. PROVIDE LACTATION ROOM COMPLIANCE PER SFBC 1210.6
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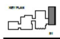


NO	DESCRIPTION	DATE
31	PERMIT REV	12/19/19
32	BULLETIN 32	1/31/2020

HGA NO: 4190-001-00

LEVEL 12 FLOOR PLAN - S1

DATE: DECEMBER 24, 2019

CONSTRUCTION DOCUMENTS

A212.1

EXHIBIT C

RIGHT OF FIRST REFUSAL

This Exhibit is attached to and made a part of the Sublease (the "**Sublease**") between Dropbox, Inc., a Delaware corporation, as Sublandlord, and Vir Biotechnology, Inc., a Delaware corporation, as Subtenant, to which this Exhibit is attached.

1. Definitions and Conflict. All capitalized terms referred to in this Exhibit shall have the same meaning as provided in the Sublease, except as expressly provided to the contrary in this Exhibit. In case of any conflict between any term or provision of the Sublease and any other exhibits attached thereto and this Exhibit, this Exhibit shall control.

2. Right of First Refusal.

(a) Provided that Subtenant is not in Default under any term or provision of the Sublease beyond the applicable cure period, Subtenant shall have an ongoing right of first refusal during the initial four (4) years of the Term of the Sublease with respect to the sublease of space on the seventh (7th) floor of the North Tower containing 26,657 RSF on the following terms and conditions; provided, however, that such right shall be subject to any pre-existing rights within the Complex and shall not be applicable if Subtenant has assigned the Sublease or sublet or otherwise afforded any other party, whether by license or other arrangement, to use any portion of the Subleased Premises (other than to a Permitted Transferee as defined in the Master Lease). If Sublandlord receives a fully executed letter of intent from a third party to sublease all or any portion of the space on the seventh (7th) floor of the North Tower (the space specified in such letter of intent being referred to as the "**Right of First Refusal Space**") on terms acceptable to Sublandlord in its sole and absolute discretion (the "**Third Party Proposal**"), then Sublandlord shall notify Subtenant of (i) the basic economic terms of such Third Party Proposal, and (ii) the permitted use of the Right of First Refusal Space specified therein; and Subtenant shall have five (5) business days after receipt of the Third Party Proposal to provide written notice to Sublandlord that Subtenant accepts the terms of the Third Party Proposal for the sublease of the Right of First Refusal Space specified in the Third Party Proposal, except that the term of any such sublease shall be appropriately adjusted to be co-terminous with the Term of the Sublease. The failure of Subtenant to provide written notice of acceptance within said time period shall be deemed an election by Subtenant not to accept the Third Party Proposal, in which case Sublandlord shall be free to sublease the Right of First Refusal Space to the party making the proposal (or any of its affiliates or assignees) substantially on the terms proposed in the Third Party Proposal, subject to the Second Chance Provisions set forth in subsection (b) below. The foregoing right of first refusal is personal to the original party signing the Sublease as Subtenant and any Permitted Transferee but may not be transferred or assigned to or exercised by any other party. Such right of first refusal shall expire and shall not be applicable to any Third Party Proposal received by Sublandlord after the date that is four (4) years after the Commencement Date.

(b) Second Chance Provisions. If Subtenant shall not so exercise such right to lease Right of First Refusal Space within the period specified in subsection (a) above, time being of the essence in respect of such exercise, Subtenant shall have no further right of first refusal hereunder; provided, however, that if Sublandlord intends to enter into a sublease for such Right

of First Refusal Space upon terms which are, in the aggregate, materially more favorable to a prospective tenant than those in Third Party Proposal (the "**Second Chance Economic Terms**"), then Sublandlord shall first deliver written notice to Subtenant ("**Second Chance Notice**") providing Subtenant with the opportunity to lease the Right of First Refusal on such more favorable terms. For purposes hereof, Second Chance Economic Terms shall be materially more favorable to a third party if such Second Chance Economic Terms reflect a net effective rental rate (including any rent abatement and Tenant Improvement costs/allowance and any other economic concessions) that is less than ninety-five percent (95%) of the net effective rental rate for such space specified in the Third Party Proposal. Subtenant's failure to elect to lease the Right of First Refusal Space upon such more favorable Second Chance Economic Terms by written notice to Sublandlord within five (5) business days after Subtenant's receipt of such Second Chance Notice from Sublandlord shall be deemed to constitute Subtenant's election not to lease such space upon such more favorable Second Chance Economic Terms, in which case Sublandlord shall be entitled to lease such space on the Second Chance Economic Terms and Subtenant shall have no further right to lease such space.

(c) Election to Expand. If Subtenant elects to sublease Right of First Refusal Space as provided above, then such space shall be included in the Sublease, except that the rental payments and other terms shall be modified with respect to the Right of First Refusal Space to reflect the terms set forth in the Third Party Proposal (other than the Term). The parties promptly shall execute an amendment to the Sublease, stating the addition of the Right of First Refusal Space to the Subleased Premises and such other modifications to the terms and conditions of the Sublease as are necessary or appropriate to incorporate the terms and conditions of the Third Party Proposal.

EXHIBIT D

PUNCHLIST ITEMS

[SEE ATTACHED]

DBX - S1F08 Punch

Nov 4, 2020

Description

31 tasks in this report.

Contents

#3251 Acoustical Ceiling

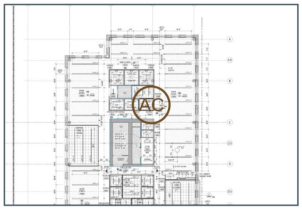
Status
Open

Created
Oct 26, 2020 7:59 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM



List
S1F08_Final Punch

Description

Missing tile

#3258 Acoustical Ceiling

Status

Open

Created

Oct 26, 2020 8:06 AM

Sheet

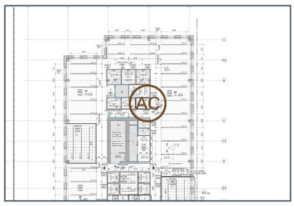
A308.1

Type

Issue

Last Updated

Nov 4, 2020 1:59 PM



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S1F08_Final Punch

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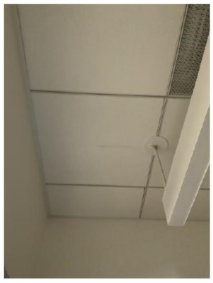
Replace tile

Photos



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#3264 Acoustical Ceiling

Status
Open

Created
Oct 26, 2020 8:10 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

#3265 Acoustical Ceiling

Status

Open

Created

Oct 26, 2020 8:10 AM

Sheet

A308.1

Type

Issue

Last Updated

Nov 4, 2020 1:59 PM

List

S1F08_Final Punch

Description

Damaged sprinkler tile

Photos

A308.1 Task markup
Oct 26, 2020 8:11 AM

#3237 Caulking

Status

Pending

Created

Oct 26, 2020 7:39 AM

Sheet

A208.1

Type

Issue

Last Updated

Nov 4, 2020 1:58 PM

List

S1F08_Final Punch

Description

Caulk window mullion

Photos

A308.1 Task markup
Oct 26, 2020 7:39 AM

#3239 Cleaning Needed

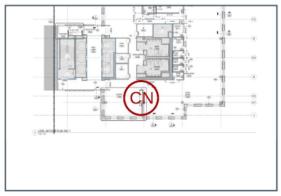
Status
Open

Created
Oct 26, 2020 7:40 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM



List
S1F08_Final Punch

Description
Clean millwork

#3247 Cleaning Needed

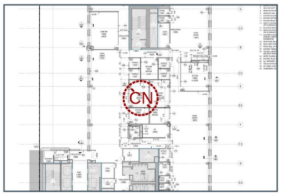
Status
Pending

Created
Oct 26, 2020 7:50 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

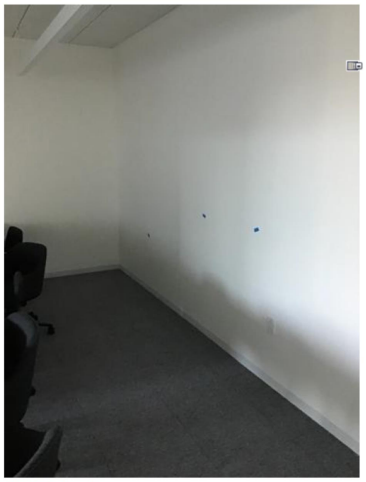


List
S1F08_Final Punch

Description
Clean scuffs in walls

Photos


A208.1 Task markup
joey williams
Oct 26, 2020 7:51 AM


A208.1 Task markup
joey williams
Oct 26, 2020 7:51 AM

#3253 Cleaning Needed

Status
Open

Created
Oct 26, 2020 8:02 AM

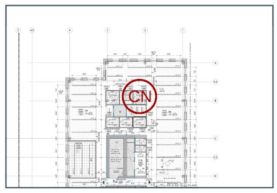
Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

Description
Drop all ceiling tile



#3263 Cleaning Needed

Status
Open

Created
Oct 26, 2020 8:09 AM

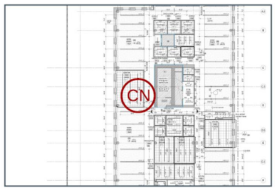
Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

Description
Drop all ceiling tile



#3245 Electrical

Status
Open

Created
Oct 26, 2020 7:47 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

Description
No power to light

#3266 Electrical

Status
Open

Created
Oct 26, 2020 8:13 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List

S1F08_Final Punch

Photos

20201026_091356_photo
Alfred Joves
Oct 26, 2020 8:13 AM

#3246 Flooring

Status
Open

Created
Oct 26, 2020 7:50 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List

S1F08_Final Punch

Photos

20201026_085149_photo
Alfred Joves
Oct 26, 2020 7:51 AM

#3244 Fire Sprinklers

Status
Open

Created
Oct 26, 2020 7:46 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
Leaking head

Photos

A308.1 Task markup
joey williams
Oct 26, 2020 7:46 AM

#3254 Fire Sprinklers

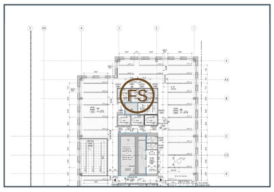
Status
Open

Created
Oct 26, 2020 8:02 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM



List
S1F08_Final Punch

Description
Missing escutcheon

Photos

20201026_090318_photo
Alfred Joves
Oct 26, 2020 8:03 AM

#3255 Fire Sprinklers

Status
Open

Created
Oct 26, 2020 8:04 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

Description
Missing escutcheon

Photos

20201026_090318_photo
Alfred Joves
Oct 26, 2020 8:04 AM

#3356 Fire Sprinklers

Status
Open

Created
Oct 26, 2020 11:33 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

#3250 Mechanical

Status
Open

Created
Oct 26, 2020 7:56 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

Description
Can see duct through grill

#3238 Millwork

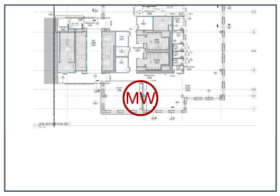
Status
Open

Created
Oct 26, 2020 7:39 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM



List
S1F08_Final Punch

Description
Adjust drawers.

#3240 Paint Touch Up

Status
Open

Created
Oct 26, 2020 7:41 AM

Sheet
A308.1

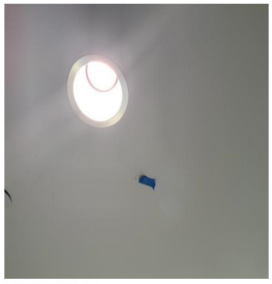
Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F08_Final Punch

Description
Touch up by light

Photos



20201026_084213_photo
Alfred Joves
Oct 26, 2020 7:42 AM

#3241 Paint Touch Up

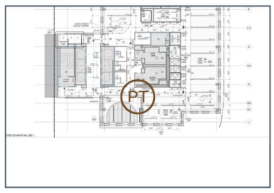
Status
Open

Created
Oct 26, 2020 7:42 AM

Sheet
A308.1

Type
Issue

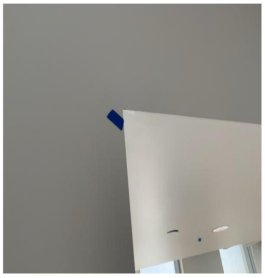
Last Updated
Nov 4, 2020 1:59 PM



List
S1F08_Final Punch

Description
At corner

Photos



20201026_084308_photo
Alfred Joves
Oct 26, 2020 7:43 AM

#3242 Paint Touch Up

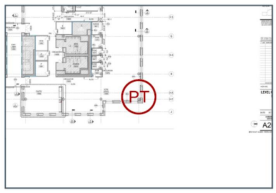
Status
Open

Created
Oct 26, 2020 7:44 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM



List
S1F08_Final Punch

Description
Paint by mullion

Photos

A208.1 Task markup
joey williams
Oct 26, 2020 7:44 AM

#3243 Paint Touch Up

Status
Open

Created
Oct 26, 2020 7:45 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
On door

#3248 Paint Touch Up

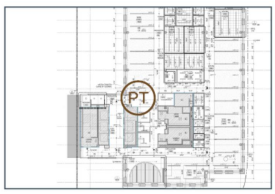
Status
Open

Created
Oct 26, 2020 7:52 AM

Sheet
A308.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM



List
S1F08_Final Punch

Description
Paint copper pipe

#3249 Paint Touch Up

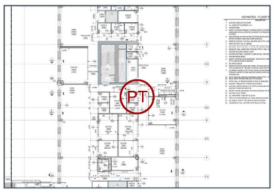
Status
Open

Created
Oct 26, 2020 7:53 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM



List
S1F08_Final Punch

Description
Scuff on door

#3252 Paint Touch Up

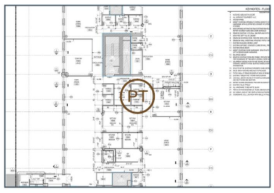
Status
Open

Created
Oct 26, 2020 7:59 AM

Sheet
A208.1

Type
Issue

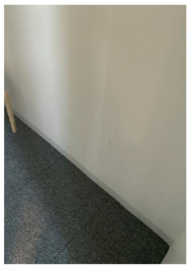
Last Updated
Nov 4, 2020 1:58 PM



List
S1F08_Final Punch

Description
Touch up

Photos



20201026_085948_photo
Alfred Joves
Oct 26, 2020 7:59 AM

#3256 Paint Touch Up

Status
Open

Created
Oct 26, 2020 8:04 AM

Sheet
A208.1

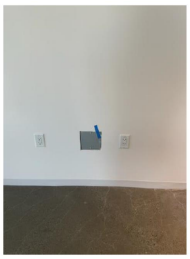
Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
Paint plate white

Photos



20201026_090457_photo
Alfred Joves
Oct 26, 2020 8:04 AM

#3257 Paint Touch Up

Status
Open

Created
Oct 26, 2020 8:05 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
Touch up corner

#3259 Paint Touch Up

Status
Open

Created
Oct 26, 2020 8:07 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
Doors

#3260 Paint Touch Up

Status
Open

Created
Oct 26, 2020 8:08 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
Doors

#3261 Paint Touch Up

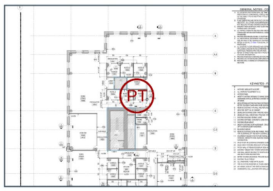
Status
Open

Created
Oct 26, 2020 8:08 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM



List
S1F08_Final Punch

Description
Touch up doors

#3262 Paint Touch Up

Status
Open

Created
Oct 26, 2020 8:09 AM

Sheet
A208.1

Type
Issue

Last Updated
Nov 4, 2020 1:58 PM

List
S1F08_Final Punch

Description
Touch up doors

DBX - S1F09 Punch List

Nov 4, 2020

Description

45 tasks in this report.

