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

FORM 10-K

☒ **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: 001-37490

Sierra Oncology, Inc.

(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**20-0138994** **(I.R.S. Employer Identification Number)**
1820 Gateway Drive, Suite 110 **San Mateo, California** **(Address of principal executive offices)**	**94404** **(Zip Code)**

(650) 376-8679

(Registrant's telephone number, including area code)

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, $0.001 par value	SRRA	The Nasdaq Global 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, if any, 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 and post such files). YES ☒ NO ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a 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 common stock held by non-affiliates of the registrant calculated based on the closing price of $12.10 of the registrant's common stock as reported on The Nasdaq Global Market on June 30, 2020, the last business day of the registrant's most recently completed second quarter, was $56.1 million.

The number of shares of Registrant's Common Stock outstanding as of March 8, 2021 was 11,628,479.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement ("Proxy Statement") relating to the 2021 Annual Meeting of Stockholders will be filed with the Commission within 120 days after the end of the Registrant's 2020 fiscal year and is incorporated by reference into Part III of this Report.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (Annual Report) contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act), and section 27A of the Securities Act of 1933, as amended (Securities Act). All statements contained in this Annual Report other than statements of historical fact, including statements regarding our future clinical development activities, expected timing and results of clinical trials, future results of operations and financial position, our business strategy and plans and our objectives for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect,” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements.

We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in Item 1A, “Risk Factors” and elsewhere in this Annual Report. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, 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 any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the forward-looking events and circumstances discussed in this Annual Report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, 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. We undertake no obligation to update publicly any forward-looking statements to conform these statements to actual results or to changes in our expectations, except as required by law. You should read this Annual Report with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

Unless the context indicates otherwise, as used in this Annual Report, the terms “Sierra Oncology,” “the Company,” “we,” “us” and “our” refer to Sierra Oncology, Inc., a Delaware corporation, and its subsidiaries taken as a whole, unless otherwise noted. Sierra Oncology is our registered trademark. The “Sierra Oncology” logo and all product names are our common law trademarks. This Annual Report contains additional trade names, trademarks and service marks of other companies, which are the property of their respective owners. We do not intend our use or display of other companies’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

PART I

Item 1. Business.

Overview

We are a late-stage biopharmaceutical company on a quest to deliver targeted therapies that treat rare forms of cancer. Our main focus is the development of momelotinib, an investigational agent for the treatment of myelofibrosis. Currently, momelotinib is in a global Phase 3 clinical trial for patients with myelofibrosis, called the MOMENTUM study, that if successful will be registration enabling. At its completion, approximately 1,000 myelofibrosis patients will have received momelotinib, and several of our clinical trial patients remain on treatment more than 10 years later.

In the third quarter of 2018, we acquired momelotinib from Gilead Sciences, Inc. (Gilead), which had completed several late-stage trials of the drug candidate in patients with myelofibrosis. Myelofibrosis is characterized by progressive anemia and thrombocytopenia and currently approved JAK inhibitor therapies, ruxolitinib and fedratinib, can induce or further exacerbate this myelosuppression, limiting their use in first line treatment and resulting in a population of second line patients who are no longer able to benefit from such therapies. Momelotinib is a novel, orally-bioavailable JAK1 (Janus kinase 1), JAK2 (Janus kinase 2) and ACVR1 (Activin A receptor type 1) inhibitor with a differentiated mechanism of action, enabling it to potentially address all three hallmarks of disease in myelofibrosis: anemia of inflammation, constitutional symptoms and enlarged spleen.

In December 2018, we reported new data for momelotinib collated from the two completed SIMPLIFY Phase 3 clinical trials and a translational biology study in transfusion dependent patients with myelofibrosis. Data from the latter study were also concurrently presented in a poster at the 60th American Society of Hematology Annual Meeting & Exposition in San Diego, California. We reported aggregated transfusion independence responses from more than 150 intermediate and high-risk transfusion dependent myelofibrosis patients demonstrating robust and consistent response rates within and across the clinical studies. More than 44% of these patients became transfusion free for at least 12 weeks and nearly 50% were transfusion independent for at least 8 weeks.

In the second quarter of 2019, we announced that we had obtained regulatory clarity with the U.S. Food and Drug Administration (FDA) concerning the design of a Phase 3 clinical trial intended to support potential registration of momelotinib. We also announced that the FDA had granted Fast Track designation to momelotinib for the treatment of patients with intermediate/high-risk myelofibrosis who have previously received a JAK inhibitor.

Following receipt of this clarity, we announced the design of the MOMENTUM Phase 3 clinical trial in myelofibrosis, which we subsequently launched in the fourth quarter of 2019. MOMENTUM is a randomized double-blind trial designed to enroll 180 myelofibrosis patients who are symptomatic and anemic and have been treated previously with a JAK inhibitor. The Primary Endpoint of the trial is the Total Symptom Score (TSS) response rate of momelotinib compared to danazol at Week 24 (99% power; p-value < 0.05). Danazol has been selected as an appropriate treatment comparator given its use to ameliorate anemia in myelofibrosis patients, as recommended by National Comprehensive Cancer Network (NCCN) and European Society for Medical Oncology (ESMO) guidelines. Patients are being randomized 2:1 to receive either momelotinib or danazol. After 24 weeks of treatment, patients on danazol are being allowed to crossover to receive momelotinib.

During the fourth quarter of 2019, we reported new analyses of red blood cell (RBC) transfusion data from SIMPLIFY-1, a double-blind Phase 3 trial of momelotinib head-to-head versus ruxolitinib in JAK inhibitor-naïve patients, which were presented in a poster by Dr. Ruben Mesa, Director of the Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center, at the 61st American Society of Hematology (ASH) Annual Meeting in Orlando, Florida. These analyses demonstrated that patients who received momelotinib had significantly decreased transfusion requirements compared to those treated with ruxolitinib, including an odds ratio of nearly 10 for receiving no transfusions during the 24-week study period. Transfusion dependency and moderate to severe anemia are critical negative prognostic factors for overall survival in myelofibrosis.

During the second quarter of 2020, at the 25th European Hematology Association (EHA) Virtual Congress, we reported favorable Long-Term Safety and Dose Intensity data for momelotinib from more than 550 patients across the two previously conducted SIMPLIFY Phase 3 studies and their subsequent ongoing extended treatment periods. More than 90 SIMPLIFY-1 and SIMPLIFY-2 patients continued to receive momelotinib for 3.5 years or longer. These data were presented in posters by Professor Claire Harrison, Guy's and St. Thomas' NHS Foundation Trust, London, United Kingdom, and Dr. Vikas Gupta, Princess Margaret Cancer Centre, Toronto, Canada. The key findings were:

- Consistent with prior data, and reflecting momelotinib's differentiated pharmacological profile, our new long-term safety analyses continue to show a rapid and sustained increase in hemoglobin levels during momelotinib therapy, in contrast to the significant decrease in hemoglobin for patients receiving ruxolitinib. Patients treated with momelotinib also experienced significantly higher mean platelet counts compared to those receiving ruxolitinib. Importantly, patients who switched from ruxolitinib to momelotinib also achieved a sustained improvement in hemoglobin in both studies, and platelets in SIMPLIFY-1. In addition to an absence of significant rates of high-grade hematological toxicities, long-term tolerability was favorable with no new safety signals or evidence of cumulative toxicity.
- Momelotinib's safety profile and durable benefits facilitated sustained dose intensity across the continuum of JAK inhibitor-naïve and previously JAK inhibitor treated myelofibrosis patients. While the starting doses for ruxolitinib were often attenuated due to low platelets, further reductions in dose intensity were also commonly required for ruxolitinib. In contrast, momelotinib was initiated at full dose for all subjects enrolled to the SIMPLIFY studies and high dose intensity was maintained in the majority over extended durations. Patients who switched from ruxolitinib to momelotinib saw an immediate and sustained improvement in dose intensity.
- The data from the two interrelated presentations suggest that the favorable effect on hemoglobin and platelets allows momelotinib to be initiated at full dose intensity and maintained for the majority of patients at full dose intensity over extended durations while retaining a favorable long-term safety profile. Notably, some patients continued to receive momelotinib 10 years after enrolling in the initial momelotinib Phase 2 trials while 90 Phase 3 SIMPLIFY patients who enrolled into those trials 4 to 6 years ago continued to receive momelotinib. We believe the dosing and safety profile may contribute to momelotinib’s potential ability to provide sustained benefits over extended durations.

Most recently, we released updated analyses from the previously completed Phase 3 SIMPLIFY studies of momelotinib at the American Society of Hematology Annual Meeting in December 2020, including overall survival data as well as efficacy data for momelotinib compared to ruxolitinib in patients with low platelet levels. The overall survival data received an oral presentation by Dr. Srdan Verstovsek of the University of Texas MD Anderson Cancer Center in Houston, Texas, USA; efficacy data by platelet strata were presented in a poster by Dr. Jean-Jacques Kiladjian, Saint Louis Hospital, Paris, France. Key findings were:

- Robust overall survival was observed in both JAK inhibitor-naïve and previously ruxolitinib treated patients. Sustained transfusion independence was observed with extended momelotinib treatment, and the median duration of TI in the momelotinib arm has not been reached after more than three years of follow up. We believe these data, in combination with previously reported safety data, further highlight where momelotinib may be a viable treatment option for myelofibrosis patients, including those who are not ideal candidates for currently approved therapies.

- The retrospective analysis of the two Phase 3 SIMPLIFY studies demonstrate that the relative benefit-risk profile of momelotinib and ruxolitinib is influenced by baseline platelet count. In SIMPLIFY-1, momelotinib achieved substantially higher Transfusion Independence (TI) and splenic response rates and had a similar symptomatic response relative to ruxolitinib in patients whose platelet count at baseline was <150 x 10^9/L. For patients whose platelet count was 150 – 300 x 10^9/L, momelotinib achieved a higher TI response rate and generally similar splenic and symptom response rates. In patients with platelet counts >300 x 10^9/L, ruxolitinib achieved higher splenic and symptom response rates than momelotinib, and the TI rate remained higher with momelotinib. These updated analyses complement previous findings that demonstrate the ability to initiate and maintain near-maximal momelotinib dose intensity regardless of baseline platelet count, suggesting that this durable dosing contributes to its efficacy profile.