Contents

#3312 Paint Touch Up

Status
Open

Created
Oct 26, 2020 11:05 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Door

#3311 Doors/Frames/ Hardware

Status
Pending

Created
Oct 26, 2020 11:04 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Dented trim

Photos

A209.1 Task markup
Oct 26, 2020 11:04 AM

#3310 Paint Touch Up

Status
Open

Created
Oct 26, 2020 11:03 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Door

#3309 Doors/Frames/ Hardware

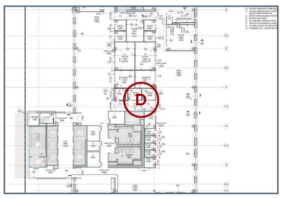
Status
Open

Created
Oct 26, 2020 11:03 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM



List
S1F09_Final Punch

Description
Dented trim

Photos

A209.1 Task markup
Oct 26, 2020 11:03 AM

#3308 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 11:01 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Photos

A209.1 Task markup
Oct 26, 2020 11:02 AM

#3307 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 11:01 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description

Tile

Photos

A209.1 Task markup
Oct 26, 2020 11:01 AM

#3306 Cleaning Needed

Status
Pending

Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 11:01 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

Photos

A209.1 Task markup
Oct 26, 2020 11:01 AM

#3305 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 11:00 AM

Sheet
A309.1

Type
Issue

Last Updated

List
S1F09_Final Punch

Description
Clean paint

Photos

A309.1 Task markup
Oct 26, 2020 11:00 AM

#3304 Paint Touch Up

Status
Open

Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:57 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

#3303 Paint Touch Up

Status
Pending

Type
Issue

List
S1F09_Final Punch

Description
Coverplate

Created
Oct 26, 2020 10:56 AM

Last Updated
Nov 4, 2020 2:00 PM

Sheet
A309.1

Photos

A309.1 Task markup
Oct 26, 2020 10:56 AM

#3302 Paint Touch Up

Status
Pending

Type
Issue

List
S1F09_Final Punch

Description
At k13

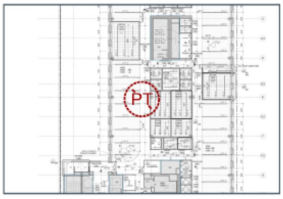
Photos

A309.1 Task markup
Oct 26, 2020 10:56 AM

Created
Oct 26, 2020 10:55 AM

Last Updated
Nov 4, 2020 2:00 PM

Sheet
A309.1



#3301 Flooring

Status
Pending

Type
Issue

List
S1F09_Final Punch

Description
Dark strip

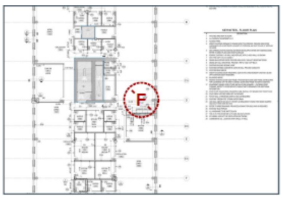
Photos

A209.1 Task markup
Oct 26, 2020 10:54 AM

Created
Oct 26, 2020 10:54 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



#3300 Flooring

Status
Open

Type
Issue

List
S1F09_Final Punch

Description
Dark patch

Photos

A209.1 Task markup
Oct 26, 2020 10:53 AM

Created
Oct 26, 2020 10:53 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

#3299 Cleaning Needed

Status
Open

Created
Oct 26, 2020 10:51 AM

Sheet
A309.1

Type
Issue

Last Updated
Nov 4, 2020 2:00 PM

List
S1F09_Final Punch

Description
Replace tile

Photos

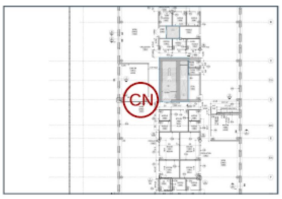
A309.1 Task markup
Oct 26, 2020 10:52 AM

#3298 Cleaning Needed

Status
Open

Created
Oct 26, 2020 10:51 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Vacuum carpet

#3297 Paint Touch Up

Status
Open

Created
Oct 26, 2020 10:50 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Door

#3296 Paint Touch Up

Status
Open

Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:48 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

Photos

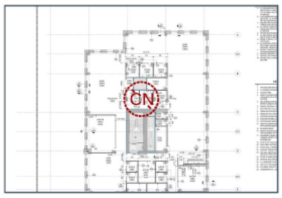
A209.1 Task markup
Oct 26, 2020 10:49 AM

#3295 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 10:48 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Lightswitch

Photos

A209.1 Task markup
Oct 26, 2020 10:48 AM

#3294 Cleaning Needed

Status
Pending

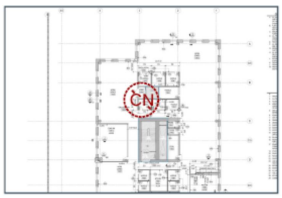
Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:47 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



Photos

A209.1 Task markup
Oct 26, 2020 10:47 AM

#3293 Paint Touch Up

Status
Pending

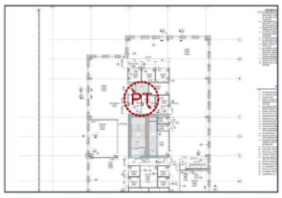
Type
Issue

List
S1F09_Final Punch

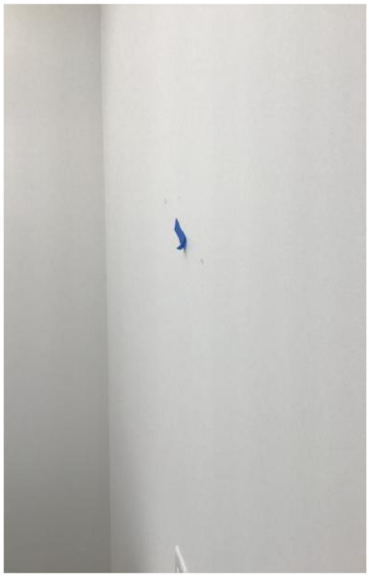
Created
Oct 26, 2020 10:47 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



Photos



A209.1 Task markup
Oct 26, 2020 10:47 AM

#3292 Paint Touch Up

Status
Open

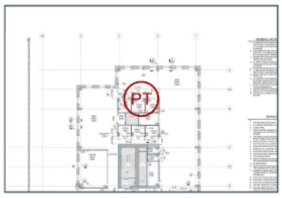
Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:44 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



Photos

A209.1 Task markup
Oct 26, 2020 10:44 AM

#3291 Cleaning Needed

Status
Open

Type
Issue

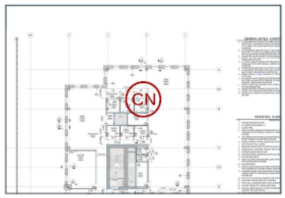
List
S1F09_Final Punch

Description
Clean doors

Created
Oct 26, 2020 10:43 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

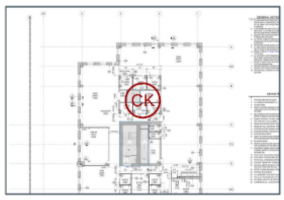


#3290 Caulking

Status
Open

Created
Oct 26, 2020 10:42 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Photos

A209.1 Task markup
Oct 26, 2020 10:42 AM

#3289 Wall Repair

Status
Open

Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:40 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

Photos

A209.1 Task markup
Oct 26, 2020 10:40 AM

#3288 Paint Touch Up

Status
Open

Type
Issue

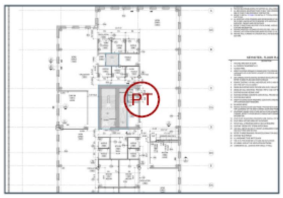
List
S1F09_Final Punch

Description
Scratch on door

Created
Oct 26, 2020 10:39 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



Photos

A209.1 Task markup
Oct 26, 2020 10:39 AM

#3287 Mechanical

Status
Open

Created
Oct 26, 2020 10:38 AM

Sheet
A309.1

Type
Issue

Last Updated
Nov 4, 2020 2:00 PM

List
S1F09_Final Punch

Description
General note: Leaking duct

Photos

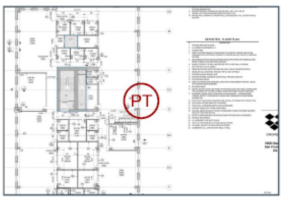
A309.1 Task markup
Oct 26, 2020 10:38 AM

#3286 Paint Touch Up

Status
Open

Created
Oct 26, 2020 10:37 AM

Sheet
A209.1

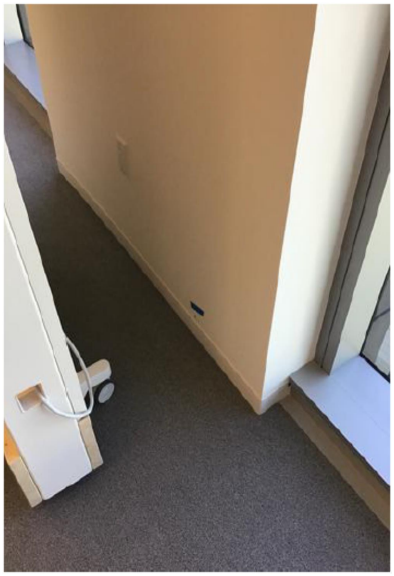


Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Photos



A209.1 Task markup
Oct 26, 2020 10:37 AM

#3285 Caulking

Status
Pending

Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:36 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

Photos

A209.1 Task markup
Oct 26, 2020 10:36 AM

#3284 Cleaning Needed

Status
Open

Type
Issue

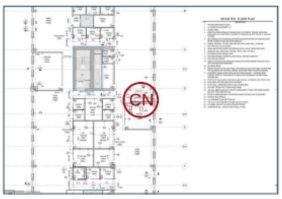
List
S1F09_Final Punch

Description
Clean millwork

Created
Oct 26, 2020 10:36 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

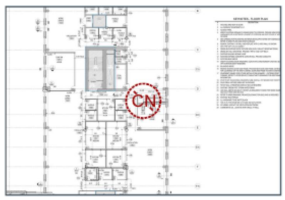


#3283 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 10:35 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Photos

A209.1 Task markup
Oct 26, 2020 10:36 AM

#3282 Cleaning Needed

Status
Pending

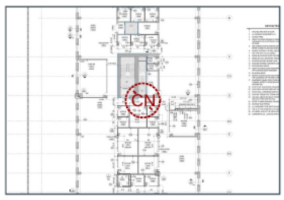
Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:34 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



Photos

A209.1 Task markup
Oct 26, 2020 10:35 AM

#3281 Paint Touch Up

Status
Pending

Type
Issue

List
S1F09_Final Punch

Created
Oct 26, 2020 10:34 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

Photos

A209.1 Task markup
Oct 26, 2020 10:34 AM

#3280 Electrical

Status
Open

Created
Oct 26, 2020 10:32 AM

Sheet
A309.1

Type
Issue

Last Updated
Nov 4, 2020 2:00 PM

List
S1F09_Final Punch

Description
Missing wire plug

Photos

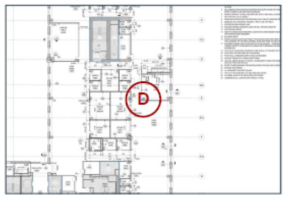
A309.1 Task markup
Oct 26, 2020 10:32 AM

#3279 Doors/Frames/ Hardware

Status
Open

Created
Oct 26, 2020 10:31 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

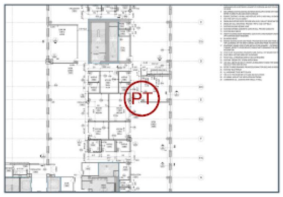
Description
Adjust limiter to open 90 degrees

#3278 Paint Touch Up

Status
Open

Created
Oct 26, 2020 10:31 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Touch up door

#3277 Paint Touch Up

Status
Open

Type
Issue

List
S1F09_Final Punch

Description
Touch up door

Created
Oct 26, 2020 10:27 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

Photos

A209.1 Task markup
Oct 26, 2020 10:28 AM

#3276 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 10:24 AM

Sheet
A209.1

Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
All glass doors

Photos

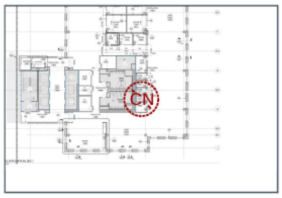
A209.1 Task markup
Oct 26, 2020 10:25 AM

#3275 Cleaning Needed

Status
Pending

Created
Oct 26, 2020 10:24 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Photos

A209.1 Task markup
Oct 26, 2020 10:24 AM

#3274 General Note

Status
Open

Type
Issue

List
S1F09_Final Punch

Description
Drop ceiling tile

Created
Oct 26, 2020 10:23 AM

Last Updated
Nov 4, 2020 2:00 PM

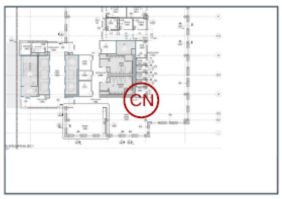
Sheet
A309.1

#3273 Cleaning Needed

Status
Open

Created
Oct 26, 2020 10:22 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Photos

A209.1 Task markup
Oct 26, 2020 10:22 AM

#3272 Flooring

Status
Pending

Type
Issue

List
S1F09_Final Punch

Description
Border loose

Photos

A209.1 Task markup
Oct 26, 2020 10:20 AM

Created
Oct 26, 2020 10:20 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1