During 2020, we continued to operationalize the MOMENTUM trial on a global basis, and we anticipate closing screening in the first half of 2021 and remain on track to complete enrollment in mid-2021. Top-line data are currently anticipated in the first half of 2022 and, if the data are positive, we anticipate filing for regulatory approval of momelotinib in the second half of 2022. Due to the recent global outbreak of COVID-19, our clinical trials have been and may continue to be affected, and we are likely to experience delays in anticipated timelines and milestones, which will be difficult to predict until we have more visibility on the duration and impact of the COVID-19 pandemic and the potential institution of additional public health orders. We have experienced and may continue to experience some delays in planned site initiations and activations and may experience future delays in overall enrollment.

We believe that our current resources will be sufficient to execute on our development strategy for momelotinib into the second half of 2022, subject to the potential impact of COVID-19. We are also starting to explore non-dilutive options that could provide additional capital to support our North American commercialization strategy.

Our portfolio also includes SRA737, a selective, orally bioavailable small molecule inhibitor of Checkpoint kinase 1 (Chk1), an emerging target for the treatment of cancer which has a key role in the DNA Damage Response (DDR). In November 2020, we entered into an amendment to the License Agreement with CRT Pioneer Fund (CPF) to allow for the potential future clinical development of SRA737.

We wholly own momelotinib, subject to future milestone payments and royalties, and retain the global commercialization rights to SRA737.

Our Lead Product Candidate – Momelotinib

Myelofibrosis

Myelofibrosis is a disorder involving the stem-cells that give rise to blood cells, and is driven by molecular abnormalities that activate the JAK-signal transducers and activators of transcription (JAK-STAT) pathway. The Janus kinases (JAKs) play a central role in the regulation of blood cell production, controlling survival, proliferation, and differentiation of progenitor cells as well as the function of mature cells. Abnormal activation of the JAK-STAT pathway is central to the development of myelofibrosis by driving proliferation, inflammation, fibrosis, and progression of disease.

The three cardinal disease manifestations of myelofibrosis are (1) progressive anemia, often in association with thrombocytopenia (deficiency of platelets in the blood) or other cytopenias (blood cell deficiencies); (2) constitutional symptoms such as fatigue, night sweats, fever, cachexia (wasting), bone pain, pruritus (itching), and weight loss; and (3) organ enlargement, principally of the spleen and less often the liver, due to these organs attempting to produce blood cells, which can cause commonly associated symptoms such as abdominal distension and pain, early satiety, dyspnea (labored breathing), and diarrhea. The median survival for all patients with myelofibrosis is about six years but is considerably worse for intermediate 2- and high-risk patients at 4 years and 2.25 years, respectively. Besides causing disease-related morbidity, myelofibrosis may result in early death from leukemic progression, which can occur in about 20% of patients, and complications arising from progressive bone marrow failure, portal or pulmonary hypertension, infections, clotting, bleeding, and cardiovascular complications.

Myelofibrosis is a relatively rare condition with an incidence of 0.1 to 1 per 100,000 individuals per year, and a prevalence of 6 per 100,000 person-years because of its chronic nature and disabling course. It is estimated that 18,000 patients are living with myelofibrosis in the United States, and there are up to 40,000 patients globally. Median age at diagnosis is 67 years. Myelofibrosis may occur de novo as primary myelofibrosis (PMF) or may arise from a preexisting myeloproliferative neoplasm (MPN), including primarily polycythemia vera (PV) or essential thrombocytosis (ET).

Importance of Anemia in Myelofibrosis

Anemia is a cardinal feature of myelofibrosis, and RBC transfusion dependence is a hallmark of the late-stage disease. Within a year of diagnosis, 45% of patients with myelofibrosis are already RBC transfusion dependent and eventually, nearly all will develop transfusion dependence.

Transfusion dependence is a critical negative prognostic factor for survival for patients with myelofibrosis. Transfusions are associated with both acute and chronic health risks, and they place a significant burden on both the patient and the health care system. Severe anemia and transfusion dependence are independent predictors of poor prognosis and are inversely correlated with quality of life. Conversely, response to anemia-targeted therapies has been associated with improvement in quality of life. The prognostic effect of anemia was recently demonstrated in 1,109 consecutive PMF patients at the Mayo Clinic, 86% of whom presented with some degree of anemia. Even mild anemia impaired survival, while severe anemia (defined as Hgb level of < 8 g/dL or transfusion dependence) was associated with > 1.5-fold increase in risk of death compared with moderate anemia (Hgb level of 8-10 g/dL).

Existing approaches for the management of myelofibrosis associated anemia include transfusion, erythropoiesis-stimulating agents in patients with low erythropoietin levels, corticosteroids, androgens (including danazol), immunomodulators, and splenectomy. Each of these treatments is described by the National Comprehensive Cancer Network (NCCN) as minimally effective.

Momelotinib – A Potent and Selective JAK1, JAK2 and ACVR1 Inhibitor

Momelotinib is a potent, selective, small-molecule inhibitor of JAK1, JAK2 and ACVR1, under development for treatment of patients with myelofibrosis. Momelotinib was discovered by Cytopia Research, which commenced an initial Phase 1/2 clinical trial in the United States in 2009. Cytopia was acquired by YM BioSciences, Inc. in 2010, which continued clinical development of the compound, before its own acquisition by Gilead in 2013. Amongst other clinical studies, Gilead conducted two registration-track Phase 3 trials in subjects with myelofibrosis, GS-US-352-0101 (SIMPLIFY-1) and GS-US-352-1214 (SIMPLIFY-2). In August 2018, we acquired the momelotinib program from Gilead and assumed the role of IND sponsor in September 2018 with the intent to continue development of momelotinib for the treatment of myelofibrosis. Several members of our senior management team were previously executives at Cytopia and/or YM BioSciences and led the early development of momelotinib.

Following our acquisition of the program, we conducted a comprehensive review of data from the two Phase 3 trials of momelotinib, versus ruxolitinib (SIMPLIFY-1) and best available therapy (BAT) (SIMPLIFY-2), as well as GS-US-352-1672, a Phase 2, open-label, translational biology trial of momelotinib in transfusion-dependent subjects with myelofibrosis. In aggregate, our analyses across a variety of datasets show consistent benefit in the three cardinal disease manifestations of myelofibrosis across a spectrum of intermediate-high risk patients with myelofibrosis, both JAK inhibitor-naïve and previously JAK inhibitor-exposed: namely, (1) anemia and transfusion dependency, (2) constitutional symptoms, and (3) enlarged spleen, consistent with the compound's differentiated inhibition of JAK1, JAK2 and ACVR1. Although SIMPLIFY-1 met its primary efficacy endpoint of non-inferior spleen volume reduction, it did not meet its key secondary efficacy endpoint of non-inferior reduction in total symptom score; and although SIMPLIFY-2 did not meet its primary efficacy endpoint of superior reduction in spleen volume, it did meet its key secondary efficacy endpoint of superior reduction in total symptom score. In both SIMPLIFY studies, additional secondary endpoints related to transfusion independence rate, transfusion dependence rate, and rate of red blood cell transfusions all favored momelotinib over control and supported the potential for momelotinib to provide meaningful anemia benefits. As such, we have determined that there is substantial clinical justification for further development of momelotinib.

Among the JAK-inhibitor class, momelotinib uniquely inhibits JAK1, JAK2 and ACVR1. All three targets contribute to disease manifestations of myelofibrosis in complex and overlapping ways. The dominant roles for each in driving the various disease manifestations include: JAK1, abnormal cytokine production and immune dysregulation; JAK2, clonal myeloid proliferation; and ACVR1, anemia. Evidence suggests that momelotinib can provide an array of differentiated and compelling anemia-related clinical benefits, while also providing symptomatic and splenic benefits clinically comparable to the approved standard-of-care, ruxolitinib. Specifically, via inhibition of JAK1 and JAK2, momelotinib is uniquely positioned as the only JAK-inhibitor demonstrated to provide comparable splenic benefit when compared directly to ruxolitinib in the JAK inhibitor treatment-naïve setting, while Phase 3 data strongly suggest the potential for momelotinib to provide substantial symptom benefit for both JAK-inhibitor treatment-naïve and exposed patients with myelofibrosis. In addition, momelotinib induces robust, clinically meaningful and consistent anemia benefits, likely via inhibition of ACVR1 and JAK1, as demonstrated in the two momelotinib Phase 3 trials and in the Phase 2 translational biology trial (GS-US-352-1672) in transfusion-dependent patients.

Myelofibrosis-associated anemia is dependent on a number of factors and involves the hyperactivation of two parallel signal transduction pathways that drive production of the peptide hormone hepcidin. Hepcidin is the master regulator of iron metabolism, and elevated levels in myelofibrosis perturbs iron homeostasis and exacerbates anemia. The principle pathway directing hepcidin expression involves activation of ACVR1, whereas a secondary pathway increases hepcidin in response to inflammation and JAK-STAT signaling. Momelotinib directly inhibits ACVR1, JAK1 and JAK2 to effectively limit hepcidin production. This unique profile induces a dose-dependent decrease in serum hepcidin, restoring iron homeostasis and alleviating anemia.