#3271 Paint Touch Up

Status
Pending

Created
Oct 26, 2020 10:19 AM

Sheet
A309.1

Type
Issue

Last Updated
Nov 4, 2020 2:00 PM

List
S1F09_Final Punch

Photos

A309.1 Task markup
Oct 26, 2020 10:19 AM

#3270 Cleaning Needed

Status
Open

Type
Issue

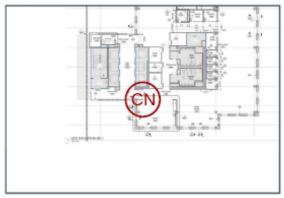
List
S1F09_Final Punch

Description
Door frame

Created
Oct 26, 2020 10:19 AM

Last Updated
Nov 4, 2020 1:59 PM

Sheet
A209.1



Photos

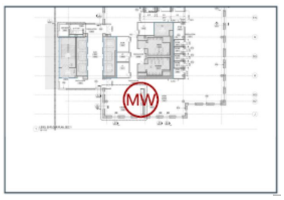
A209.1 Task markup
Oct 26, 2020 10:19 AM

#3269 Millwork

Status
Open

Created
Oct 26, 2020 10:15 AM

Sheet
A209.1



Type
Issue

Last Updated
Nov 4, 2020 1:59 PM

List
S1F09_Final Punch

Description
Scratches on door face

Photos

A209.1 Task markup
Oct 26, 2020 10:16 AM

#3268 Window Treatment & Drapes

Status
Open

Type
Issue

List
S1F09_Final Punch

Description
Missing curtain

Created
Oct 26, 2020 10:14 AM

Last Updated
Nov 4, 2020 2:00 PM

Sheet
A309.1

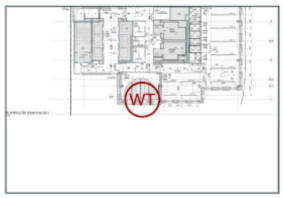


EXHIBIT E

WORK AGREEMENT

[SEE ATTACHED]

EXHIBIT E

WORK AGREEMENT

THIS WORK AGREEMENT (this "**Work Agreement**") is attached to and made a part of that certain Sublease (the "**Sublease**") between **DROPBOX, INC.**, a Delaware corporation ("**Sublandlord**"), and **VIR BIOTECHNOLOGY, INC.**, a Delaware corporation ("**Subtenant**"). All capitalized terms used but not defined herein shall have the respective meanings given such terms in the Sublease. This Work Agreement sets forth the terms and conditions relating to the construction of Subtenant Initial Improvements (defined below) in the Subleased Premises.

SECTION 1

ALLOWANCE; SUBTENANT INITIAL IMPROVEMENTS

1.1 Allowance. Subtenant shall be entitled to a one-time allowance in an amount not to exceed (i) $8,074,200 with respect to the 11th Floor and 12th Floor Subleased Premises in the aggregate (the "**11th and 12th Floor Allowance**"), and (ii) $2,422,260 with respect to the 10th Floor Subleased Premises (the "**10th Floor Allowance**", and together with the 11th and 12th Floor Allowance, the "**Allowance**"), for the costs relating to the design, permitting and construction of the initial improvements be constructed by Subtenant that are to be permanently affixed in the 10th Floor Subleased Premises, the 11th Floor Subleased Premises and the 12th Floor Subleased Premises (as applicable, the "**Subtenant Initial Improvements**"). In clarification of the foregoing, the 11th and 12th Floor Allowance shall only be applicable for Subtenant Initial Improvements on the eleventh (11th) and twelfth (12th) floors and the 10th Floor Allowance shall only be applicable for Subtenant Initial Improvements on the tenth (10th) floor, and in no event will Sublandlord be obligated to make disbursements pursuant to this Work Agreement for an applicable portion of the Subleased Premises in an amount that exceeds the amount of the Allowance applicable to such portion of the Subleased Premises. Notwithstanding anything to the contrary set forth herein:

(a) no portion of the 11th and 12th Floor Allowance shall be disbursed by Sublandlord after twenty four (24) months after the Delivery Date for the 11th Floor and 12th Floor Subleased Premises; and any portion, if any, of the 11th and 12th Floor Allowance that is not disbursed by Sublandlord on or before such date shall revert to Sublandlord and Subtenant shall have no rights thereto; and

(b) no portion of the 10th Floor Allowance, shall be disbursed by Sublandlord after thirty (30) months after the Delivery Date for the 10th Floor Subleased Premises; and any portion, if any, of the 10th Floor Allowance that is not disbursed by Sublandlord on or before such date shall revert to Sublandlord and Subtenant shall have no rights thereto.

1.2 Disbursement of the Allowance.

(a) Allowance Items. Except as otherwise set forth in this Work Agreement, the Allowance shall be disbursed by Sublandlord only for the following items and costs (collectively the "**Allowance Items**"):

(i) Payment of the fees of the Architect, Contractor, Subtenant 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 Subtenant Initial Improvements;

(iii) The cost of construction of the Subtenant Initial 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 Complex, any portion of the Master Lease Premises (including the Subleased Premises) or any building systems serving any portion of the Master Lease Premises (including Subleased 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 Subtenant Initial Improvements required by applicable building codes (collectively, the "**Code**");

(vi) The costs of Sublandlord's charges and fees (Section 2.6) and Sublandlord's Management Fee (defined below); and

(vii) Sales and use taxes and Title 24 fees.

(b) Disbursement of Allowance. During the construction of the applicable portion of the Subtenant Initial Improvements, Sublandlord shall make monthly disbursements of the 10th Floor Allowance and the 11th and 12th Floor Allowance, as applicable, to reimburse Subtenant for Allowance Items with respect to such Subtenant Initial Improvements and shall authorize the release of funds as follows, and otherwise in accordance with such disbursement procedures as Sublandlord shall reasonably require from time to time.

(i) Initial Disbursement. The initial disbursement of the Allowance for each portion of the Subleased Premises shall not be available to Subtenant until:

(A) in the case of the 11th and 12th Floor Allowance, Subtenant has paid at least twenty five percent (25%) of the Anticipated Costs (as defined below) of the Subtenant Initial Improvements for the 11th Floor and 12th Floor Subleased Premises (the "**Required 11th Floor and 12th Floor Initial Subtenant Payment**"**)**; and

(B) in the case of the 10th Floor Allowance, the later of: (1) the date that Subtenant has paid at least twenty five percent (25%) of the Anticipated Costs of the Subtenant Initial Improvements for the 10th Floor Subleased Premises (the "**Required 10th Floor Initial Subtenant Payment**"**)**, and (2) June 1, 2022.

(ii) Subsequent Disbursements.

(A) On or before the fifth (5th) day of each calendar month during the construction of the Subtenant Initial Improvements in the applicable portion of the Subleased Premises (or such other date as Sublandlord may designate), Subtenant shall deliver to Sublandlord with respect to such Subtenant Initial Improvements: (A) a request for payment from Contractor (defined below) approved by Subtenant, in the form of an AIA G702/G703 application for payment (or comparable forms reasonably approved by Sublandlord), showing the schedule, by trade, of percentage of completion of the applicable Subtenant Initial Improvements, detailing the portion of the work completed and the portion not completed (each, a "**Payment Request**"); (B) invoices from all of Subtenant's Agents (defined below) for labor rendered and materials delivered to the Subleased Premises; (C) executed conditional mechanic's lien releases from all of Subtenant'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 Subtenant's prior submission hereunder) in compliance with all applicable laws as reasonably determined by Sublandlord, 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 Subtenant issued to pay the requested sums to Subtenant's Agents; and (E) all other information reasonably requested by Sublandlord (collectively, the "**Payment Request Supporting Documentation**").

(B) Within thirty (30) days after Subtenant's delivery to Sublandlord of all Payment Request Supporting Documentation, Sublandlord shall deliver a check to Subtenant made payable to Subtenant (or, at Sublandlord's election, by wire transfer of immediately available funds) in payment of the lesser of: (x) the amount so requested by Subtenant 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 Sublandlord, 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 Sublandlord's reasons for its dispute (a "**Draw Dispute Notice**"), Sublandlord may deduct the amount of such disputed item from the payment. Sublandlord and Subtenant shall, in good faith, endeavor to diligently resolve any such dispute. Sublandlord's payment of such amounts shall not be deemed Sublandlord's approval or acceptance of the work furnished or materials supplied as set forth in Subtenant's Payment Request. Disbursements of soft costs and costs not to be paid through the Contractor shall be made based upon submittal by Subtenant of satisfactory documentation for the same concurrently with Subtenant's submittal of its Payment Request, and payment shall be made no later than thirty (30) days after submittal of such documentation, provided that in no event will Sublandlord be obligated to pay any amounts in excess of the applicable Allowance.

(iii) Final Disbursement. Subject to the provisions of this Work Agreement, following the final completion of construction of the Subtenant Initial Improvements in the applicable portion of the Subleased Premises, Sublandlord shall deliver to Subtenant a check made payable to Subtenant (or, at Sublandlord's election, by wire transfer of immediately

available funds) in the amount of the Final Retention for such portion of the Subleased Premises, provided that (A) Subtenant delivers to Sublandlord for the entirety of the Subtenant Initial Improvements in such portion of the Subleased Premises properly executed unconditional mechanics' lien releases from all of Subtenant's Agents in compliance with all applicable laws, as reasonably determined by Sublandlord, including without limitation compliance with all applicable provisions of California Civil Code Sections 8132 - 8138; (B) Sublandlord 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 Complex or any portion of the Master Lease Premises (including the Subleased Premises), the curtain wall of the Complex or the structure or exterior appearance of the Complex; (C) Architect delivers to Sublandlord a certificate, in a form reasonably acceptable to Sublandlord, certifying that the construction of such Subtenant Initial Improvements has been substantially completed in accordance with the Approved Working Drawings; (D) Subtenant supplies Sublandlord with evidence that all governmental approvals required for Subtenant to legally occupy such portion of the Subleased Premises have been obtained; and (E) Subtenant has fulfilled its Completion Obligations (defined below) and has otherwise complied with Sublandlord's standard "close-out" requirements regarding city approvals, closeout tasks, closeout documentation regarding the general contractor, financial close-out matters, and Subtenant's vendors, and as set forth in the tenant improvement guidelines (the "**Subtenant Improvement Guidelines**") to be provided to Subtenant by Sublandlord. Disbursements of soft costs and costs not to be paid through Contractor shall be made based upon submittal by Subtenant of satisfactory documentation for the same, and payment shall be made concurrently with payment of the Final Retention, provided that in no event will Sublandlord be obligated to pay any amounts in excess of the applicable Allowance.

(c) Standard Subtenant Improvement Package. Landlord and Sublandlord have established specifications for the Complex standard components to be used in the construction of the Subtenant Initial Improvements in the Subleased Premises (collectively, the "**Building Standards**"), which Building Standards shall be provided to Subtenant by Sublandlord. The quality of the Subtenant Initial Improvements shall be equal to or of greater quality than the quality of the Building Standards.

(d) Shaft Reopening. The parties acknowledge that in connection with the initial construction of the Complex Sublandlord had 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. Sublandlord has agreed to allow Subtenant's Contractor (defined below) to undertake the work of restoring that shaft to a useable condition, at Sublandlord's cost (in addition to and not as part of the Allowance). Prior to undertaking such restoration work, Subtenant shall provide Sublandlord with the plans and specifications for such work and the Contractor's estimate of the cost thereof, which plans, specifications and cost estimate shall be subject to Sublandlord's prior written approval, such approval not to be unreasonably withheld, conditioned or delayed. Subtenant shall include the cost of such work in the Payment Request submitted to Sublandlord following the completion of such work.

SECTION 2

CONSTRUCTION DRAWINGS

2.1 Selection of Architect; Construction Drawings. Subtenant shall retain a reputable architect approved in advance, in writing by Sublandlord, such approval not to be unreasonably withheld, conditioned or delayed (the "**Architect**"), in connection with the Subtenant Initial Improvements, including the preparation of a Space Plan (as defined below) and to prepare the Construction Drawings. Subtenant shall retain the engineering consultants designated by Sublandlord listed below or (except for Siemens [Life Safety] and Sasco/LANlogic [Riser Management]) such other engineering consultant approved by Sublandlord, such approval not to be unreasonably withheld, conditioned or delayed (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:	Nishkian Menninger or Forell Elsesser Engineers
MEP:	Affiliated Engineers, Inc. (AEI)
Life Safety:	Seimens
Sprinkler:	RLH
Air Balancing:	RSA
Riser Management:	Sasco / LANlogic

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 Subtenant Improvement Guidelines and shall be subject to Sublandlord's approval (as approved pursuant to Sections 2.2 and 2.3 below, the "**Approved Working Drawings**"). All MEP drawings must be fully engineered and cannot be prepared on a "design-build" basis. Subtenant and Architect shall verify, in the field, the dimensions and conditions as shown on the relevant portions of the base building plans, and Subtenant and Architect will be solely responsible for the same, and Sublandlord shall have no responsibility in connection therewith. Sublandlord's review of the Construction Drawings shall be for its sole purpose and shall not obligate Sublandlord to review the same, for quality, design, Code compliance or other like matters. Accordingly, notwithstanding that any Construction Drawings are reviewed by Sublandlord or its space planner, architect, engineers and consultants, and notwithstanding any advice or assistance that may be rendered to Subtenant by Sublandlord or Sublandlord's space planner, architect, engineers, and consultants, Sublandlord 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 Subtenant's waiver and indemnity set forth in the Sublease shall specifically apply to the Construction Drawings and the Approved Working Drawings.

2.2 Space Plan. Subtenant shall supply Sublandlord for Sublandlord'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 Subleased Premises signed by Subtenant (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. Sublandlord may request clarification or more specific drawings for special use items not included in the Space Plan. Sublandlord shall advise Subtenant within ten (10) Business Days after Sublandlord's receipt of the Space Plan (or, if applicable, such additional information requested by Sublandlord pursuant to the provisions of the immediately preceding sentence) if the same is approved or is unsatisfactory or incomplete in any respect. If Subtenant is so advised, Subtenant shall promptly cause the Space Plan to be revised to correct any deficiencies or other matters Sublandlord may reasonably require. If Sublandlord fails to respond within such ten (10) Business Day period, Subtenant shall deliver Sublandlord an additional notice requesting approval and if Sublandlord thereafter fails to respond within three (3) Business Days of receipt of such additional notice, Sublandlord will be deemed to have approved such Space Plan.

2.3 Working Drawings. After the Space Plan has been approved (or deemed approved) by Sublandlord (and Landlord), Subtenant 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 Subleased Premises, to enable the Architect and the Building Consultants to complete the Working Drawings (as defined below). Subtenant shall cause the Architect and the Building Consultants to promptly complete the architectural and engineering drawings for such portion of the Subleased Premises, and Architect shall compile a fully coordinated set of architectural, structural, mechanical, electrical and plumbing working drawings in a form which is complete to allow subcontractors to bid on the work and to obtain all applicable permits (collectively, the "**Working Drawings**") and shall submit four (4) hard copies and one (1) electronic copy signed by Subtenant to Sublandlord for Sublandlord's (and Landlord's) review and approval. Sublandlord shall advise Subtenant within ten (10) Business Days after Sublandlord's receipt of the Working Drawings if Sublandlord, in good faith, determines that the same are approved or are unsatisfactory or incomplete. If Subtenant is advised that the Working Drawings are unsatisfactory or are incomplete, Subtenant shall promptly revise the Working Drawings to correct any deficiencies or other matters Sublandlord may reasonably require. If Sublandlord fails to respond within such ten (10) Business Day period, Subtenant shall deliver Sublandlord an additional notice requesting approval and if Sublandlord thereafter fails to respond within three (3) Business Days of receipt of such additional notice, Sublandlord will be deemed to have approved such Working Drawings. After approval (or deemed approval) by Sublandlord of the Working Drawings, Subtenant shall submit the same to the appropriate municipal authorities for all applicable building permits. Subtenant hereby agrees that neither Sublandlord nor Sublandlord's consultants shall be responsible for obtaining any building permit or for obtaining interim or final sign-offs on such permits and that obtaining the same shall be Subtenant's responsibility; provided that Sublandlord shall cooperate with Subtenant in executing permit applications and other ministerial acts reasonable necessary to enable Subtenant to obtain any such permit or sign-off. In no event shall Subtenant commence any construction work in any portion the Subleased Premises prior to Sublandlord'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 Sublandlord.

2.4 Change Orders. Once approved by Sublandlord, no material change in the Working Drawings may be made without the prior written approval of Sublandlord. In the event Subtenant desires to make any such change, Subtenant shall deliver notice of the same to Sublandlord, setting forth in detail the change Subtenant desires to make to such Working Drawings. Sublandlord shall, within ten (10) Business Days of receipt of such notice, either (i) approve the proposed change, or (ii) disapprove the proposed change and deliver a notice to Subtenant specifying in reasonably sufficient detail the reasons for Sublandlord's disapproval.

2.5 Sublandlord's Approval. Sublandlord's approval of any matter under this Work Agreement may be withheld if Sublandlord (or Landlord) determines that the same would violate any provision of the Master Lease, the Sublease or this Work Agreement or would adversely affect the mechanical, electrical, plumbing, heating, ventilating and air conditioning, life-safety or other systems of the Complex or any portion of the Master Lease Premises (including the Subleased Premises, the curtain wall of the Complex or the structure or exterior appearance of the Complex.

2.6 Sublandlord's Costs. Subtenant shall be responsible for payment of the reasonable out-of-pocket fees (not to exceed $5,000) incurred by, and the reasonable out-of-pocket cost of documents and materials supplied by, Sublandlord and Sublandlord's consultants in connection with the preparation and review of the Construction Drawings and otherwise relating to the construction of the Subtenant Initial Improvements.

SECTION 3

CONSTRUCTION OF THE SUBTENANT INITIAL IMPROVEMENTS

3.1 Subtenant's Selection of Contractors.

(a) The Contractor. A general contractor selected by Subtenant and approved in writing by Sublandlord shall be retained by Subtenant to construct the Subtenant Initial Improvements ("**Contractor**").

(b) Subtenant's Agents. All subcontractors, laborers, materialmen, and suppliers used by Subtenant (such subcontractors, laborers, materialmen, and suppliers, and the Contractor to be known collectively as "**Subtenant's Agents**") must be approved in writing by Sublandlord, such approval not to be unreasonably withheld, conditioned or delayed (Sublandlord will approve or disapprove Subtenant's Agents within ten (10) Business Days following Subtenant's written request, and failure to respond within this period shall be deemed approval of the same), provided that Sublandlord will require Subtenant to retain the Building Consultants. All of Subtenant's Agents shall be licensed in the State of California, capable of being bonded and shall use only union labor.

3.2 Construction of Subtenant Initial Improvements by Subtenant's Agents.

(a) Construction Contract; Cost Budget; Over-Allowance Payments. Prior to Subtenant's execution of the construction contract and general conditions with Contractor (the "**Contract**"), Subtenant shall submit the Contract (including Contractor's proposal and all exhibits and back-up documentation associated with such Contract) to Sublandlord for approval, which approval shall not be unreasonably withheld or delayed. The Contract shall comply with all relevant provisions of this Work Agreement. Prior to the commencement of the construction of any portion of the Subtenant Initial Improvements, Subtenant shall provide Sublandlord 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 Subtenant Initial Improvements, which costs form the basis for the amount of the Contract (the "**Anticipated Costs**"). Sublandlord and Subtenant shall then determine the amount equal to the difference between (i) the amount of such Anticipated Costs less the amount of the Required 10th Floor Initial Subtenant Payment or the Required 11th and 12th Floor Initial Subtenant Payment, as applicable, and (ii) the amount of the Allowance applicable to such portion of the Subleased 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 Subtenant Initial Improvements) (such difference, if any, being the "**Anticipated Over-Allowance Amount**"). Once Subtenant has paid the Required 10th Floor Initial Subtenant Payment or the Required 11th and 12th Floor Initial Subtenant Payment, as applicable, Subtenant shall thereafter pay a percentage of each amount requested by the Contractor or otherwise to be disbursed under this Work Agreement, 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 Subtenant (the "**Over-Allowance Payments**") shall be a condition to Sublandlord's obligation to pay any amounts from the Allowance (the "**Improvement Allowance Payments**"). After the initial determination of the Anticipated Costs, Subtenant shall advise Sublandlord 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 Subtenant Initial Improvements otherwise change, and the Required 11th Floor and 12th Floor Initial Subtenant Payment or Required 10th Floor Initial Subtenant Payment, as applicable, Anticipated Over-Allowance Amount and Over-Allowance Payments shall be adjusted such that the applicable Improvement Allowance Payments by Sublandlord and applicable the Over-Allowance Payments by Subtenant shall accurately reflect the then-current amount of the Anticipated Costs for the applicable Subtenant Initial Improvements.

(b) Construction Requirements.

(i) Sublandlord's General Conditions for Subtenant's Agents and Subtenant Initial Improvement Work. Construction of the Subtenant Initial Improvements shall comply with the following: (A) the Subtenant Initial Improvements shall be constructed in strict accordance with the Approved Working Drawings and Sublandlord's (and Landlord's) construction guidelines; (B) Subtenant's Agents shall submit schedules of all work relating to the Subtenant Initial Improvements to Sublandlord and Sublandlord shall, within five (5) Business Days of receipt thereof, inform Subtenant's Agents of any changes which are necessary thereto, and Subtenant's Agents shall adhere to such corrected schedule; and (C) Subtenant shall abide by

all rules made by Sublandlord 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 Complex, and any other matter in connection with this Work Agreement, including, without limitation, the construction of the Subtenant Initial Improvements. Subtenant shall a fee to Sublandlord for Sublandlord's design review, processing of Payment Requests, coordination of the Subtenant Initial Improvements with Landlord, and general oversight (the "Management Fee") with respect to each portion of the Subtenant Initial Improvements in an amount equal to: (A) with respect to the 11th Floor and 12th Floor Subleased Premises, $161,484.00 (i.e., two percent (2%) of the 11th and 12th Floor Allowance); and (B) with respect to the 10th Floor Subleased Premises, $48,445.20 (i.e., two percent (2%) of the 10th Floor Allowance); and said Management Fee shall be deducted from the applicable portion of the Allowance on a prorata basis with each disbursement of such portion of the Allowance.

(ii) Indemnity. Subtenant's indemnity of Sublandlord as set forth in the Sublease 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 Subtenant or Subtenant's Agents, or anyone directly or indirectly employed by any of them, or in connection with Subtenant's non-payment of any amount arising out of the Subtenant Initial Improvements and/or Sublandlord's disapproval of all or any portion of any request for payment. Such indemnity by Subtenant, as set forth in the Sublease, shall also apply with respect to any and all costs, losses, damages, injuries and liabilities related in any way to Sublandlord's performance of any ministerial acts reasonably necessary (A) to permit Subtenant to complete the Subtenant Initial Improvements, and (B) to enable Subtenant to obtain any building permit or certificate of occupancy for any portion of the Subleased Premises. The foregoing indemnity shall not apply to claims caused by the gross negligence or willful misconduct of Sublandlord, Landlord or its or their members, partners, shareholders, officers, directors, agents, employees and/or contractors, or to the failure of Sublandlord to disburse the Allowance as and when required hereunder.

(iii) Requirements of Subtenant's Agents. Each of Subtenant's Agents shall warrant that the portion of the Subtenant Initial 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 Subtenant'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 Subtenant Initial 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 Subtenant Initial Improvements, and/or the Complex 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, Sublandlord and Subtenant, as their respective interests may appear, and can be

directly enforced by either. Subtenant covenants to give to Sublandlord and/or Landlord any assignment or other assurances as may be necessary to effect such right of direct enforcement.

(c) Insurance Requirements.

(i) General Coverages. All of Subtenant'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 Sublandlord as set forth in the Master Lease (provided that the limits of liability to be carried by Subtenant's Agents and Contractor shall be in amounts as may be required by Landlord).

(ii) Special Coverages. During construction of any portion of the Subtenant Initial Improvements, Subtenant shall carry "Builder's All Risk" insurance in an amount approved by Sublandlord covering the construction of the Subtenant Initial Improvements (at Subtenant's option, Subtenant shall cause Contractor to carry such Builder's All Risk insurance), and such other insurance as Landlord or Sublandlord may reasonably require, it being understood and agreed that the Subtenant Initial Improvements shall be insured by Subtenant pursuant to the Sublease 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 Sublandlord, and shall be in form and with companies as are required to be carried by Subtenant as set forth in the Sublease.

(iii) General Terms. Certificates for all insurance carried pursuant to this Section 3.2(c) shall be delivered to Sublandlord before the commencement of construction of the Subtenant Initial Improvements and before the Contractor's equipment is moved onto the site. Subtenant shall immediately notify Sublandlord in the event any policy of insurance carried by Subtenant is cancelled or the coverage materially changed. Subtenant's Contractor and subcontractors shall maintain all of the foregoing insurance coverage in force until the Subtenant Initial Improvements are fully completed and accepted by Sublandlord, except for any Products and Completed Operation Coverage insurance required by Sublandlord, which is to be maintained for ten (10) years following completion of the work and acceptance by Sublandlord and Subtenant, where applicable. All policies carried under this Section 3.2(c) (other than Workers' Compensation coverage) shall insure Landlord, Sublandlord and Subtenant, as their interests may appear. All insurance, except Workers' Compensation, maintained by Subtenant'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 Subtenant Initial Improvements and that any other insurance maintained by Landlord or Sublandlord is excess and noncontributing with the insurance required hereunder. The requirements for the foregoing insurance shall not derogate from the provisions for indemnification of Sublandlord by Subtenant under the Sublease or this Work Agreement.

(d) Governmental Compliance. The Subtenant Initial Improvements shall comply in all respects with the following: (i) the Code and other federal, state, city and/or quasi-governmental 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 Sublandlord. Sublandlord shall have the right to inspect the Subtenant Initial Improvements at all times, provided however, that Sublandlord's failure to inspect the Subtenant Initial Improvements shall in no event constitute a waiver of any of Sublandlord's rights hereunder nor shall Sublandlord's inspection of the Subtenant Initial Improvements constitute Sublandlord's approval of the same. Should Sublandlord disapprove any portion of the Subtenant Initial Improvements, Sublandlord shall notify Subtenant in writing of such disapproval and shall specify the items disapproved. Any defects or deviations in, and/or disapproval by Sublandlord of, the Subtenant Initial Improvements shall be rectified by Subtenant at no expense to Sublandlord, provided however, that in the event Sublandlord determines that a defect or deviation exists or disapproves of any matter in connection with any portion of the Subtenant Initial 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 Complex or any portion of the Master Lease Premises (including the Subleased Premises) or the structure or exterior appearance of the Complex, Sublandlord may take such action as Sublandlord deems necessary, at Subtenant's expense and without incurring any liability on Sublandlord's part, to correct any such defect, deviation and/or matter, including, without limitation, causing the cessation of performance of the construction of the Subtenant Initial Improvements until such time as the defect, deviation and/or matter is corrected to Sublandlord's satisfaction.

(f) Meetings. Subtenant 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 Subtenant Initial Improvements, and Sublandlord shall receive prior written notice of, and Sublandlord and/or its agents (and Landlord and/or its agents) shall have the right to attend, all such meetings, and, upon Sublandlord's request, certain of Subtenant's Agents shall attend such meetings. In addition, minutes shall be taken at all such meetings, and Sublandlord 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.

3.3 Notice of Completion; Copy of Record Set of Plans. Within thirty (30) days after completion of construction of any portion of the Subtenant Initial Improvements, Subtenant 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 Sublandlord 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 Subtenant fails to do so, Sublandlord may execute and file such Notice of Completion and give such notices on behalf of Subtenant as Subtenant's agent for such purpose, at Subtenant's sole cost and expense. Within thirty (30) days following the completion of construction of any portion of the Subtenant Initial Improvements, (i) Subtenant 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 Sublease, and (C) to deliver to Sublandlord such updated drawings in accordance with Sublandlord's then-current CAD Format Requirements, and (ii) Subtenant shall deliver to Sublandlord a copy of all warranties, guaranties, and operating manuals and information relating to the improvements, equipment, and systems in the Subleased Premises as Sublandlord may require.

SECTION 4

MISCELLANEOUS

4.1 Subtenant's Representative. Subtenant has designated **Larry Matarazzi (larry@vir.bio)** as its sole representative with respect to the matters set forth in this Work Agreement, until further notice to Sublandlord, who shall have full authority and responsibility to act on behalf of Subtenant as required in this Work Agreement.

4.2 Sublandlord's Representative. Sublandlord has designated Chandler Bonney (chandler@dropbox.com) its sole representative with respect to the matters set forth in this Work Agreement, who, until further notice to Subtenant, shall have full authority and responsibility to act on behalf of Sublandlord as required in this Work Agreement.

4.3 Subtenant's Default. Notwithstanding any provision to the contrary contained in the Sublease, if a Default by Subtenant under the Sublease (including, without limitation, this Work Agreement) has occurred at any time on or before the substantial completion of the Subtenant Initial Improvements, then (i) in addition to all other rights and remedies granted to Sublandlord pursuant to the Sublease, Sublandlord shall have the right to withhold payment of all or any portion of the Allowance, and (ii) all other obligations of Sublandlord under the terms of this Work Agreement shall be forgiven until such time as such default is cured pursuant to the terms of the Sublease.