In a nonclinical anemia model, momelotinib treatment increased circulating plasma iron, RBC production, and Hgb levels consistent with the observed reduction in inflammatory cytokine and hepcidin levels associated with inhibition of JAK1, JAK2 and ACVR1.This effect of momelotinib was further validated by data from trial GS-US-352-1672 in an advanced, transfusion-dependent myelofibrosis population in which 34% and 39% of patients achieved transfusion independence for at least 12 and 8 weeks, respectively. Median plasma hepcidin levels declined acutely after momelotinib dosing and chronically over the entire 24-week dosing period, suggesting momelotinib induced a sustained reduction of both predose (basal) and postdose levels of hepcidin. In an exploratory post-hoc analysis, a substantial reduction in transfusion frequency was also observed in subjects who did not achieve complete transfusion independence.

Similarly, substantially higher rates of transfusion independence and lower rates of transfusion dependency were observed in momelotinib-treated subjects compared with ruxolitinib or BAT-treated subjects in the SIMPLIFY-1 and SIMPLIFY-2 pivotal trials. In an exploratory aggregate analysis including 152 transfusion dependent patients treated with momelotinib across the SIMPLIFY-1, SIMPLIFY-2, and GS-US-352-1672 trials, the combined 8- and 12-week transfusion independence response rates across this continuum of JAK-inhibitor-naïve and exposed, intermediate- and high-risk myelofibrosis patients, were 48.7% and 44.1%, respectively. The rate of transfusion independence in transfusion-dependent subjects, along with other anemia benefits, were broadly consistent across these trials, and are consistent with the empirical findings of a pronounced anemia benefit observed in initial Phase 1/2 momelotinib clinical studies.

In addition, there is extensive evidence of momelotinib's sustained positive effects on hemoglobin (Hgb) and other anemia endpoints. A robust and long-lasting increase in Hgb was observed in the GS-US-352-1672 trial, which enrolled only transfusion-dependent subjects. A similar observation was noted in the JAK inhibitor-naïve SIMPLIFY-1 trial, where a rapid and sustained increase in Hgb was observed in subjects randomized to momelotinib, which contrasted with the acute and profound reduction in Hgb by treatment with the standard-of-care, ruxolitinib. Notably, subjects who crossed over to momelotinib treatment following 24 weeks of ruxolitinib therapy experienced a rapid and substantive increase in Hgb, ultimately achieving sustained Hgb levels that exceeded those observed in the pretreatment baseline period.

In totality, over 1,200 subjects have been treated with momelotinib across more than 20 clinical studies, with over 820 myelofibrosis patients treated to date. Uniquely among the JAK inhibitor class, this substantive body of clinical data has demonstrated consistent and reproducible therapeutic benefits for momelotinib across all three hallmarks of myelofibrosis, anemia, enlarged spleen and symptoms. In general, momelotinib has proven to be generally well tolerated, with certain patients having received continuous daily dosing of momelotinib for more than 10 years, indicative of momelotinib's potential to provide long-term tolerability and sustained benefit. In the randomized phases of SIMPLIFY-1 and SIMPLIFY-2, the most commonly reported treatment emergent adverse events for subjects treated with momelotinib were thrombocytopenia, diarrhea, headache, asthenia and nausea. The most commonly reported Serious Adverse Events (SAEs) were anemia, atrial fibrillation, diarrhea, pneumonia and cardiac failure. These SAEs include events assessed as both related and unrelated to momelotinib and each occurred in < 4% of subjects.

Momelotinib – Next Steps

During the fourth quarter of 2019, we launched the MOMENTUM clinical trial for patients with myelofibrosis. The randomized double-blind global Phase 3 trial is designed to confirm the efficacy of momelotinib on myelofibrosis symptoms, transfusion independence and splenomegaly, as compared to danazol. The trial is targeting enrollment of 180 myelofibrosis patients who are symptomatic, anemic and have been treated previously with a JAK inhibitor. We anticipate reporting top-line data from the trial in the first half of 2022. Data from MOMENTUM, along with data from more than 820 myelofibrosis patients previously treated with momelotinib, will form the basis of the global registration strategy for momelotinib.

Our DDR Candidate – SRA737

SRA737, a Potent, Highly Selective, Orally Bioavailable Chk1 Inhibitor

SRA737 is a potent, highly selective, orally bioavailable small molecule inhibitor of Checkpoint kinase 1, an emerging target for the treatment of cancer which has a key role in the DNA Damage Response. SRA737 was investigated in two Phase 1/2 clinical trials that were initiated in the third quarter of 2016 in the United Kingdom under a Clinical Trial Authorization (CTA). SRA737 was licensed to us in September 2016 and in January 2017, we successfully transferred sponsorship of the trials to Sierra.

Checkpoint kinase 1 (Chk1) is a serine-threonine kinase and master regulator of cell cycle progression and the DNA Damage Response (DDR) replication stress response. One of the hallmarks of cancer is genomic instability. A major source of genomic instability in certain tumors arises as a consequence of dysregulated cell cycle checkpoints and aberrant DNA replication, resulting in high replication stress (RS), which is manifested by stalled replication forks and associated DNA damage. Chk1 regulates multiple cell-cycle phases, temporarily inhibiting the progression of cell replication and division in order to ensure proper replication of the genome and repair of collapsed or damaged replication forks. Chk1 stabilizes stalled replication forks, manages origin firing to avoid further replication stress, and mediates DNA repair via homologous recombination in the event of fork collapse. Tumors with high RS become reliant on Chk1 to mitigate the potentially catastrophic consequences of excess genomic instability. As such, Chk1 represents a promising therapeutic target in cancers with high RS, as inhibiting Chk1 drives excessive genomic instability which can result in replication catastrophe and tumor cell death.

During the second quarter of 2019, we reported preliminary efficacy and safety data from these two trials at the 2019 ASCO Annual meeting. We also announced plans to prioritize our resources on the development of momelotinib and that we would be launching a campaign exploring non-dilutive strategic options to support any future continued development of SRA737. In the fourth quarter of 2020, we announced an amendment to the license agreement with CPF to allow for the potential future clinical development of SRA737.

SRA737-01 Phase 1/2 Monotherapy Trial

This signal-seeking Phase 1/2 study (NCT02797964) was designed to investigate the safety and tolerability of continuous, oral daily dosing of SRA737, as well as to survey a broad range of cancer indications and genetic contexts in the expansion phase, in order to evaluate preliminary anti-tumor activity and delineate potential genetic signatures and/or tumor indications that might warrant additional therapeutic investigation.

At the 2019 ASCO Annual meeting, we reported preliminary efficacy and safety data from this trial. Evidence of anti-tumor activity was observed in subjects with high grade serous ovarian carcinomas, colorectal, prostate and non-small cell lung cancers; no RECIST partial responses or complete responses were confirmed, but several noteworthy tumor reductions were recorded.

SRA737-02 Phase 1/2 Low-Dose Gemcitabine Combination Trial

Extensive preclinical data, as well as emerging clinical data, support the synergistic interaction between Chk1 inhibition and gemcitabine. Gemcitabine profoundly depletes DNA replication building blocks, and targets proliferating cells by inducing replication stress through induction of stalled replication forks and double-strand breaks. Low concentrations of gemcitabine cause a prolonged cell cycle S-phase and induce hallmarks of replication stress without inducing overt cytotoxicity. The critical role of Chk1 in mediating cellular responses to replication stress affords the opportunity to combine SRA737 with sub-therapeutic concentrations of the replication stress-inducing agent gemcitabine.

This signal-seeking Phase 1/2 study (NCT02797977) was designed to investigate the safety and tolerability of SRA737 in combination with sub-therapeutic, low dose gemcitabine (LDG), as well as to evaluate preliminary anti-tumor activity of SRA737 potentiated by LDG in tumors with genetic alterations predicted to confer increased intrinsic RS and Chk1i sensitivity. Relative to standard-of-care, gemcitabine doses tested were approximately 10-25% of a standard chemotherapeutic dose.

At the 2019 ASCO Annual meeting, we reported preliminary efficacy and safety data from this trial. Overall, Partial Responses were observed in six subjects and 41 subjects had a best response of Stable Disease (SD); durable SD lasting ≥ 4 months was recorded in 32 subjects and was observed in all expansion cohorts. The combination of SRA737+LDG was generally well tolerated. Following ASCO 2019, we announced plans to prioritize our resources on the development of momelotinib and that we would be launching a campaign exploring non-dilutive strategic options to support any future continued development of SRA737. In the fourth quarter of 2020, we announced an amendment to the license agreement with CPF to allow for the potential future clinical development of SRA737.

Asset Purchase Agreement

In August 2018, we entered into an Asset Purchase Agreement with Gilead whereby we acquired worldwide rights to the pharmaceutical product momelotinib, an investigational orally-bioavailable JAK1, JAK2 and ACVR1 inhibitor together with all related intellectual property rights and certain other related assets. Pursuant to the agreement, we made a one-time upfront payment of $3.0 million in August 2018. In October 2019, we entered into an amendment to the Asset Purchase Agreement in which we agreed to issue, subject to certain conditions, shares of common stock and a warrant to purchase common stock to Gilead in consideration for meaningfully reduced royalty rates and elimination of a near term milestone payment in the Asset Purchase Agreement. Pursuant to the amended agreement, milestone payments of up to an aggregate of $190.0 million may become payable to Gilead upon the achievement of certain regulatory and commercial milestone events and we are now required to pay Gilead low double-digit to high-teens percent tiered combined royalties based upon net sales. In January 2020, we entered into a securities purchase agreement with Gilead, pursuant to which we issued to Gilead 725,283 shares of our common stock and a warrant to purchase 725,283 shares of common stock at a price per share of $13.20.

License Agreements

CRT Pioneer Fund LP License Agreement

In September 2016, we entered into an exclusive license agreement with CRT Pioneer Fund LP (CPF) for worldwide rights, know-how and materials to develop SRA737, a small molecule inhibitor targeting Checkpoint kinase 1, an emerging target to treat cancer which has a key role in the DNA Damage Response. Pursuant to the agreement, we made a one-time upfront payment of $7.0 million to CPF in October 2016 and paid $2.0 million to CPF in January 2017 for the successful transfer of two ongoing Phase I clinical trials. Pursuant to the original license agreement, additional milestone payments of up to an aggregate of $319.5 million may have become payable to CPF upon the achievement of certain milestones. In November 2020, we entered into an amendment to the license agreement with CPF, which amended the terms and reduced the amounts of certain future milestones. Pursuant to the amended agreement, future milestone payments of up to an aggregate of $290.0 million may become payable to CPF upon the achievement of certain developmental, regulatory and commercial milestones, including a milestone payment of $2.0 million upon the dosing of the first patient of the first trial of SRA737 following the effective date of the amendment. In addition, we are required to pay CPF, on a product-by-product and country-by-country basis, tiered high single-digit to low double-digit royalties on the net sales of any product successfully developed until the later of (i) the date when such licensed product is no longer covered by a valid patent claim within the licensed intellectual property, (ii) the expiration of any data, marketing or other statutory exclusivity rights covering the licensed product, or (iii) a specified period after the first commercial sale of the licensed product. Such royalties will be reduced on a product-by-product and country-by-country basis under certain conditions, including if certain generic competition exists in such country, or if we are required to pay royalties to third parties in order to develop or commercialize the licensed product.

The license agreement will expire on the date of expiration of our obligation to pay royalties to CPF. Either party may terminate the license agreement if the other party materially breaches the license agreement, subject to certain cure provisions, and CPF may terminate the license agreement in certain limited circumstances as described in the license agreement. The license agreement may also be terminated at any time by us upon 90 days’ prior written notice to CPF.

Carna Biosciences, Inc. Collaboration Agreement

In May 2016, we entered into an exclusive license agreement with Carna Biosciences, Inc. (Carna) for worldwide rights to develop and commercialize SRA141, a small molecule kinase inhibitor targeting Cdc7. In exchange for this exclusive right, we paid Carna an upfront payment of $0.9 million in June 2016. In June 2020, we entered into a collaboration agreement with Carna effectively terminating the license agreement. Pursuant to the collaboration agreement, Carna paid an upfront fee of $0.3 million for the exclusive worldwide rights for SRA141 and other transition services. In addition, we may be entitled to single-digit royalties on product sales, on a product-by-product basis, and low to mid-teen profit share on royalty and non-royalty income.

The collaboration agreement will expire on the date of expiration of Carna's obligation to pay royalties to us. We may terminate the collaboration agreement if Carna materially breaches the agreement, subject to certain cure provisions. The collaboration agreement may also be terminated at any time by Carna upon 30 days' prior written notice to us.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary or intellectual property protection for momelotinib and SRA737 and future product candidates, to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary or intellectual property rights. Our strategy is to seek to protect our proprietary position and intellectual property position by, among other methods, filing patent applications related to our proprietary technology and product candidates in the United States and in foreign jurisdictions. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary and intellectual property position.

We have acquired all rights to patent portfolios directed to compositions of matter and methods of use related to momelotinib and other JAK 1/2 and ACVR1 inhibitors. As of December 31, 2020, these rights included three issued U.S. patents comprising claims directed to compositions and analogs of momelotinib and methods of using momelotinib for the treatment of myelofibrotic indications as a single agent. Two of these patents will expire in 2028 while the third patent will expire in 2030, absent any extensions. As of December 31, 2020, these rights also include 53 issued foreign patents and one pending foreign patent application in 48 jurisdictions, including Australia, Canada, China, several countries in Europe, Japan, Korea, Mexico, Russia and others comprising claims directed to compositions of momelotinib for the treatment of myelofibrotic indications as a single agent. These foreign patents, and any patent issuing from the pending foreign patent application, are expected to expire in 2028, absent any extension. As of December 31, 2020, these rights also included one issued U.S. utility patent and one reissued U.S. utility patent, and one pending reissue application comprising claims directed to different polymorph and salt forms of momelotinib, and methods of their use for the treatment of myelofibrotic indications. These patents will expire in 2035, absent any extension. Note that for issued U.S. patents, up to five years of patent term extension is available for a single patent directed to the composition of momelotinib, bringing the possible patent exclusivity in the U.S. out to 2040. As of December 31, 2020, these rights also included 46 issued foreign patents, and 14 pending foreign patent applications in 52 jurisdictions, including Australia, Brazil, Canada, China, several countries in Europe, Hong-Kong, India, Israel, New Zealand, Mexico, Japan, Korea, Singapore and Taiwan comprising claims directed to different polymorph and salt forms of momelotinib. These foreign patents, and any patent issuing from these pending foreign patent applications, are expected to expire in 2035, absent any extension. Note that for issued European patents, up to five years of term extension is available via a Supplementary Protection Certificate (SPC) for a single patent directed to the composition of momelotinib, bringing the possible patent exclusivity in Europe out to 2040. As of December 31, 2020, these rights also included four issued foreign patents in four jurisdictions, including Australia, New Zealand, Singapore and South Africa comprising claims directed to methods of using momelotinib for the treatment of anemia. As of December 31, 2020, these rights also included one issued U.S. patent comprising claims directed to methods of using momelotinib for the treatment of ACVR1-mediated diseases. This U.S. patent will expire in 2037, absent any extensions. Additionally, as of December 31, 2020, these rights also included one pending Patent Cooperation Treaty application, and two foreign pending application comprising claims directed to platelet count-agnostic methods of using momelotinib for the treatment of myelofibrosis. We have filed and will continue to file patent applications directed to the composition of matter and methods of use related to various aspects of momelotinib as they develop.

We have exclusively licensed CPF's rights to patents owned by Cancer Research Technology (CPF), a subsidiary of Cancer Research UK (CRUK), directed to compositions of matter and methods of use related to SRA737 and other Chk1 inhibitors. As of December 31, 2020, these rights included two issued U.S. patents and two pending U.S. patent application comprising claims directed to compositions of SRA737 and methods of using SRA737 for the treatment of cancer indications as a single agent, or in combination with a DNA damaging agent. The two issued U.S. patents and any patents issuing from the pending U.S. utility application are expected to expire in 2033, absent any adjustments or extensions. As of December 31, 2020, these rights also included 27 issued foreign patents and 6 pending foreign patent applications in 27 foreign jurisdictions, including Australia, Canada, China, Europe and Japan comprising claims directed to compositions of SRA737 and methods of using SRA737 for the treatment of cancer indications as a single agent, or in combination with a DNA damaging agent. These foreign patents, and any patents issuing from these pending foreign patent applications, are expected to expire in 2033, absent any extensions. As of December 31, 2020, these rights also included, one pending U.S. application and 4 pending foreign applications comprising claims directed to biomarkers and patient selection when using SRA737 to treat cancer indications. Any patents issuing from these pending patent applications are expected to expire in 2038, absent any adjustments or extensions. As of December 31, 2020, these rights also included one pending U.S. application and 8 pending foreign applications comprising claims directed to methods of using SRA737 in combination with PARP inhibitors for inhibiting tumor reduction. Any patents issuing from these pending patent applications are expected to expire in 2038, absent any adjustments or extensions. As of December 31, 2020, these rights also included one pending U.S. application and 7 pending foreign applications comprising claims directed to methods of using SRA737 as a monotherapy or in combination therapy to treat cancer indications. Any patents issuing from these pending patent applications are expected to expire in 2039, absent any adjustments or extensions. As of December 31, 2020, these rights also included one pending Patent Cooperation Treaty application filed by the Company and The University of Texas M.D. Anderson Cancer Center comprising claims directed to methods of using SRA737 to treat cancer indications. Additionally, as of December 31, 2020, these rights also included one pending Patent Cooperation Treaty application comprising claims directed to methods of using SRA737 in the treatment of cancer associated with an intermediate mutational burden (TMB), or genetic abnormality in one or more particular genes associated with replicative stress. We have filed and will continue to file patent applications directed to the composition of matter and methods of use related to various aspects of SRA737 as they develop.

The term of individual patents depends upon the legal term for patents in the countries in which they are obtained. In most countries, including the United States, the patent term is 20 years from the earliest filing date of a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent. The term of a patent that covers a drug may also be eligible for patent term extension when FDA approval is granted, provided statutory and regulatory requirements are met. In the future, if and when our product candidates receive approval by the FDA, the European Medicines Agency (EMA) or other foreign regulatory authorities, we expect to apply for patent term extensions on issued patents covering those drugs, depending upon the length of the clinical trials for each product candidate and other factors. There can be no assurance that any of our pending patent applications will issue or that we will benefit from any patent term extension or favorable adjustment to the term of any of our patents.

As with other oncology companies, our ability to maintain and solidify our proprietary and intellectual property position for our product candidates and technologies will depend on our success in obtaining effective patent claims and enforcing those claims if granted. However, patent applications that we may file or license from third parties may not result in the issuance of patents. We also cannot predict the breadth of claims that may be allowed or enforced in our patents. Our issued patents and any issued patents that we may receive in the future may be challenged, invalidated or circumvented. For example, we cannot be certain of the priority of inventions covered by pending third-party patent applications. If third parties prepare and file patent applications that also claim technology or therapeutics to which we have rights, we may have to participate in interference proceedings to determine priority of invention, which could result in substantial costs to us, even if the eventual outcome is favorable to us. In addition, because of the extensive time required for clinical development and regulatory review of a product candidate we may develop, it is possible that, before momelotinib and SRA737 or any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of any such patent.

In addition to patents, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our scientific advisors and consultants, and invention assignment agreements with our employees. The confidentiality agreements are designed to protect our proprietary information and, in the case of agreements or clauses requiring invention assignment, to grant us ownership of technologies that are developed through our relationship with a third party.

Competition

The hematology and oncology industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the level of generic competition and the availability of reimbursement from government and other third-party payors. While we believe that our technology, knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with existing therapies that are available for the indication or indications for which they are approved and new therapies that may become available in the future.