4.4 Subject to Master Lease. Notwithstanding anything to the contrary herein, Subtenant's construction of the Subtenant Initial Improvements shall be subject to the terms and conditions of the Master Lease. Any charges or fees imposed by Landlord in connection with the review and approval of the Construction Drawings and otherwise relating to the construction Subtenant Initial Improvements shall be subsumed within the Management Fee and Sublandlord shall be responsible for any such charges and fees.

EXHIBIT F

Commencement Date Letter Agreement

Date _____

Subtenant _____
Address _____
_____

Re: Commencement Date Letter Agreement with respect to that certain Sublease dated as of _____, 2020 ("**Sublease**"), by and between **DROPBOX, INC.**, a Delaware corporation, as Sublandlord, and **VIR BIOTECHNOLOGY, INC.**, a Delaware corporation, as Subtenant, for **133,896** rentable square feet on the eighth (8th), ninth (9th), tenth (10th), eleventh (11th) and twelfth (12th) floors)of the North Tower located at 1800 Owens Street, San Francisco, California. Capitalized terms used but not otherwise defined herein shall have the meanings given such terms in the Sublease.

Dear _____:

In accordance with the terms and conditions of the Sublease, Subtenant has accepted possession of the Subleased Premises and agrees:

1. The Commencement Date of the Sublease is _____, 202_.

2. The Rent Commencement Date with respect to each floor of the Subleased Premises is as follows:

   (i) 8th Floor Subleased Premises: _____;
   (ii) 9th Floor Subleased Premises: _____;
   (iii) 10th Floor Subleased Premises: _____;
   (iv) 11th Floor Subleased Premises: _____; and
   (v) 12th Floor Subleased Premises: _____.

3. The schedule of Base Rent set forth in Section 3(a)(ii) of the Sublease is superseded by the schedule of Base Rent attached hereto.

4. The Expiration Date of the Sublease is August 30, 2033.

Please acknowledge your acceptance of possession and agreement to the terms set forth above by signing this Commencement Date Letter Agreement in the space provided and returning a fully executed counterpart (a scanned signature sent via electronic mail to my attention in PDF or similar format to _____@____.com will suffice).

Sincerely,

_____

Sublandlord Authorized Signatory

Agreed and Accepted:

Subtenant: _____

By: **[EXHIBIT - - DO NOT SIGN]**
Name: _____
Title: _____
Date: _____

[ATTACH REVISED SCHEDULE OF BASE RENT]

EXHIBIT G

WIRE INSTRUCTIONS

[SEE ATTACHED]

EXHIBIT H

Letter of Credit

L/C DRAFT LANGUAGE

IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER _____

ISSUE DATE: _____

ISSUING BANK:
SILICON VALLEY BANK
3003 TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210
SANTA CLARA, CA 95054

BENEFICIARY:
DROPBOX, INC.
1800 OWENS STREET, SUITE 200
SAN FRANCISCO, CA 94158
ATTENTION: TREASURY

APPLICANT:
VIR BIOTECHNOLOGY, INC.
499 ILLINOIS STREET, SUITE 500
SAN FRANCISCO, CA 94158

AMOUNT: US$3,842,103.72 (THREE MILLION EIGHT HUNDRED FORTY TWO THOUSAND ONE HUNDRED THREE AND 72/100 U.S. DOLLARS)

EXPIRATION DATE: _____, 20__ [ONE YEAR FROM ISSUANCE]

PLACE OF EXPIRATION: ISSUING BANK'S COUNTERS AT ITS ABOVE ADDRESS

LADIES AND GENTLEMEN:

WE HEREBY ESTABLISH OUR IRREVOCABLE LETTER OF CREDIT NO. _____ (THIS "LETTER OF CREDIT") IN YOUR FAVOR FOR THE ACCOUNT OF VIR BIOTECHNOLOGY, INC. FOR AN AMOUNT NOT TO EXCEED IN THE AGGREGATE THREE MILLION EIGHT HUNDRED FORTY TWO THOUSAND ONE HUNDRED THREE AND 72/100 U.S. DOLLARS ($3,842,103.72).

FUNDS UNDER THIS CREDIT ARE AVAILABLE AGAINST PRESENTATION OF THIS ORIGINAL LETTER OF CREDIT AND AMENDMENT(S), IF ANY AND THE DRAW STATEMENT ATTACHED AS **EXHIBIT A**, WITH THE BLANKS APPROPRIATELY COMPLETED.

THIS LETTER OF CREDIT EXPIRES AND IS PAYABLE AT THE OFFICE OF SILICON VALLEY BANK, 3003 TASMAN DRIVE, MAIL SORT HF 210, SANTA CLARA, CA 95054, ATTENTION: GLOBAL TRADE FINANCE. (THE "OFFICE"), ON OR PRIOR TO _____, 20__ [ONE YEAR FROM ISSUANCE] (THE "EXPIRATION DATE").

WE HEREBY AGREE WITH YOU IF DOCUMENTS ARE PRESENTED TO US UNDER THIS LETTER OF CREDIT AT OR PRIOR TO 11:00 A.M. CALIFORNIA TIME, ON A BUSINESS DAY, AND PROVIDED THAT SUCH DRAFTS PRESENTED CONFORM TO THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, PAYMENT SHALL BE INITIATED BY US IN IMMEDIATELY AVAILABLE FUNDS BY OUR CLOSE OF BUSINESS ON THE SUCCEEDING BUSINESS DAY. IF DOCUMENTS ARE PRESENTED TO US UNDER THIS LETTER OF CREDIT AFTER 11:00 A.M. CALIFORNIA TIME, ON A BUSINESS DAY, AND PROVIDED THAT SUCH DRAFTS CONFORM WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, PAYMENT SHALL BE INITIATED BY US IN IMMEDIATELY AVAILABLE FUNDS BY OUR CLOSE OF BUSINESS ON THE SECOND SUCCEEDING BUSINESS DAY. AS USED IN THIS LETTER OF CREDIT, "BUSINESS DAY" SHALL MEAN ANY DAY OTHER THAN A SATURDAY, SUNDAY OR A DAY ON WHICH BANKING INSTITUTIONS IN THE STATE OF CALIFORNIA ARE AUTHORIZED OR REQUIRED BY LAW TO CLOSE. IF THE EXPIRATION DATE SHALL EVER FALL ON A DAY WHICH IS NOT A BUSINESS DAY THEN THE EXPIRATION DATE SHALL AUTOMATICALLY BE EXTENDED TO THE DATE WHICH IS THE NEXT BUSINESS DAY.

PARTIAL DRAWS AND MULTIPLE PRESENTATIONS ARE ALLOWED.

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT THE EXPIRATION DATE WILL BE AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR ADDITIONAL PERIODS OF ONE (1) YEAR FROM THE PRESENT EXPIRATION DATE OR ANY FUTURE EXPIRATION DATE, UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO THE THEN CURRENT EXPIRATION DATE WE SEND YOU A NOTICE BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED, OR OVERNIGHT COURIER SERVICE WITH PROOF OF DELIVERY, TO THE ADDRESS SHOWN ABOVE, AND CONCURRENTLY NOTIFY DROPBOX, INC., 1800 OWENS STREET, SUITE 200, SAN FRANCISCO, CALIFORNIA 94158, ATTENTION: LEGAL DEPARTMENT, IN THE SAME DELIVERY METHOD, THAT WE ELECT NOT TO EXTEND THIS LETTER OF CREDIT BEYOND THE THEN CURRENT EXPIRATION DATE. IN NO EVENT SHALL THIS LETTER OF CREDIT BE AUTOMATICALLY EXTENDED BEYOND _____ [INSERT A FINAL EXPIRY DATE]. UPON YOUR RECEIPT OF SUCH NOTIFICATION OF NON-EXTENSION , YOU MAY DRAW AGAINST THIS LETTER OF CREDIT BY PRESENTATION OF THIS ORIGINAL LETTER OF CREDIT AND AMENDMENT(S), IF ANY AND THE ATTACHED **EXHIBIT B**, WITH THE BLANKS APPROPRIATELY COMPLETED.

PRESENTATION OF A DRAWING UNDER THIS LETTER OF CREDIT MAY BE MADE ON OR PRIOR TO THE THEN CURRENT EXPIRATION DATE BY PERSONAL DELIVERY, COURIER SERVICE OR OVERNIGHT MAIL OR FACSIMILE.

FACSIMILE PRESENTATIONS ARE PERMITTED. SHOULD BENEFICIARY WISH TO MAKE PRESENTATIONS UNDER THIS LETTER OF CREDIT ENTIRELY BY FACSIMILE TRANSMISSION IT NEED NOT TRANSMIT THIS LETTER OF CREDIT AND AMENDMENT(S), IF ANY. EACH FACSIMILE TRANSMISSION SHALL BE MADE AT: (408) 496-2418 OR (408) 969-6510; AND SIMULTANEOUSLY UNDER TELEPHONE ADVICE TO: (408) 450-5001 OR (408) 654-7176, ATTENTION: STANDBY LETTER OF CREDIT NEGOTIATION SECTION. IN ADDITION, ABSENCE OF THE AFORESAID TELEPHONE ADVICE SHALL NOT AFFECT OUR OBLIGATION TO HONOR ANY DRAW REQUEST. IN CASE THE DRAWING IS PRESENTED BY FACSIMILE TRANSMISSION, FURTHER PRESENTATION OF THE ORIGINAL DRAWING DOCUMENTS IS NOT REQUIRED.

IN THE EVENT THAT THE ORIGINAL OF THIS LETTER OF CREDIT IS LOST, STOLEN OR DESTROYED, WE WILL ISSUE YOU A “CERTIFIED TRUE COPY” OF THIS LETTER OF CREDIT UPON OUR RECEIPT OF YOUR INDEMNITY LETTER TO US WHICH WILL BE SENT TO YOU UPON OUR RECEIPT OF YOUR WRITTEN REQUEST THAT THIS STANDBY LETTER OF CREDIT IS LOST, STOLEN OR DESTROYED. IF THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT IS MUTILATED, WE WILL ISSUE YOU A REPLACEMENT STANDBY LETTER OF CREDIT WITH THE SAME NUMBER, DATE AND TERMS AS THE ORIGINAL UPON OUR RECEIPT OF THE MUTILATED STANDBY LETTER OF CREDIT.

THIS LETTER OF CREDIT IS TRANSFERABLE ONE OR MORE TIMES WITHOUT CHARGE TO YOU ASSUMING SUCH TRANSFER TO SUCH TRANSFEREE WOULD BE IN COMPLIANCE WITH THEN APPLICABLE LAW AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE REGULATIONS OF THE U.S. DEPARTMENT OF TREASURY AND U.S. DEPARTMENT OF COMMERCE. TRANSFER MUST BE REQUESTED IN ACCORDANCE WITH OUR TRANSFER FORM, WHICH IS ATTACHED AS **EXHIBIT C**, ACCOMPANIED BY THE RETURN OF THIS ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS THERETO FOR ENDORSEMENT THEREON BY US TO THE TRANSFEREE. APPLICANT SHALL PAY OUR TRANSFER FEE OF ¼ OF 1% OF THE TRANSFER AMOUNT (MINIMUM US$250.00) UNDER THIS LETTER OF CREDIT. ALL CHARGES IN CONNECTION WITH ANY TRANSFER OF THIS LETTER OF CREDIT ARE FOR THE APPLICANT’S ACCOUNT, PROVIDED THAT PAYMENT OF ANY SUCH CHARGES SHALL NOT BE A CONDITION PRECEDENT TO THE EFFECTIVENESS OF THE TRANSFER.

WE HEREBY ENGAGE WITH YOU THAT DOCUMENTS (INCLUDING FAX DOCUMENTS) PRESENTED IN COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT WILL BE DULY HONORED IF PRESENTED TO OUR OFFICE ON OR BEFORE THE EXPIRATION DATE.

IF ANY INSTRUCTIONS ACCOMPANYING A DRAWING UNDER THIS LETTER OF CREDIT REQUEST THAT PAYMENT IS TO BE MADE BY TRANSFER TO YOUR ACCOUNT WITH ANOTHER BANK, WE WILL ONLY EFFECT SUCH PAYMENT BY FED WIRE TO A U.S. REGULATED BANK, AND WE AND/OR SUCH OTHER BANK MAY RELY ON AN ACCOUNT NUMBER SPECIFIED IN SUCH INSTRUCTIONS EVEN IF THE NUMBER IDENTIFIES A PERSON OR ENTITY DIFFERENT FROM THE INTENDED PAYEE.

THIS LETTER OF CREDIT IS SUBJECT TO THE INTERNATIONAL STANDBY PRACTICES 1998, INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 590.

IF YOU HAVE ANY QUESTIONS REGARDING THIS TRANSACTION, PLEASE CONTACT _____ AT (408) _____ ALWAYS QUOTING OUR LETTER OF CREDIT NO. SVBSF_____.

SILICON VALLEY BANK,

_____ _____

AUTHORIZED SIGNATURE AUTHORIZED SIGNATURE

EXHIBIT A to EXHIBIT H
DRAW CERTIFICATE

TO:
ISSUING BANK:
SILICON VALLEY BANK
3003 TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210
SANTA CLARA, CALIFORNIA 95054

DATE: _____

LADIES AND GENTLEMEN:

RE: IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____ (THE "LETTER OF CREDIT")

THE UNDERSIGNED, A DULY AUTHORIZED OFFICIAL OF [INSERT BENEFICIARY NAME] (HEREINAFTER REFERRED TO AS "BENEFICIARY"), HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW UPON THE LETTER OF CREDIT IN THE AMOUNT OF $_____ [AMOUNT IN WORDS U.S. DOLLARS] PURSUANT TO THAT CERTAIN SUBLEASE DATED _____, 20__, BY AND BETWEEN BENEFICIARY, AS SUBLANDLORD, AND _____, AS SUBTENANT.