To our knowledge, there are currently two approved myelofibrosis drugs that specifically rely on JAK inhibition, ruxolitinib, marketed by Incyte Corporation as Jakafi® in the United States and by Novartis as Jakavi in the rest of the world and fedratinib, marketed by Celgene Corporation as Inrebic® in the United States. Fedratinib was also recently approved in Europe. In addition, there is one additional JAK inhibitor competitor in clinical development, at a similar state of development or more advanced than us. CTI Biopharma Corporation is developing pacritinib, for a subset of myelofibrosis patients with platelet counts less than 50,000/uL commenced its rolling NDA submission in October 2020. However, to our knowledge, there are no drugs that target JAK1, JAK2 and ACVR1 on the market, nor in development. Other competitors developing myelofibrosis therapeutics include Acceleron, Constellation Pharma, AbbVie, Kartos and Incyte. Celgene and Acceleron are developing luspatercept in a Phase 3 clinical trial for myelofibrosis. Constellation Pharma is developing pelabresib (CPI-0610), a BET inhibitor in Phase 3 clinical trial in combiniation with ruxolitinib. AbbVie announced two Phase 3 clinical trials in combination with ruxolitinib for JAKi naïve and previously JAKi treated patients. Kartos announced clinical trial plans for KRT-232, a MDM2 inhibitor for JAKi relapsed or refractory MF patients. Incyte launched Phase 3 clinical trials to evaluate parsaclisib, in combination with ruxolitinib. In addition, there are several Phase 1 and Phase 2 clinical trials being conducted in myelofibrosis by various companies, including a Phase 2 study of a deuterated form of momelotinib being run by Zelgen Biopharmaceuticals in China. Several additional companies are advancing assets in the early stages of development potentially for the myelofibrosis market. If momelotinib is approved, it will compete with existing therapies for the indication or indications for which it is approved. While we believe that momelotinib may have the ability to provide an anemia benefit in addition to treating the other manifestations of myelofibrosis, which we believe is unique within the JAK inhibitor class of agents, the market for momelotinib is competitive, and physicians and other prescribers may not recommend or prescribe momelotinib over other competing products.

To our knowledge, there are no approved drugs that specifically target Chk1 on the market, but there are a number of competitors in clinical development, at a similar stage of development or more advanced than us. To our knowledge, Esperas Pharma is conducting a Phase 1/2 clinical trial of an oral Chk1 inhibitor as monotherapy and in combination with gemcitabine in patients with advanced or metastatic cancer. There are also preclinical programs focused on developing Chk1 inhibitors. If SRA737 is approved, it will compete with existing therapies and currently marketed drugs for the indication or indications for which it is approved.

Many of the companies against which we may compete have significantly greater financial and other resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the hematology and oncology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or that may be necessary for, our programs.

Our commercial opportunity 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 any drugs that we may develop. Our competitors also may obtain FDA or foreign regulatory approval for their product candidates more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic drugs.

Manufacturing

We do not have any manufacturing facilities or personnel. We currently rely, and expect to continue to rely, on third parties for the manufacture and supply of preclinical study and clinical trial materials in relation to our lead product candidate, momelotinib, including materials for any combination trials that we may undertake, and any future potential product candidates that we may develop for preclinical and clinical testing, as well as for commercial manufacture if momelotinib receives marketing approval.

We do not currently have arrangements in place for redundant supply. We believe that our manufacturers have sufficient capacity to meet our current demand and, in the event that they fail to meet our demand, adequate alternative sources for such materials exist. However, there is a risk that if supplies are interrupted or result in poor yield or quality, it would materially harm our business. We will continue to evaluate product demand requirements and qualify alternate sources for momelotinib, and our other product candidates on an as-needed basis.

Manufacturing is subject to extensive regulations that impose various procedural and documentation requirements, which govern recordkeeping, manufacturing processes and controls, personnel, quality control and quality assurance, among others. Our contract manufacturing organizations are required to comply with current good manufacturing practice (cGMP) regulations, which are regulatory requirements for the production of pharmaceuticals that will be used in humans.

Government Regulation

FDA Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, or FDCA, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending NDAs, withdrawal of an approval, clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, consent decrees, fines, refusal of government contracts, restitution, disgorgement, civil or criminal penalties, and criminal prosecution. Any agency or judicial enforcement action could have a material adverse effect on us.

Pharmaceutical product development for a new product or certain changes to an approved product in the United States typically involves preclinical laboratory and animal tests, the submission to the FDA of an IND, which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the product candidate for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease.

The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies, and formulation studies in accordance with FDA's good laboratory practice requirements and other applicable regulations;

- submission to the FDA of an IND, which must become effective before human clinical trials may begin;

- approval by an independent IRB ethics committee, either centralized or with respect to each clinical site, before each clinical trial may be initiated;

- performance of adequate and well-controlled human clinical trials in accordance with GCP requirements to establish the safety and efficacy of the proposed drug for its intended use;

- submission to the FDA of an NDA after completion of all pivotal trials;

- determination by the FDA within 60 days of its receipt of an NDA to accept the filing for substantive review;

- satisfactory completion of an FDA advisory committee review, if applicable;

- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with cGMP requirements to ensure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality, and purity, and of selected clinical investigation sites to assess compliance with GCPs; and

- FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States.

Prior to beginning the first clinical trial with a product candidate in the United States, 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(s) for clinical studies. 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. Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements, including good laboratory practices (GLPs). The results of preclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long-term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time 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 new drug to eligible human subjects under the supervision of a qualified investigator. Clinical trials must be conducted (i) in compliance with federal regulations; (ii) in compliance with good clinical practice (GCP), an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators and monitors, and which includes the requirement that all research subjects provide their informed consent for their participation in any clinical study; and (iii) under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary or permanent discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The trial protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board (IRB) for approval. An IRB is an appropriately constituted group that has been formally designated to review and monitor biomedical research involving human subjects and has the authority to approve, require modifications in (to secure approval), or disapprove research. IRB review serves an important role in the protection of the rights and welfare of human

research subjects. Regulatory authorities, the IRB, 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 clinical trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which may review data and endpoints at designated check points, make recommendations and/or 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. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1: The product candidate is initially introduced into healthy human subjects or patients with the target disease or condition. These studies 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. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.

- Phase 2: The product candidate is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages, and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.

- Phase 3: The product candidate 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.

Post-approval clinical trials, sometimes referred to as Phase 4 studies, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of an NDA. Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug and 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, the manufacturer must develop methods for testing the identity, strength, quality, and purity of the final drug. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

While the IND is active and before approval, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs, findings from animal or *in vitro* testing suggesting a significant risk to humans, and any clinically important increased incidence of a serious suspected adverse reaction compared to that listed in the protocol or investigator brochure.

Further, as a result of the COVID-19 pandemic, we may be required to develop and implement additional clinical trial policies and procedures designed to help protect subjects from the COVID-19 virus. For example, the FDA has issued guidance on conducting clinical trials during the pandemic, which describes a number of considerations for sponsors of clinical trials impacted by the pandemic, including certain reporting requirements, and additional guidance on the good manufacturing practice considerations for responding to COVID-19 infection and other topics. We may be required to make further adjustments to our clinical trials or business operations based on current or future guidance and regulatory requirements as a result of the COVID-19 pandemic.

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development nonclinical and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. The submission of an NDA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances. Additionally, no user fees are assessed on NDAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins a substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing.

The FDA has agreed to certain performance goals in the review of NDAs. Most such applications for standard review drug products are reviewed within ten to twelve months; most applications for priority review drugs are reviewed in six to eight months. Priority review can be applied to drugs that the FDA determines offer major advances in treatment or provide a treatment where no adequate therapy exists. For biologics, priority review is further limited only for drugs intended to treat a serious or life-threatening disease relative to the currently approved products. The review process for both standard and priority review may be extended by FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission.

The FDA may also refer applications for novel drug products, or drug products that present difficult questions of safety or efficacy, to an advisory committee—typically a panel that includes clinicians and other experts—for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. FDA will not approve the product unless compliance with current good manufacturing practices (cGMPs) is satisfactory and the NDA contains data that provide evidence that the drug is safe and effective in the indication studied. If the FDA determines that the application, manufacturing process, or manufacturing facilities are not acceptable, it will outline the deficiencies in a Complete Response Letter 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 FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a Complete Response Letter. A Complete Response Letter indicates that the review cycle of the application is complete, and the application will not be approved in its present form. A Complete Response Letter usually describes the specific deficiencies in the NDA identified by the FDA and may require additional clinical data, such as an additional pivotal Phase 3 clinical trial or other significant and time-consuming requirements related to clinical trials, nonclinical studies, or manufacturing. If a Complete Response Letter is issued, the sponsor must resubmit the NDA, addressing all of the deficiencies identified in the letter to the FDA satisfaction, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA does not satisfy the criteria for approval. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included.

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. As a condition of NDA approval, the FDA may require Risk Evaluation and Mitigation Strategies (REMS) to help ensure that the benefits of the drug outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals and elements to assure safe use (ETASU). ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring and the use of patient registries. The requirement for REMS can materially affect the potential market and profitability of the drug, and typically require substantial documentation and communication with the FDA.

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 also require one or more Phase 4 post-market studies 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 studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could impact the timeline for regulatory approval or otherwise impact ongoing development programs.

Changes to some of the conditions established in an approved application, including changes in indications, labeling or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Pediatric Information

Under the Pediatric Research Equity Act (PREA), NDAs or supplements to NDAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant full or partial waivers, or deferrals, for submission of data. Unless otherwise required by regulation, PREA generally does not apply to a drug for an indication for which orphan designation has been granted; however, beginning in 2020, PREA will apply to NDAs for orphan-designated drugs if the drug is molecularly targeted cancer product intended for the treatment of an adult cancer and is directed at a molecular target that FDA has determined is substantially relevant to the growth or progression of a pediatric cancer. The Best Pharmaceuticals for Children Act (BPCA) provides NDA holders a six-month extension of any exclusivity—patent or non-patent—for a drug if certain conditions are met. Conditions for exclusivity include the FDA's determination that information relating to the use of a new drug in the pediatric population may produce health benefits in that population, FDA making a written request for pediatric studies, and the applicant agreeing to perform, and reporting on, the requested studies within the statutory timeframe. Applications under the BPCA are treated as priority applications, with all of the benefits that designation confers.

Expedited Development and Review Programs

The FDA has a Fast Track designation program that is intended to expedite or facilitate the process for reviewing new drug products that meet certain criteria. Specifically, new drugs 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. With regard to a Fast Track product, the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

Any product submitted to the FDA for approval, including a product with a Fast Track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis, or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug designated for priority review in an effort to facilitate the review. The FDA endeavors to review applications with priority review designations within six months of the filing date as compared to ten months for review of new molecular entity NDAs under its current PDUFA review goals.

In addition, a product may be eligible for accelerated approval. Drug products intended to treat serious or life-threatening diseases or conditions may be eligible for 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 approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. In addition, the FDA currently requires pre-approval of promotional materials as a condition for accelerated approval, which could adversely impact the timing of the commercial launch of the product. Accelerated approval or Fast Track programs do not reduce the amount of clinical data necessary to establish the drug is both safe and effective or the standards for approval.

The Food and Drug Administration Safety and Innovation Act established a category of drugs referred to as "breakthrough therapies" that may be eligible to receive breakthrough therapy designation. A sponsor may seek FDA designation of a product candidate as a "breakthrough therapy" if the product is intended, alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the product 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. The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same drug if relevant criteria are met. If a product is designated as breakthrough therapy, the FDA will work to expedite the development and review of such drug.

Fast Track designation, priority review, accelerated approval, and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process. We previously announced that the FDA has granted Fast Track designation to momelotinib for the treatment of patients with intermediate/high-risk myelofibrosis who have previously received a JAK inhibitor. Even if a product qualifies for Fast Track designation or any of these other 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. We may continue to explore some of these opportunities for our product candidates as appropriate.

Disclosure of Clinical Trial Information

Sponsors of clinical trials of FDA-regulated products, including drugs, are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, trial sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed in certain circumstances for up to two years after the date of completion of the trial. Competitors may use this publicly-available information to gain knowledge regarding the progress of development programs.

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 changes, are subject to prior FDA review and approval. There are continuing, annual program fees for any marketed products. Drug 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 cGMP, 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 cGMP 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 cGMP 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 studies or clinical studies 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 the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;

- clinical holds on post-approval or Phase IV clinical studies, if applicable;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal 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 drug products. A company can only promote the indications that are approved by the FDA and in accordance with the provisions of the approved label. 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, in their independent professional medical judgment, 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. In many cases, physicians view 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. The federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined companies from engaging in off-label promotion. The FDA and other regulatory agencies have also required that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA-approved labelling.

The Hatch-Waxman Act

Orange Book Listing

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent whose claims cover the applicant's product. 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 generic competitors in support of approval of an abbreviated new drug application (ANDA). An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, pre-clinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. The ANDA applicant may also elect to submit a section viii statement certifying that its proposed ANDA label does not contain (or carve out) any language regarding the patented method-of-use rather than certify to a listed method-of-use patent. If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired. A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV certification. If the ANDA applicant has provided a Paragraph IV certification to the FDA, the

applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the ANDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the ANDA applicant.

The ANDA application also will not be approved until any applicable non-patent exclusivity listed in the Orange Book for the referenced product has expired.

Marketing Exclusivity and Patent Term Extension

Market exclusivity provisions authorized under the FDCA can delay the submission and approval of certain marketing applications for products containing the same active ingredient. Upon NDA approval of a new chemical entity (NCE), which is a drug that contains no active moiety that has been approved by FDA in any other NDA, that drug receives five years of marketing exclusivity during which FDA cannot receive any ANDA seeking approval of a generic version of that drug. Certain changes to a drug, such as the addition of a new indication to the package insert, are associated with a three-year period of exclusivity during which FDA cannot approval an ANDA for a generic drug that includes the change. An ANDA may be submitted one year before NCE exclusivity expires if a Paragraph IV certification is filed. If there is no listed patent in the Orange Book, there may not be a Paragraph IV certification, and, thus, no ANDA may be filed before the expiration of the exclusivity period.

After NDA approval, owners of relevant drug patents may apply for up to a five-year patent term extension. The allowable patent term extension is calculated as half of the drug's testing phase (the time between IND application and NDA submission) and all of the review phase (the time between NDA submission and approval). The time can be shortened if FDA determines that the applicant did not pursue testing and review with due diligence. The total patent term after the extension may not exceed 14 years from NDA approval. For patents that might expire during the review phase, the patent owner may request an interim patent extension. An interim patent extension increases the patent term by one year and may be renewed up to four times. For each interim patent extension granted, the post-approval patent extension is reduced by one year. The Director of the United States Patent and Trademark Office must determine that approval of the drug covered by the patent for which a patent extension is being sought is likely. Interim patent extensions are not available for a drug for which an NDA has not been submitted. Up to five years of patent term extension is potentially available for a single US issued patent directed to the momelotinib composition of matter upon NDA approval. We have acquired patent rights including two issued U.S. utility patents and one pending reissue application comprising claims directed to a polymorph and salt form of momelotinib. These patents will expire in 2035, absent any extension. If five years of patent term extension is applied to one of these patents, the patent exclusivity for momelotinib in the U.S. would extend to either 2040 or the maximum allowable 14-year limit from NDA approval, whichever is sooner.

During the exclusivity period, the FDA may not approve or even accept for review an abbreviated new drug application (ANDA) or an NDA submitted under Section 505(b)(2) (505(b)(2) NDA), submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovative drug or for another indication, where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder.

The FDCA alternatively provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages, or strengths of an existing drug. This three-year exclusivity covers only the modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to any nonclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric exclusivity is another type of marketing exclusivity available in the United States. Pediatric exclusivity provides for an additional six months of marketing exclusivity attached to another period of exclusivity if a sponsor conducts clinical trials in children in response to a written request from the FDA. The issuance of a written request does not require the sponsor to undertake the described clinical trials. In addition, orphan drug exclusivity, as described above, may offer a seven-year period of marketing exclusivity, except in certain circumstances.

Other Healthcare Laws

In the U.S., the research, manufacturing, distribution, sale and promotion of drug products that we are developing are subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare & Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, state Attorneys General, and other state and local government agencies. For example, sales, marketing and scientific/educational grant programs must comply with applicable health care fraud and abuse laws, such as the federal Anti-Kickback Statute, the federal False Claims Act, Stark law, and implementing regulations, and similar state laws. Pricing and rebate programs must comply with the Medicaid Drug Rebate Program requirements of the Omnibus Budget Reconciliation Act of 1990, as amended, and the Veterans Health Care Act of 1992, as amended. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Other laws and regulations that may apply to prescription drug manufacturers include the Sunshine Act, prescription drug price reporting requirements, and various state transparency and reporting laws. All business activities of prescription drug manufacturers are also potentially subject to federal and state consumer protection and unfair competition laws.

The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for, purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid, or other federally financed healthcare programs. The Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act (PPACA) amended the intent element of the federal statute so that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to commit a violation. This statute has been interpreted broadly to apply to arrangements between pharmaceutical manufacturers on the one hand and any referral source on the other, including prescribers, purchasers and formulary managers. The term “remuneration” has been broadly interpreted to include anything of value, including, for example, gifts, discounts, the furnishing of supplies or equipment, credit arrangements, payments of cash, waivers of payments, ownership interests, and service fees, unless expressly exempted or protected by a safe harbor. Further, the statute has been interpreted to cover any arrangement where one purpose of the remuneration was to obtain remuneration in exchange for referral or to induce further referrals for an item or service. Violations of the anti-kickback statute are punishable by imprisonment, criminal fines, civil monetary penalties and exclusion from participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Our practices may not in all cases meet all of the criteria of an applicable safe harbor for protection from liability under the federal Anti-Kickback Statute. The reach of the Anti-Kickback Statute was broadened by PPACA, which, among other things, amends the intent requirement of the federal Anti-Kickback Statute such that the government does not need to prove that a person had the intent to specifically violate the statute in order to find a violation. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act (discussed below) or the civil monetary penalties statute, which imposes fines against any person who is determined to have presented or caused to be presented claims to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Additionally, many states have adopted laws similar to the federal Anti-Kickback Statute, and some of these state prohibitions apply to referral of patients for healthcare items or services reimbursed by any third-party payer, not only the Medicare and Medicaid programs in at least some cases, and do not expressly provide for certain safe harbors or impose different requirements for safe harbor protection under applicable state laws.

The federal False Claims Act imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal healthcare program. The qui tam provisions of the False Claims Act allow a private individual to bring civil actions on behalf of the federal government alleging that the defendant has submitted or cause to be submitted a false claim to the federal government, and to share in any monetary recovery. In recent years, the number of suits brought by private individuals has increased dramatically. In addition, various states have enacted false claims laws analogous to the False Claims Act. Many of these state laws apply where a claim is submitted to any third-party payer and not merely a federal healthcare program. There are many potential bases for liability under the False Claims Act. Liability arises, primarily, when an entity knowingly submits, or causes another to submit, a false claim for reimbursement to the federal government. The False Claims Act has been used to assert liability on the basis of inadequate care, kickbacks and other improper referrals, improperly reported government pricing metrics such as Best Price or Average Manufacturer Price, improper use of Medicare billing numbers when detailing the provider of services, improper promotion of off-label uses (i.e., uses not expressly approved by FDA in a drug's label), and allegations as to misrepresentations with respect to the services rendered. Our future activities relating to the reporting of discount and rebate information and other information affecting federal, provincial, state and third party reimbursement of our products, and the sale and marketing of our products and our service arrangements or data purchases, among other activities, may be subject to scrutiny under these laws. We are unable to predict whether we would be subject to actions under the False Claims Act or a similar state law, or the impact of such actions. However, the cost of defending such claims, as well as any sanctions imposed, could adversely affect our financial performance. Also, the Health Insurance Portability and Accountability Act of 1996, or HIPAA, created several new federal crimes, including healthcare fraud, and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payers. The false statements statute prohibits 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.