PAYMENT OF THE AMOUNT DEMANDED IS TO BE MADE TO THE BENEFICIARY BY WIRE TRANSFER IN IMMEDIATELY AVAILABLE FUNDS IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS:
[PAYMENT INSTRUCTIONS TO BE INSERTED]

[BENEFICIARY NAME]

BY: _____
NAME:_____
TITLE: _____

EXHIBIT B to EXHIBIT H

TO:
ISSUING BANK:
SILICON VALLEY BANK
3003 TASMAN DRIVE
2ND FLOOR, MAIL SORT HF210
SANTA CLARA, CALIFORNIA 95054

DATE: _____

LADIES AND GENTLEMEN:

RE: IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____ (THE "LETTER OF CREDIT")

THE UNDERSIGNED, A DULY AUTHORIZED OFFICIAL OF [INSERT BENEFICIARY NAME] , (HEREINAFTER REFERRED TO AS "BENEFICIARY"), HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW UPON THE LETTER OF CREDIT IN THE AMOUNT OF $_____ [AMOUNT IN WORDS U.S. DOLLARS] AS WE HAVE BEEN NOTIFIED THAT THE LETTER OF CREDIT WILL NOT BE EXTENDED AND _____, (''SUBTENANT"), HAS NOT PROVIDED US WITH AN ACCEPTABLE SUBSTITUTE IRREVOCABLE STANDBY LETTER OF CREDIT IN ACCORDANCE WITH THE TERMS OF THAT CERTAIN SUBLEASE DATED AS OF _____, ____ BY AND BETWEEN BENEFICIARY, AS SUBLANDLORD, AND SUBTENANT.

DRAWN UNDER IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____ ISSUED BY _____ [NAME OF ISSUING BANK].

PAYMENT OF THE AMOUNT DEMANDED IS TO BE MADE TO THE BENEFICIARY BY WIRE TRANSFER IN IMMEDIATELY AVAILABLE FUNDS IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS:
[PAYMENT INSTRUCTIONS TO BE INSERTED]

[BENEFICIARY NAME]

BY: _____
NAME:_____
TITLE: _____

EXHIBIT C to EXHIBIT H

TRANSFER FORM

DATE: _____

TO: SILICON VALLEY BANK
3003 TASMAN DRIVE
SANTA CLARA, CA 95054
ATTN: GLOBAL TRADE FINANCE
STANDBY LETTERS OF CREDIT

RE: IRREVOCABLE STANDBY LETTER OF CREDIT
NO. _____ ISSUED BY
SILICON VALLEY BANK, SANTA CLARA
L/C AMOUNT: _____

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 DIRECTLY 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 EITHER (1) ENDORSE THE TRANSFER ON THE REVERSE THEREOF, AND FORWARD IT DIRECTLY TO THE TRANSFEREE WITH YOUR CUSTOMARY NOTICE OF TRANSFER, OR (2) ISSUE A REPLACEMENT LETTER OF CREDIT TO THE TRANSFEREE ON SUBSTANTIALLY THE SAME TERMS AND CONDITIONS AS THE TRANSFERRED LETTER OF CREDIT (IN WHICH EVENT THE TRANSFERRED LETTER OF CREDIT SHALL HAVE NO FURTHER EFFECT).

SINCERELY,

_____
(BENEFICIARY'S NAME)

_____
(SIGNATURE OF BENEFICIARY)

_____
(NAME AND TITLE)

SIGNATURE AUTHENTICATED The name(s), title(s), and signature(s) conform to that/those on file with us for the company and the signature(s) is/are authorized to execute this instrument.
(Name of Bank)
(Address of Bank)
(City, State, ZIP Code)
(Authorized Name and Title)
(Authorized Signature)
(Telephone number)

EXHIBIT I

LABORATORY USE PROVISIONS

[SEE ATTACHED]

EXHIBIT I

LABORATORY USE PROVISIONS

The provisions of this **Exhibit I** supplement the provisions of Section 5(a) of the Sublease and pertain to Subtenant's use of portions of the Subleased Premises for laboratory and research and development purposes ("**Laboratory Use**"). To the extent that any provision of this Exhibit conflict or are inconsistent with any of the provisions contained elsewhere in the Sublease, the provisions of this **Exhibit I** shall control.

1. **Laboratory and Research and Development Use**. Subject to the requirements of Landlord in effect from time to time, and subject to and in accordance with the provisions of this **Exhibit I**, Subtenant may use portions of the 8th, 9th, 10th, 11th and 12th Floor Subleased Premises for Laboratory Use.

(a) Biosafety Level. The Laboratory Use permitted hereunder shall not exceed that of a Biosafety Level 3 laboratory as specified by the National Institutes of Health from time to time or any equivalent successor designation (and Subtenant shall certify from time to time upon the reasonable request of Sublandlord that the Laboratory Use in the Subleased Premises does not exceed Biosafety Level 3).

(b) No Animal Testing. In no event shall live animal testing of any kind be permitted as part of the Laboratory Use, and no vivarium or other live animal testing facility may be constructed or located within any part of the Subleased Premises.

2. **Compliance with Laws; Best Practices**.

(a) Applicable Laboratory Use Laws. Subtenant's permitted Laboratory Use of the Subleased Premises shall at all times be undertaken and performed in strict accordance with all applicable laws and the rules, regulations, requirements and guidelines of all governmental and quasi-governmental authorities and agencies having regulatory jurisdiction over any aspect of Subtenant's Laboratory Use ("**Applicable Laboratory Use Laws**"), including, without limitation, the federal Department of Health and Human Services, Food and Drug Administration, Center for Disease Control and Prevention, and National Institutes of Health, as well as applicable state and local governmental authorities. Subtenant also shall comply with (and shall certify such compliance from time to time upon the reasonable request of Sublandlord) 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) Industry Standards and Best Practices. Subtenant shall comply with applicable industry standards and best practices for Subtenant's permitted Laboratory Use ("**Industry Standards and Best Practices**"), including, without limitation, those set forth in the Biosafety in Microbiological and Biomedical Laboratories, 5th Edition, published by the U.S. Department of Health and Human Services, Revised December 2009, as updated from time to

time, and the National Institutes of Health Biosafety Level 3 Laboratory Certification Requirements dated July 2006, as updated from time to time.

(c) Permits. Subtenant 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 Handled by Subtenant on the Subleased Premises or in the Complex. Sublandlord shall have a continuing right, without obligation, to review and inspect any and all such permits, licenses, certifications and approvals, together with any Hazardous Materials Business Plans, Safety Data Sheets ("**SDSs**"), and Contingency Plans and Emergency Procedures of Subtenant.

3. **Laboratory Improvements and Equipment**.

(a) Laboratory Improvements. Subtenant's improvement of any portion of the Subleased Premises for Laboratory Use, including the installation of any Laboratory Equipment, shall be undertaken in accordance with the terms of the Work Agreement (provided, however, that the Allowance shall only be available for the construction of Subtenant Improvements on the 10th, 11th and 12th Floor Subleased Premises, as provided for in the Work Agreement) and Applicable Laboratory Use Laws and shall be undertaken in accordance with Industry Standards and Best Practices.

(b) Installation. All Laboratory Equipment must be properly insulated to minimize the transmission of noise or vibrations to portions of the Complex outside of the Subleased Premises. Should other tenants or occupants of the Complex complain of unreasonable noise or vibrations, Subtenant will be responsible for abating any such noise or vibrations, at Subtenant's sole cost. Any damage to property, including, without limitation, damage to the Complex or to any other tenant spaces due to leaks from any Lab Equipment or any malfunction thereof will be the sole responsibility of Subtenant.

(c) Use of HEPA Filters. Subtenant shall use high efficiency particulate air (HEPA) filters where required in exhaust equipment in portions of the Subleased Premises devoted to Laboratory Use in accordance with Applicable Laboratory Use Laws and Industry Standards and Best Practices. Pursuant to the Mission Bay Requirements (Master Lease Exhibit F, Section 7), Subtenant shall inspect and monitor such filters regularly to ensure proper functioning (and Subtenant shall certify such use, inspection and monitoring of such filters from time to time upon the reasonable request of Sublandlord).

(d) Decommissioning. Without limiting Subtenant's obligations under Section 4(l) below, prior to the expiration or earlier termination of the Term of the Sublease, Subtenant shall (i) decontaminate and decommission all of the Laboratory Equipment in a manner and so that it is in a condition (with respect to the presence of biological or chemical materials and otherwise) that complies with Applicable Laboratory Use Laws and Hazardous Materials Laws, and (ii) furnish a certification prepared by an independent third party decommissioning and testing agent demonstrating that the Laboratory has been fully decontaminated and decommissioned in accordance with Applicable Laws (as defined in the Master Lease).

(e) Removal of Laboratory Equipment. In addition to the removal of any Subtenant Improvements that may be required pursuant to the terms of Sublease, upon the expiration of the Term, or any earlier termination of the Sublease, Subtenant shall remove from the Subleased Premises the laboratory related equipment, fixtures and furnishings located in the Subleased Premises, including, but not limited to, laboratory benches and vented fume hoods and biosafety cabinets.

4. **Hazardous Materials**.

(a) Definitions. The following terms shall have the following meanings for purposes of this **Exhibit I**:

(i) "**Biohazardous Materials**" means any and all substances and materials defined or referred to as "medical waste," "biological waste," "biohazardous waste," "biohazardous material" or any other term of similar import under any Hazardous Materials Laws, including (but not limited to) California Health & Safety Code Sections 25100 et seq., California Health & Safety Code Sections 117600 et seq., and any regulations promulgated thereunder, as amended from time to time.

(ii) "**Environmental Condition**" means the Release of any Hazardous Materials in, over, on, under, through, from or about the Complex (including, but not limited to, the Subleased Premises).

(iii) "**Environmental Damages**" means all claims, suits, judgments, damages, losses, penalties, fines, liabilities, encumbrances, liens, costs and expenses of whatever kind or nature, contingent or otherwise, matured or unmatured, foreseeable or unforeseeable, arising out of or in connection with any Environmental Condition, including, without limitation: (A) damages for personal injury, or for injury or damage to personal property or to the Complex or any portion thereof, including, without limitation (1) any claims brought by or on behalf of any person, (2) any loss of, lost use of, damage to or diminution in the fair market value or fair market rental value of the Complex or any portion thereof, and (3) costs of any investigation, remediation, removal, abatement, containment, closure, restoration or monitoring work required by any federal, state or local governmental agency or political subdivision, or otherwise reasonably necessary to protect the public health or safety, whether on or off the Complex; (B) reasonable fees incurred for the services of attorneys, consultants, contractors, experts and laboratories in connection with the preparation of any feasibility studies, investigations or reports or the performance of any work described above; (C) any liability to any third person or governmental agency to indemnify such person or agency for costs expended or liabilities incurred in connection with any items described in clause (A) or (B) above; and (D) the amount of any penalties, damages or costs a party is required to pay or incur in excess of that which the party otherwise would reasonably have expected to pay or incur absent the existence of the applicable Environmental Condition.

(iv) "**Handling" or "Handles**", when used with reference to any substance or material, includes (but is not limited to) any receipt, storage, use, generation, Release, transportation, treatment or disposal of such substance or material.

(v) "**Hazardous Materials**" means any and all chemical, explosive, biohazardous, radioactive or otherwise toxic or hazardous materials or hazardous wastes, including without limitation any asbestos-containing materials, PCB's, CFCs, petroleum and derivatives thereof, Radioactive Materials, Biohazardous Materials, Hazardous Wastes, any other substances defined or listed as or meeting the characteristics of a hazardous substance under any Hazardous Materials Laws, hazardous material, Hazardous Waste, toxic substance, toxic waste, biohazardous material, biohazardous waste, biological waste, medical waste, radiation, radioactive substance, radioactive waste, or other similar term, as applicable, under any law, statute, ordinance, code, rule, regulation, directive, order, condition or other written requirement enacted, promulgated or issued by any public officer or governmental or quasi-governmental authority, whether now in force or hereafter in force at any time or from time to time to protect the environment or human health, and/or any mixed materials, substances or wastes containing more than one of the foregoing categories of materials, substances or wastes.

(vi) "**Hazardous Materials Laws**" means, collectively, (A) the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. Sections 9601-9657, (B) the Hazardous Materials Transportation Act of 1975, 49 U.S.C. Sections 1801-1812, (C) the Resource Conservation and Recovery Act of 1976, 42 U.S.C. Sections 6901-6987 (together with any amendments thereto, any regulations thereunder and any amendments to any such regulations as in effect from time to time, "**RCRA**"), (D) the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 U.S.C. §1251 et seq., (E) the Toxic Substances Control Act of 1976, 14 U.S.C. §2601 et seq., (F) the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §11001 et seq., (G) the California Carpenter-Presley-Tanner Hazardous Substance Account Act, California Health & Safety Code Sections 25300 et seq., (H) the Hazardous Materials Release Response Plans and Inventory Act, California Health & Safety Code Sections 25500 et seq., (I) the California Hazardous Waste Control Law, California Health & Safety Code Sections 25100 et seq. (together with any amendments thereto, any regulations thereunder and any amendments to any such regulations as in effect from time to time, the "**CHWCL**"), (J) California Health & Safety Code Sections 25015-25027.8, (K) the Medical Waste Management Act, California Health & Safety Code Sections 117600 et seq., (L) any amendments to or successor statutes to any of the foregoing, as adopted or enacted from time to time, (M) any regulations or amendments thereto promulgated pursuant to any of the foregoing from time to time, (N) any laws relating to Biohazardous Materials, including (but not limited to) any regulations or requirements with respect to the shipping, use, decontamination and disposal thereof, and (O) any other law now or at any time hereafter in effect regulating, relating to or imposing liability or standards of conduct concerning any Hazardous Materials, including (but not limited to) any requirements or conditions imposed pursuant to the terms of any orders, permits, licenses, registrations or operating plans issued or approved by any governmental or quasi-governmental authority from time to time in connection with any Handling of Hazardous Materials in, on or about the Subleased Premises or the Complex.

(vii) "**Hazardous Wastes**" means (A) any waste listed as or meeting the identified characteristics of a "hazardous waste" or terms of similar import under RCRA, (B) any waste meeting the identified characteristics of a "hazardous waste", "extremely hazardous waste" or "restricted hazardous waste" under the CHWCL, and/or (C) any and all

other substances and materials defined or referred to as a "hazardous waste" or other term of similar import under any Hazardous Materials Laws.

(viii) "**Radioactive Materials**" means (A) any and all substances and materials the Handling of which requires an approval, consent, permit or license from the Nuclear Regulatory Commission, (B) any and all substances and materials the Handling of which requires a Radioactive Material License or other similar approval, consent, permit or license from the State of California, and (C) any and all other substances and materials defined or referred to as "radiation," a "radioactive material" or "radioactive waste," or any other term of similar import under any Hazardous Materials Laws, including (but not limited to) Title 17, California Code of Regulations Section 30100, and any statutes, regulations or other laws administered, enforced or promulgated by the Nuclear Regulatory Commission.