In addition, we may be subject to, or our marketing activities may be limited by, data privacy and security regulation in the U.S. and foreign jurisdictions in which we conduct our business, including jurisdictions in which we conduct our clinical trials. For example, HIPAA and its implementing regulations established uniform federal standards for certain "covered entities" (healthcare providers, health plans and healthcare clearinghouses) governing the conduct of certain electronic healthcare transactions and protecting the security and privacy of protected health information. The American Recovery and Reinvestment Act of 2009 included expansion of HIPAA's privacy and security standards called the Health Information Technology for Economic and Clinical Health Act, or HITECH. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to "business associates"—independent contractors, service providers or agents of covered entities that create, receive, maintain, or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney's fees and costs associated with pursuing federal civil actions.

The Physician Payment Sunshine Act, or the Sunshine Act, requires applicable manufacturers and certain distributors of prescription drugs, among other products, that are available for coverage by Medicare, Medicaid or the Children's Health Insurance Program to report annually to the Secretary of HHS: (i) payments or other transfers of value made by that entity, or by a third-party as directed by that entity, to covered recipients, such as physicians and teaching hospitals, or to third parties on behalf of physicians or teaching hospitals; and (ii) physician ownership (including immediate family ownership) and investment interests in the entity. Effective January 1, 2022, these reporting and transparency requirements will extend to include payments and transfers of value made during the previous year to certain non-physician covered recipients, including physician assistants, nurse practitioners, and other mid-level practitioners. There are also an increasing number of state and local "sunshine" or transparency and reporting laws that require applicable manufacturers to make reports to states on pricing and marketing information. The U.S. federal government discloses the reported information on a publicly available website. Several states have enacted legislation requiring pharmaceutical companies to, among other things, establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. These federal, state, and local laws may affect our sales, marketing, and other promotional activities by imposing administrative and compliance burdens on us. If we fail to track and report as required by these laws or otherwise comply with these laws, we could be subject to the penalty provisions of the pertinent state and federal authorities.

Because of the breadth of these health care laws and the narrowness of available statutory and regulatory exemptions, 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 penalties, including criminal and significant civil monetary penalties, damages, fines, imprisonment, exclusion from participation in government healthcare programs, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private qui tam actions brought by individual whistleblowers in the name of the government or refusal to allow us to enter into supply contracts, including government contracts, the curtailment or restructuring of our operations, and corporate integrity agreement, which impose certain compliance, certification and reporting obligations, 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 or if we contract with vendors or independent contractors outside of the U.S., we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-approval requirements, including safety surveillance, anti-corruption/anti-bribery laws, anti-kickback laws, healthcare fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals. While we are not aware of any current issues, we are unable to predict whether we will be subject to actions under applicable healthcare laws, or the impact of such actions on our business. However, the costs of defending such actions or claims, as well as any sanctions imposed, could result in a material adverse effect on our business or financial condition.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. Sales of pharmaceutical products for which we receive regulatory approval for commercial sale will depend, in part, on the availability of third-party coverage and adequate reimbursement from third-party payors. Third-party payors include government health administrative authorities, managed care providers, private health insurers and other organizations. These third-party payers may deny coverage or reimbursement for a product or therapy in whole or in part if they determine that the product or therapy was not medically appropriate or necessary. Third-party payers may attempt to control costs by limiting coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drug products for a particular indication, and by limiting the amount of reimbursement for particular procedures or drug treatments.

The cost of pharmaceuticals continues to generate substantial governmental and third-party payer interest. We expect that the pharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations and additional legislative proposals. Third-party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals. The product candidates that we develop may not be considered medically necessary or cost-effective. A payer’s decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. Some third-party payers also require pre-approval or prior authorization of coverage for new or innovative drug therapies before they will reimburse healthcare providers who prescribe such therapies or patients who use such prescription drugs. While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, these requirements or any announcement or adoption of such proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and to operate profitably.

The marketability of any product candidates for which we or our collaborators receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we or our collaborators receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. There can be no assurance that our products will be considered medically reasonable and necessary for a specific indication, that our products will be considered cost-effective by third-party payers, that coverage or an adequate level of reimbursement will be available or that the third-party payers' reimbursement policies will not adversely affect our ability to sell our products profitably.

In addition, in many foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the EU provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the EU do not follow price structures of the United States and generally prices tend to be significantly lower.

Healthcare Reform

In the U.S. and foreign jurisdictions, there have been a number of legislative and regulatory changes to the healthcare system that could affect our future results of operations. 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.

Enacted in March 2010, the Patient Protection and Affordable Care Act, as amended, or PPACA, is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on pharmaceutical and medical device manufacturers and impose additional health policy reforms. Among other things, PPACA revises the definition of "average manufacturer price" for reporting purposes, which could increase the amount of Medicaid drug rebates to states. Further, the new law imposes a significant annual fee on companies that manufacture or import branded prescription drug products. Substantial new provisions affecting compliance have also been enacted, which may affect our business practices with healthcare practitioners and a significant number of provisions are not yet, or have only recently become, effective. For example, in November 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. In December 2020, CMS issued a final rule implementing significant manufacturer price reporting changes under the Medicaid Drug Rebate Program, including regulations that affect manufacturer-sponsored patient assistance programs subject to pharmacy benefit manager accumulator programs and Best Price reporting related to certain value-based purchasing arrangements. PPACA, as well as other legislation and regulations, may continue to place downward pressure on pharmaceutical pricing, especially under the Medicare program, and may also increase our regulatory burdens and operating costs. In addition, other legislative changes have been proposed and adopted since PPACA was enacted. These new laws may result in reductions in Medicare and other healthcare funding, which could have a material adverse effect on our customers and accordingly, our financial operations.

There have been judicial and Congressional challenges and amendments to certain aspects of the PPACA, and we expect there will be additional challenges and amendments to the PPACA in the future, including the potential repeal of all or part of PPACA. In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013, which will remain in effect through 2030, with the exception of a temporary suspension implemented under various COVID-19 relief legislation from May 1, 2020 through March 31, 2021, unless additional Congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our product candidates, if approved, and, accordingly, our financial operations.

There have been legislative and judicial efforts to repeal, replace, or change some or all of the ACA, including measures taken during the Trump administration. The Tax Reform Act, among other things, included 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 November 2020, the United States Supreme Court held oral arguments on the Fifth Circuit U.S. Court of Appeals decision that held that the individual mandate is unconstitutional. It is uncertain how the United States Supreme Court will rule on this case or how healthcare measures of the Biden administration will impact the PPACA and our business. Additionally, the 2020 federal spending package permanently eliminated, effective January 1, 2020, the PPACA-mandated "Cadillac" tax on certain high-cost employer-sponsored insurance plans and the medical device excise tax, and effective January 1, 2021, also eliminates the health insurer tax. The Bipartisan Budget Act of 2018, or the BBA, among other things, also amended the PPACA, effective January 1, 2019, by increasing from 50% to 70% the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." In addition, CMS published a final rule that would give states greater flexibility, effective January 1, 2020, in setting benchmarks for insurers in the individual and small group marketplaces, which may have the effect of relaxing the essential health benefits required under the PPACA for plans sold through such marketplaces.

Further, there have been several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, reduce the costs of drugs under Medicare and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposal for fiscal year 2021 included a $135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increased patient access to lower cost generic and biosimilar drugs. In particular, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. The FDA also released a final rule in September 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, in November 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. The CMS also 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. In December 2020, CMS issued a final rule implementing significant manufacturer price reporting changes under the Medicaid Drug Rebate Program, including regulations that affect manufacturer-sponsored patient assistance programs subject to pharmacy benefit manager accumulator programs and Best Price reporting related to certain value-based purchasing arrangements. It is unclear to what extent these new regulations will be implemented and to what extent these or any future legislation or regulation by the Biden administration will have on our business, including our ability to generate revenue and achieve profitability. We expect additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates if approved.

Our business activities may be subject to the Foreign Corrupt Practices Act of 1977, as amended, or FCPA, and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate, including the U.K. Bribery Act. The FCPA generally prohibits offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to a non-U.S. government official in order to influence official action, or otherwise obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals

are government entities; therefore, our dealings with these prescribers and purchasers are subject to regulation under the FCPA. Recently the SEC and the Department of Justice have increased their FCPA enforcement activities with respect to biotechnology and pharmaceutical companies. There is no certainty that all of our employees, agents, contractors, or collaborators, or those of our affiliates, will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers, or our employees, the closing down of our facilities, requirements to obtain export licenses, cessation of business activities in sanctioned countries, implementation of compliance programs, and prohibitions on the conduct of our business. Any such violations could include prohibitions on our ability to offer our products in one or more countries and could materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, and our business, prospects, operating results, and financial condition.

Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing, among other things, research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of drugs, and reimbursement requirements. Generally, before a new drug can be marketed, considerable data demonstrating its quality, safety and efficacy must be obtained, organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority. Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical studies or marketing of the product in those countries. Certain countries outside of the U.S. have a similar process that requires the submission of a clinical study application much like the IND prior to the commencement of human clinical studies. The approval process varies from country to country and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country and may require us to perform additional pre-clinical or clinical testing.