(ix) "**Release**" means any accidental or intentional spilling, leaking, pumping, pouring, emitting, discharging, injecting, escaping, leaching, migrating, dumping or disposing into the air, land, surface water, groundwater or the environment (including without limitation the abandonment or discarding of receptacles containing any Hazardous Materials). Notwithstanding the foregoing, a Release shall not include any spilling or discharge of Hazardous Materials which is not caused by or does not result from the action or inaction of Subtenant or any agent, employee, contractor, vendor, supplier, licensee, subsubtenant or invitee of Subtenant (a "**Subtenant Party**").

(x) "**Subtenant's Contamination**" means any Release of Hazardous Material on or about the Subleased Premises or other portion of the Complex by Subtenant and/or any Subtenant Party.

(xi) Other capitalized terms not defined herein shall have the meanings specified in the Sublease.

(b) Handling of Hazardous Materials. The Handling of Hazardous Materials in the Subleased Premises and the Complex by all Subtenant Parties shall at all times comply with and be subject to all provisions of the Sublease and all Hazardous Materials Laws. Without limiting the generality of the foregoing, Subtenant shall comply at all times with all Hazardous Materials Laws applicable to any aspect of Subtenant's use of the Subleased Premises and the Complex and of Subtenant's operations and activities in, on and about the Subleased Premises and the Complex, and shall ensure at all times that Subtenant's Handling of Hazardous Materials in, on and about the Subleased Premises or the Complex does not violate (x) the terms of any governmental licenses or permits applicable to the Complex or Subleased Premises or to Subtenant's Handling of any Hazardous Materials therein, or (y) any applicable requirements or restrictions relating to the occupancy classification of the Complex and the Subleased Premises.

(c) Disposition of Hazardous Materials. Subtenant shall not dispose of any Hazardous Materials, except to the extent authorized by permit, at the Subleased Premises or the Complex, but instead shall arrange for off-site disposal, under Subtenant's own name and EPA waste generator number (or other similar identifying information issued or prescribed by any other governmental authority with respect to Radioactive Materials, Biohazardous Materials or any other Hazardous Materials) and at Subtenant's sole expense, in compliance with all

applicable Hazardous Materials Laws, all Applicable Laboratory Use Laws and all other applicable federal, state and local laws and regulatory requirements, and in accordance with Industry Standards and Best Practices.

(d) Information Regarding Hazardous Materials. Prior to entering into the Sublease, Subtenant has completed and delivered to Sublandlord the Environmental Questionnaire attached to this **Exhibit I** (the "**Environmental Questionnaire**") with respect to Subtenant's anticipated Laboratory Use in the Subleased Premises. In addition, Subtenant shall provide the following information and/or documentation to Sublandlord in writing prior to the Delivery Date for the 10th Floor Subleased Premises, 11th Floor Subleased Premises and 12th Floor Subleased Premises, and thereafter shall update and deliver to Sublandlord such information and/or documentation (x) upon such demand to Subtenant from Sublandlord (but no more than once each calendar year), (y) prior to the construction of improvements in the 9th Floor Subleased Premises for Laboratory Use, or (z) upon any Material Change (as defined in Subsection (xi) below) in Subtenant's Hazardous Materials inventory or in Subtenant's business operations involving Hazardous Materials, which updates shall reflect any Material Changes in such information and/or documentation:

(i) An inventory of all Hazardous Materials that Subtenant intends to or does receive, use, handle, generate, transport, store, treat or dispose of from time to time, or at the time of preparation of such inventory proposes or expects to use, handle, generate, transport, store, treat or dispose of from time to time, in connection with its operations at the Subleased Premises. Such inventory shall include, but shall separately identify, any Hazardous Wastes, Biohazardous Materials and Radioactive Materials covered by the foregoing description. Subtenant shall also disclose in writing to Sublandlord the Biosafety Level designation associated with Subtenant's use of any Biohazardous Materials.

(ii) Copies of all then existing permits, licenses, registrations and other similar documents issued by any governmental or quasi-governmental authority that authorize any Handling of Hazardous Materials in, on or about the Subleased Premises or the Complex by any Subtenant Party.

(iii) All SDSs required to be completed with respect to operations of Subtenant at the Subleased Premises from time to time in accordance with Title 8, California Code of Regulations Section 5194 or 42 U.S.C. Section 11021, or any amendments thereto, and any Hazardous Materials Inventory Sheets that accompany the SDSs.

(iv) All hazardous waste manifests that Subtenant is required to complete from time to time in connection with its operations at the Subleased Premises.

(v) A copy of any "**Hazardous Materials Business Plan**" required from time to time with respect to Subtenant's operations at the Subleased Premises pursuant to California Health & Safety Code Sections 25500 et seq., and any regulations promulgated thereunder, as amended from time to time, or in connection with Subtenant's application for a business license from the City of San Francisco. If Applicable Law does not require Subtenant to prepare a Hazardous Materials Business Plan, Subtenant shall furnish to Sublandlord at the times and in the manner set forth above the information that would

customarily be contained in a Hazardous Materials Business Plan, including information regarding Subtenant's Hazardous Materials inventories. The parties acknowledge that a Hazardous Materials Business Plan would ordinarily include an emergency response plan, and that regardless of whether Applicable Law requires Subtenant to prepare Hazardous Materials Business Plans, Sublandlord in its reasonable discretion may elect to prepare a coordinated emergency response plan for the Complex or portions thereof, including the Subleased Premises.

(vi) Any "**Contingency Plans and Emergency Procedures**" required of Subtenant from time to time, in connection with its operations at the Subleased Premises, pursuant to Applicable Law, Title 22, California Code of Regulations Sections -66264.50 et seq., and any amendments thereto, and any "records" required under Title 22, California Code of Regulations Section 66264.70 et seq., and any amendments thereto from time to time. Sublandlord in its reasonable discretion may elect to prepare a Contingency Plan and Emergency Procedures for the Complex or portions thereof, including the Subleased Premises, in which event, if Applicable Law does not require Subtenant to prepare a Contingency Plan and Emergency Procedures for its operations at the Subleased Premises, Subtenant shall furnish to Sublandlord at the times and in the manner set forth above the information that would customarily be contained in a Contingency Plan and Emergency Procedures.

(vii) Copies of any biennial or other periodic reports furnished or required to be furnished to the California Department of Health Services from time to time, under Applicable Law, pursuant to Title 22, California Code of Regulations Section 66264.70 et seq. and any amendments thereto, relating to any Hazardous Materials.

(viii) Copies of any industrial wastewater discharge permits issued to or held by Subtenant from time to time in connection with its operations at the Subleased Premises.

(ix) Copies of any other lists, reports, studies, or inventories of Hazardous Materials or of any subcategories of materials included in Hazardous Materials that Subtenant is otherwise required to prepare and file from time to time with any governmental or quasi-governmental authority in connection with Subtenant's operations at the Subleased Premises, including (but not limited to) reports filed by Subtenant with the federal Food & Drug Administration or any other regulatory authorities primarily in connection with the presence (or lack thereof) of any "select agents" or other Biohazardous Materials on the Subleased Premises, together with proof of filing thereof. For the avoidance of doubt, this provision does not require Subtenant to disclose to Sublandlord FDA filings that are not related to Hazardous Materials or any subcategories of materials included in Hazardous Materials that are being handled at the Subleased Premises.

(x) Any other information reasonably requested by Sublandlord in writing from time to time in connection with (A) Sublandlord's monitoring (in Sublandlord's reasonable discretion) and enforcement of Subtenant's obligations under this Section and of compliance with applicable Hazardous Materials Laws in connection with any Handling or Release of Hazardous Materials in the Subleased Premises or the Complex by any Subtenant Party, (B) any inspections or enforcement actions by any governmental authority pursuant to any Hazardous Materials Laws or any other laws relating to the presence or Handling

of Hazardous Materials in the Subleased Premises or the Complex by any Subtenant Party, and/or (C) Sublandlord's preparation (in Sublandlord's reasonable discretion) and enforcement of any reasonable rules and procedures relating to the presence or Handling by Subtenant or any Subtenant Party of Hazardous Materials in the Subleased Premises or the Complex, including (but not limited to) any contingency plans or emergency response plans as described above.

(xi) As used herein, "**Material Change**" shall refer to any change in the use, presence or Handling of Hazardous Materials by Subtenant that would (A) reasonably be expected to have a significant effect on the Subleased Premises or the Complex, (B) violate the compliance with or provisions of any existing permits, licenses, registrations and other similar documents issued by any governmental or quasi-governmental authority that authorize any Handling of Hazardous Materials in, on or about the Subleased Premises or the Complex by any Subtenant Party, or (C) cause the information provided in the Environmental Questionnaire to become untrue or inaccurate in any material respect.

Notwithstanding the foregoing, Subtenant shall not be required to provide Sublandlord with any portion(s) of such documents containing information of a proprietary nature which, in and of themselves, do not contain a reference to any Hazardous Materials or hazardous activities. It is not the intent of this Section to provide Sublandlord with information which could be detrimental to Subtenant's business should such information become possessed by Subtenant's competitors.

(e) Indemnification; Notices to Sublandlord. Subtenant shall be responsible for and shall indemnify, defend and hold Landlord and Sublandlord harmless from and against all Environmental Damages directly or indirectly arising out of: (i) any Handling of Hazardous Materials by any Subtenant Party in, on or about the Subleased Premises or the Complex, (ii) any breach of Subtenant's obligations under this Section or of any Hazardous Materials Laws by any Subtenant Party, or (iii) the existence of any Subtenant's Contamination in, on or about the Subleased Premises or the Complex caused by any Subtenant Party, including, without limitation, any removal, cleanup or restoration work and materials necessary to return the Complex or any improvements of whatever nature located on the Complex to the condition existing prior to the Handling of Hazardous Materials in, on or about the Subleased Premises or the Complex by any Subtenant Party. In the event of any Subtenant's Contamination in, on or about the Subleased Premises or any other portion of the Complex, Subtenant shall promptly give written notice thereof to Sublandlord (regardless of the source or quantity of the Release). Notwithstanding the foregoing, Subtenant shall have no obligation to report routine spills which are controlled and cleaned up, which are incident to Subtenant's operations and that cause no Environmental Damage to the Subleased Premises and/or the Complex. In addition, Subtenant shall (A) promptly notify Sublandlord if Subtenant becomes aware of any material claims by any person or entity relating to any Hazardous Materials in, on, under, from, about or in the vicinity of the Subleased Premises, whether relating to damage, contribution, cost recovery, compensation, loss or injury (provided that Subtenant shall not be required to so notify Sublandlord if prevented from doing so by applicable law, including HIPAA, or existing confidentiality obligations), and (B) promptly advise Sublandlord in writing of Subtenant's discovery of any occurrence or condition in, on, under or about the Subleased Premises that would reasonably subject Sublandlord or Landlord to any liability, or restriction on ownership, occupancy, transferability or use of the Subleased Premises or the Complex under any Hazardous Materials Laws. Subtenant shall not enter into any legal proceeding or other action, settlement,

consent decree or other compromise with respect to any claims involving Hazardous Materials without first notifying Sublandlord of Subtenant's intention to do so and affording Sublandlord the opportunity to join and participate, as a party if Sublandlord so elects, in such proceedings and in no event shall Subtenant enter into any agreements which are binding on Sublandlord or Landlord, the Subleased Premises or the Complex with Sublandlord's prior written consent (and the consent of Landlord, if required). Notwithstanding anything to the contrary contained herein, nothing in this Section 4(e) shall be construed to make Subtenant responsible for any Hazardous Materials present on the Subleased Premises as of the Commencement Date, or which migrate thereto through air, water or soil through no fault of Subtenant, or are introduced by Sublandlord, Landlord, any other tenant of the Building or any third party not under Subtenant's control. Sublandlord shall indemnify, defend and hold Subtenant harmless from any and all costs, liabilities, demands, claims, causes of action, penalties, fines, losses, liens, assessments, damages, disbursements, expenses, or fees of any kind or any nature (including without limitation all clean-up costs and reasonable attorneys' fees) which may at any time be imposed upon, incurred by, or asserted or awarded against Subtenant which (i) result from Hazardous Materials which existed on or in the Subleased Premises prior to Subtenant's occupancy or (ii) are brought onto the Subleased Premises by, or otherwise caused by the negligence or willful misconduct of, Sublandlord.

(f) Governmental Notices. Subtenant shall promptly provide Sublandlord with copies of all notices received by Subtenant from any governmental authority relating to any actual, threatened or alleged Release by Subtenant or any Subtenant Party of Hazardous Materials in, on or about the Subleased Premises or any other portion of the Complex (and regardless of the source or quantity of any actual, threatened or alleged Release), including, without limitation, any investigation, inspection, proceeding, notice of violation, notice of responsibility or demand for action from any federal, state or local governmental authority or official in connection with any actual, threatened or alleged Release by any Subtenant Party of Hazardous Materials in or about the Subleased Premises or any other portion of the Complex.

(g) Inspection by Sublandlord. In addition to, and not in limitation of, Sublandlord's rights under the Sublease, upon reasonable prior request by Sublandlord Subtenant shall grant Sublandlord and its consultants, as well as any governmental authorities having jurisdiction over the Subleased Premises or over any aspect of Subtenant's use thereof, access to the Subleased Premises at reasonable times (but in no event less than 24 hours' notice) to inspect Subtenant's Handling of Hazardous Materials in, on and about the Subleased Premises, and Sublandlord shall not thereby incur any liability to Subtenant or be deemed guilty of any disturbance of Subtenant's use or possession of the Subleased Premises by reason of such entry; provided, however, that Sublandlord shall use reasonable efforts to minimize interference with Subtenant's use of the Subleased Premises caused by such entry. Sublandlord shall bear all costs relating to any such inspection. Sublandlord shall comply with any security precaution reasonably imposed by Subtenant during any entry onto the Subleased Premises. Notwithstanding Sublandlord's rights of inspection and review of documents, materials and physical conditions under this Section with respect to Subtenant's Handling of Hazardous Materials, Sublandlord shall have no duty or obligation to perform any such inspection or review or to monitor in any way any documents, materials, physical conditions or compliance with any Applicable Laws in connection with Subtenant's Handling of Hazardous Materials, and no third

party shall be entitled to rely on Sublandlord to conduct any such inspection, review or monitoring by reason of the provisions of this Section.

(h) Monitoring by Sublandlord. Sublandlord reserves the right to monitor, at Subtenant's cost, once per year (and at any time that Sublandlord reasonably believes that Subtenant may be violating a material requirement of this **Exhibit I**), through consultants engaged by Sublandlord: (x) all aqueous and atmospheric discharges and emissions from the Subleased Premises during the Term by a Subtenant Party, (y) Subtenant's compliance with requirements and restrictions relating to the occupancy classification of the Building (including, but not limited to, Hazardous Materials inventory levels of Subtenant), and (z) Subtenant's compliance with all other requirements of this Section. Any such costs incurred by Sublandlord shall be reimbursed by Subtenant to Sublandlord within fifteen (15) days after written demand by Sublandlord from time to time, accompanied by supporting documentation reasonably evidencing the costs for which such reimbursement is claimed.

(i) Clean Up. If Sublandlord, Subtenant or any governmental or quasi-governmental authority discovers any Release from the Subleased Premises during the Term by a Subtenant Party in violation of this Section, or if any environmental report prepared by Sublandlord or Subtenant indicates the presence of any Hazardous Materials as to which Subtenant has a removal or remediation obligation under the Sublease, or if Sublandlord discovers any other breach of Subtenant's obligations under this Section, then upon receipt of written notice from Sublandlord or at such earlier time as Subtenant obtains actual knowledge of the applicable discharge, emission or breach, Subtenant at its sole expense shall (x) in the case of a Release in violation of any Environmental Law, cease the applicable discharge or emission and remediate any continuing effects of the discharge or emission until such time as Subtenant demonstrates to Sublandlord's reasonable satisfaction that the applicable discharge or emission is in compliance with all Hazardous Materials Laws and any other applicable regulatory requirements to the satisfaction of the appropriate governmental agency with jurisdiction over the Release, and (y) in the case of any other breach of Subtenant's obligations under this Section, take such corrective measures as Sublandlord may reasonably request in writing in order to cure or eliminate the breach as promptly as practicable and to remediate any continuing effects of the breach. Without limiting the foregoing, Subtenant, at its sole expense, shall immediately comply with all reporting requirements imposed pursuant to any and all Hazardous Materials Laws and take such additional investigative, remedial and corrective actions as Sublandlord shall in its reasonable discretion deem necessary so that the Subleased Premises and the Complex are remediated to the condition existing prior to such Release. If, within thirty (30) days after the initial discovery of the matter requiring clean up or remediation, Subtenant fails to initiate remediation of the Release, or if Subtenant thereafter fails to proceed with diligence to complete such clean up or remediation as promptly as practicable, then Sublandlord shall have the right, but not the obligation, and without waiving any other rights under the Sublease, to carry out any remediation recommended by the applicable environmental report or required by the applicable governmental authority, and recover all of the costs and expenses thereof from Subtenant as Rent, payable within fifteen (15) days after receipt of written demand therefor. Subtenant shall continue to pay all Rent during any clean-up or remediation, and shall not be entitled to any reduction, offset or deferral of any Rent due or accruing under the Sublease during any such clean-up or remediation.

(j) Environmental Study. No later than thirty (30) days prior to expiration or any earlier termination of the Term, Subtenant at its sole cost and expense, shall obtain and deliver to Sublandlord an environmental study, performed by an expert reasonably satisfactory to Sublandlord, evaluating, the presence or absence of any Subtenant's Contamination in, on and about the Subleased Premises and the Complex. Such study shall be based on a reasonable and prudent level of tests and investigations of the Subleased Premises and surrounding portions of the Complex (if appropriate) which tests shall be conducted no earlier than forty-five (45) days prior to the Expiration Date. If such environmental study reveals that remediation is required under any Hazardous Materials Laws that Subtenant is responsible for under the Sublease, Subtenant shall submit a remediation plan to Sublandlord prepared by such expert and at its sole expense shall promptly commence and diligently pursue to completion the required remedial actions.

(k) Radioactive Materials. Without limiting any other applicable provisions of this Section, if Subtenant Handles or proposes to Handle any Radioactive Materials in or about the Subleased Premises, Subtenant shall provide Sublandlord with copies of Subtenant's licenses or permits for such Radioactive Materials and with copies of all radiation protection programs and procedures required under Applicable Laws or otherwise adopted by Subtenant from time to time in connection with Subtenant's Handling of such Radioactive Materials. In addition, Subtenant shall comply with any and all rules and procedures issued by Sublandlord from time to time with respect to the Handling of Radioactive Materials on the Complex (such as, by way of example but not limitation, rules implementing a label defacement program for decayed waste destined for common trash and/or rules relating to transportation and storage of Radioactive Materials on the Complex).

(l) Surrender. Prior to the expiration or termination of the Sublease, Subtenant shall (A) complete any remediation or clean-up required under the terms of the Sublease and (B) obtain and deliver to Sublandlord a letter or other written determination from the overseeing governmental authority confirming that any remediation or clean-up has been completed in accordance with the requirements of such governmental authority and that no further response action of any kind is required for the unrestricted use of the Subleased Premises ("**Closure Letter**"). Upon the expiration or earlier termination of the Sublease, Subtenant shall also be obligated to close all permits obtained in connection with Hazardous Materials used by Subtenant or any Subtenant Party in accordance with Applicable Laws.

(m) Deemed Holdover Occupancy. Notwithstanding any other provisions of the Sublease, if on or before the expiration or earlier termination of the Sublease Subtenant has failed to remove from the Subleased Premises or the Complex all Hazardous Materials Handled by a Subtenant Party or has failed to complete any remediation or removal of Subtenant's Contamination and/or to have fully remediated in compliance with the requirements of the Sublease and with all applicable Hazardous Materials Laws and any other applicable federal, state and local laws the Subtenant's Handling and/or Release (if applicable) of any such Hazardous Materials and/or has not received the Closure Letter, closed all applicable permits and received any other governmental approval required for facility closure under Hazardous Materials Laws, then for so long as such circumstances continue to exist, Subtenant shall be deemed to be occupying the Subleased Premises on a holdover basis without Sublandlord's consent (notwithstanding such otherwise applicable termination or expiration of the Term) and

shall be required to continue pay Rent and other charges in accordance with the Sublease until such time as all such circumstances have been fully resolved in accordance with the requirements of the Sublease and with all applicable Hazardous Materials Laws and other any other applicable federal, state and local laws.

(n) Confidentiality. Unless compelled to do so by Applicable Law (including in connection with mandatory governmental reporting requirements), Subtenant agrees that Subtenant shall not discuss, disseminate or copy any information, data, findings, communications, conclusions or reports regarding the environmental condition of the Subleased Premises to any person (other than Subtenant's consultants, attorneys, employees, shareholders and potential and actual investors, lenders, business and merger partners, subsubtenants and assignees that have a need to know such information), including any governmental authority, without the prior written consent of Sublandlord. In the event that Subtenant believes disclosure is compelled by Applicable Law, it shall provide Sublandlord ten (10) days' advance notice of disclosure of confidential information so that Sublandlord may attempt to obtain a protective order.

(o) Survival of Obligations. Subtenant's obligations under this **Exhibit I** shall survive the expiration or earlier termination of the Sublease and shall survive any conveyance by Sublandlord of its interest in the Subleased Premises. The provisions of this Section and any exercise by Sublandlord of any of the rights and remedies contained herein shall be without prejudice to any other rights and remedies that Sublandlord may have under the Sublease or under Applicable Law with respect to any Environmental Conditions and/or any Hazardous Materials. Sublandlord's exercise or failure to exercise, at any time or from time to time, any or all of the rights granted in this **Exhibit I** shall not in any way impose any liability on Sublandlord or shift from Subtenant to Sublandlord any responsibility or obligation imposed upon Subtenant under the Sublease or under Hazardous Materials Laws, Environmental Conditions and/or compliance with any applicable federal, state or local laws.

[TO BE COMPLETED BY SUBTENANT AND DELIVERED TO SUBLANDLORD]

ENVIRONMENTAL QUESTIONNAIRE
FOR COMMERCIAL, RESEARCH AND DEVELOPMENT, AND INDUSTRIAL PROPERTIES

Property Name: _____
Property Address: _____

Instructions: The following questionnaire is to be completed by the Tenant 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 are 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 Landlord 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 J

Security System and Procedure

1. Badging.

   a) Building security badging to be distributed through Sublandlord. Sublandlord will provide Subtenant with up to two hundred (200) security badges per floor of the Subleased Premises at no charge. Sublandlord will charge Subtenant a $25 fee for replacing each badge and any additional badges beyond the initial two hundred (200) security badges per floor of the Subleased Premises .

   b) Subtenant must provide Sublandlord with the following employee information when requesting badges: (i) Government Issued Photo ID, (ii) First Name/Last Name, (iii) Company, and (iv) Date of Hire.

   c) A primary and secondary approver must be identified by the Subtenant. Badges are only produced weekly on a day determined by Sublandlord.

   d) All badge requests must be submitted by the identified approver.

   e) Subtenant will be required to make an immediate written notification of all terminated individuals with a badge.

   f) A monthly audit will be required to verify all individuals with an assigned access badge is active and in good standing with the Subtenant.

   g) Subtenant will be required to meet and escort a Subtenant employee if a badge is forgotten.

2. Guests.

   a) Subtenant, at Subtenant's sole cost and expense, shall install and maintain one (1) iPad at the North Tower's lobby security desk which must be used as Subtenant's stand-alone visitor management system. Such system shall be subject to Sublandlord's prior written approval.

   b) All guests (non-badged employees) must be accompanied by a badged Subtenant employee.

   c) If Subtenant does not have a visitor management system, Sublandlord will extend Sublandlord's system for Subtenant's use. Any costs incurred in connection with such use will be included as Additional Rent.

d) Only individuals direct hired by Subtenant or hired through a staffing agency may be populated in the visitor management system. Contractors/vendors of Subtenant shall not be included.

e) A total of ten (10) badges will be provided for the Subtenant should an employee forget a badge. Subtenant must email Sublandlord to activate the badge for such individual.

3. CCTV & Access Control.

a) Sublandlord will place cameras in certain Common Areas (i.e. elevator banks, stairwells) or any other area that may be serviced by Sublandlord's workplace services.

b) Subtenant may install its own access control and CCTV within Subleased Premises only, at Subtenant's sole cost and pursuant to the terms of the Sublease.

4. Emergency. Subtenant will be required to comply with all emergency procedures outlined in the Dropbox Emergency Action Plan (which Sublandlord shall make available to Subtenant), to include identification of floor wardens and participation in all emergency drills, etc. The EAP may be updated or revised at Sublandlord's discretion and a copy provided to Subtenant.

5. Elevator. Dedicated elevator will be assigned and badging at the elevator will be required to access each floor of the Subleased Premises.

6. Physical Security & Safety Policies. Subtenant shall cooperate and comply with the Dropbox Physical Security & Safety policy (which Sublandlord will make available to Subtenant), which policy may be updated or revised at Sublandlord's discretion and a copy provided to Subtenant.

7. Vendors and Contractors. Except in the event of an emergency, Subtenant shall cause Subtenant's contractors and vendors to cooperate and comply with Sublandlord's security and safety policies (which shall include providing at least twenty four (24) hours prior notice before accessing the Complex).

EXHIBIT K

LIST OF COMPETITORS

1. Box
2. Google
3. Apple
4. Microsoft
5. Bloomberg
6. CNBC
7. cnet
8. Wired
9. pCloud
10. ShareFile
11. Sync.com
12. Tresorit

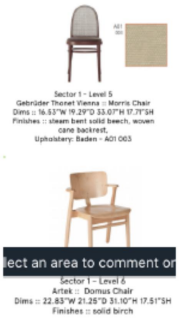
EXHIBIT L

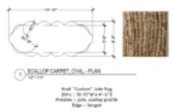
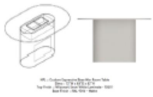
FURNITURE

[SEE ATTACHED]

A8 & A9 Furniture Inventory

Furniture item		A8	A9
Workstations			
• Desks		160	160
• Peds		160	160
• Aeron chairs	 (similar, but not identical)	160	160
Living Rooms			
• Lounge Chairs		3	4
• Sofas		2	2

• Coffee tables	 (custom tan color)	3	3
• Artek stools		6	6
Collab tables (Low)			
• Table		3	2
• Chairs		12	8
Green Kitchens			
• Oval tables		1	1
• Dining chairs		8	8

• Lounge chairs	Specification TBD	4	4
• Coffee tables	Specification TBD	2	2
• Jute rugs		2	2
Mother's Rooms			
• Chairs		1	1
• Side tables		1	1
Low Cork Screens			
• Screens	Custom	2	2
Collaboration Seating			
• Tables		3	3
• Stools		15	15

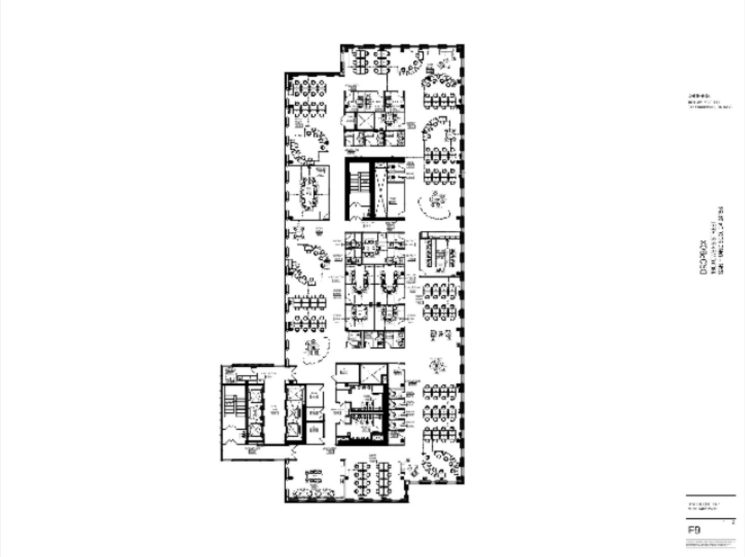
Conference Rooms

Table Size	A8	A9
Phone (CTA-01)	5	6
Huddle (CTA-03)	11	12
Small (CTA-04)	1	1
Small (CTA-08)	2	2
Medium (CTA-10)	1	1
Medium (CTA-17)	2	2
Large (CTA-18)	1	0
Large (CTA-19)	1	1
Classroom tables (CLT-01)	0	6
Chairs		
Vitra Softshell	35	38
Vitra .04	33	34
Maarten	35	36

A8 Floorplan

PDF A8_Furniture • PDF Document

A9 Floorplan



PDF A9_Furniture • PDF Document

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 and 333-237410) pertaining to the 2016 Equity Incentive Plan, 2019 Equity Incentive Plan and 2019 Employee Stock Purchase Plan of Vir Biotechnology, Inc.
b. Registration Statement (Form S-3 No. 333-250013) of Vir Biotechnology, Inc.;

of our reports dated February 25, 2021, 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, 2020.

/s/ Ernst & Young LLP

Redwood City, California
February 25, 2021

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 25, 2021

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 25, 2021

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, 2020 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:

(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 25th of February 2021.

/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."