In the European Union, Member States require both regulatory clearances by the national competent authority and a favorable ethics committee opinion prior to the commencement of a clinical trial. Under the European Union regulatory systems, marketing authorization applications may be submitted under either a centralized or decentralized procedure or national procedure. An additional route (mutual recognition procedure) is based on the recognition of granted marketing authorizations by one or more EU countries. The centralized procedure is compulsory for certain types of medicines, including human medicines containing new active substances to treat cancer.

We would be subject to the centralized authorization procedure, which provides for the grant of a single marketing authorization by the European Commission that is valid for all 27 European Union Member States, as well as Iceland, Liechtenstein and Norway (who, together with the European Union Member States) are members of the European Economic Area (EEA). Under the centralized procedure, pharmaceutical companies submit a single marketing authorization application to the EMA. By law, a company can only start to market a medicine once it has received a marketing authorization.

The UK is no longer a member of the EU, but EU law remains applicable in Northern Ireland. There are a number of new marketing authorization routes available in the UK, Great Britain (England, Scotland and Wales) or Northern Ireland, in addition to the national procedure. As with the EU position, a company can only start to market a medicine in the UK once it has received a marketing authorization.

European Regulation of Clinical Trials and Grant of Marketing Authorization

Pharmaceutical products in the European Union are subject to regulation under comprehensive legislation enacted by the European Commission in the European Medicinal Products Directive (Directive 2001/83/EC), as amended. Centrally authorized products are also regulated by Regulation (EC) No. 726/2004. This legislation is binding on all Member States together with ancillary legislation governing research. In the UK, the main legislative texts relating to human medicines is the Medicines Act 1968 and the Human Medicines Regulation 2012.

Clinical Trial Authorization

Clinical trials in the European Union are regulated under European Council Directive 2001/20/EC (Clinical Trials Directive) on the implementation of GCP in the conduct of clinical trials of medicinal products for human use. The Clinical Trials Directive requires the sponsor of an investigational medicinal product to obtain a CTA, much like an IND in the United States, from the national competent authority of a European Union Member State in which the clinical trial is to be conducted. The application for CTA must satisfy detailed requirements for the protection of trial subjects including requirements relating to consent and specific rules for minors and adults unable to consent by reason of incapacity. The CTA application must be accompanied by an investigational medicinal product dossier with supporting information prescribed by the Council Directive and corresponding national laws of the Member States and further detailed in applicable guidance, including the European Commission Communication 2010/C 82/01. A clinical trial may only be commenced after an Ethics Committee has given its approval.

A sponsor of a clinical trial must also follow certain procedures, including obtaining a unique EudraCT number by entering specified relevant information in the EudraCT Community Clinical Trial System. In addition, Member States require that the manufacture and/or importation of investigational medicinal products be authorized. Sponsors of investigational medicinal products must ensure compliance with, among other things, GCP and good manufacturing practice (GMP) as well as requirements pertaining to safety reporting.

In April 2014, Regulation EU No 536/2014 (Clinical Trials Regulation) was adopted to replace the Clinical Trials Directive. The Clinical Trials Regulation is intended to simplify the current rules for clinical trial authorization and standards of performance. For instance, there will be a streamlined application procedure via a single-entry point, a European Union portal and database. The implementation of the Clinical Trials Regulation depends on confirmation of full functionality of the Clinical Trials Information System (CTIS) through an independent audit, which commenced in September 2020. The system is currently planned to go live in December 2021. The new clinical trial portal and database will be maintained by the EMA in collaboration with the European Commission and the European Union Member States. The objectives of the new Regulation include consistent rules for conducting trials throughout the European Union, consistent data standards and adverse events listing, and consistent information on the authorization status. Additionally, information on the conduct and results of each clinical trial carried out in the European Union will be made publicly available.

The main legislation that applies to clinical trials in the UK is the UK Medicines for Human Use (Clinical Trials) Regulations 2004, which transposes the Clinical Trials Directive into domestic law. Consequently, the requirements and obligations that relate to the conduct of clinical trials in the UK currently remain largely aligned with the EU position. A CTA will be required to conduct a clinical trial in the UK, together with Ethics Committee approval. However, the sponsor of a clinical trial in the UK must be established in the UK or a country on an approved list (currently limited to the EU Member States plus Iceland, Liechtenstein and Norway) or appoint a legal representative who is established on one of the aforementioned countries. Clinical trials should also be registered on an established international register such as ISRCTN registry or ClinicalTrials.gov. The UK also requires the manufacture and/or importation of investigational medicinal products to be authorised. There is no mutual recognition agreement between the UK and EU on GMP, so medicines manufactured in the UK would be subject to GMP release in the EU.

Procedural Routes for Marketing Authorization in the European Union and UK

The European Union system for authorization of medicinal products for human use offers several routes: the centralized procedure, the decentralized procedure, and the mutual recognition procedure, as well as domestic national routes. The centralized procedure provides for the grant of a single marketing authorization that is valid for all European Union Member States as well as the EEA countries of Iceland, Liechtenstein and Norway. The centralized procedure is mandatory for certain categories of investigational products, including human products containing a new active substance indicated for the treatment of certain diseases, including cancer, AIDS, diabetes and neurodegenerative illness; orphan medicinal products; and medicinal products manufactured using biotechnological processes. Applications for marketing authorization for such medicines must be submitted to the EMA, in which the Committee for Medicinal Products for Human Use (CHMP) is generally responsible for conducting the initial assessment of a product.

The decentralized and mutual recognition procedures are applicable to the majority of conventional medicinal products and are both based on the principle of recognition of a marketing authorization by one or more Member States. The decentralized procedure is available for applicants who wish to market a product in various European Union Member States where such product has not received marketing approval in any European Union Member State before. In this procedure, an application for marketing authorization is submitted simultaneously in several Member States, one of them being chosen as the "Reference Member State." At the end of the procedure, national marketing authorizations are granted in the Reference and in the concerned Member States. The mutual recognition procedure is compulsory when a medicinal product has already received a marketing authorization in one Member State and is to be marketed in a Member State other than that in which it was first authorized. Any national marketing authorization granted by a European Union Member State's national authority can be used to support an application for its mutual recognition by other Member States. Marketing authorization applications can also be submitted directly to the Member State's national competent authority under the national route (if the centralized route is not compulsory). There are now multiple routes to obtain a marketing authorization in the UK, Great Britain or Northern Ireland, which are broadly categorized as either (1) national routes (i.e. the innovative licensing and access procedure (ILAP), the national procedure, rolling review, EC Decision Procedure (ECDP), the MR/DC reliance procedure and unfettered access from Northern Ireland); or (2) international routes (i.e. Access Consortium to market a medicine in the UK, Australia, Canada, Singapore and/or Switzerland; or the Project Orbis program for cancer treatments). The application procedure will depend on the relevant procedure chosen.

All granted centrally authorized marketing authorizations automatically became Great Britain (GB) marketing authorizations on 1 January 2021. Though there are several ways to obtain a marketing authorization for GB (and Northern Ireland) discussed above, the EDRCP is available for marketing authorizations approved under the centralized procedure. Under this procedure the UK's regulator, the MHRA, can rely on the decision of the European Commission on the approval of a new marketing authorization under centralized procedure for a period of two years from 1 January 2021 when determining an application for a GB marketing authorization. Applicants submit a letter of intent to submit an EDRCP to the MHRA at least 4 weeks before the submission of the application for the EDRCP marketing authorization application. The marketing authorization application is submitted after receipt of the positive opinion from the CHMP.

Standard for Approval of a Marketing Authorization in the European Union and UK

The objective of the EMA is the comprehensive evaluation of benefit/risk profile of a new medicinal product going through the centralized procedure. This evaluation involves showing that the product has significant efficacy and safety, together with a satisfactory plan for risk management post-marketing. The CHMP is the EMA's expert committee responsible for human medicinal products. The CHMP is responsible for conducting the initial review of centrally authorized marketing authorization applications and for assessing modifications or extensions (variations) to an existing marketing authorization. It also considers the recommendations of the Pharmacovigilance Risk Assessment Committee on the safety of medicines on the market and when necessary, recommends to the European Commission changes to a medicine's marketing authorization, or its suspension or withdrawal from the market. The marketing authorization application is similar to the NDA in the United States. All application procedures require an application in the common technical document (CTD), which includes the submission of detailed information about the manufacturing and quality of the product, and non-clinical and clinical trial information. The main scientific principle used by the CHMP in the evaluation of medicinal products is the benefit/risk ratio based on quality, efficacy, safety, and risk management considerations. The CHMP assesses whether the data it reviews comply with the ICH-harmonized Good Practices published for GCP, GMP and good laboratory practice (GLP). The CHMP also considers whether studies concluding efficacy and safety of products have sufficient statistical power.

Marketing authorizations for the UK are submitted to the MHRA. As the Medicinal Products Directive is transposed into domestic law, the standards of clinical efficacy, safety, chemical control and manufacture as at 31 December 2020 (the end of the transition period for the UK's exit from the EU) are retained. As Northern Ireland continues to apply EU law, medicines regulation for Great Britain is likely to be closely aligned with the EU for some time.

Other Regulatory Issues

An exemption to the rule requiring marketing authorization permits Member States of the European Union (and the UK) to make a product available for compassionate use to patients with a chronically or seriously debilitating disease or whose disease is considered life threatening, and who cannot be treated satisfactorily by an authorized medicinal product. The medicinal product concerned must be undergoing clinical trials or the subject of application for marketing authorization.

Quality of the medicinal products in question is governed by the GMP Directives. These lay down the legal framework for GMP for both marketed medicinal products and investigational products in clinical trials. The Directive obliges manufacturers to comply with GMP for an effective pharmaceutical quality assurance, quality control, systems for recording and reviewing complaints and a system for prompt recall of products in the distribution network. With regards to post–marketing safety of newly authorized products, the EMA monitors and supervises the safety of medicines that have been authorized in the EU to ensure their benefits outweigh their risks. Volume 4 of EudraLex published by the European Commission provides GMP guidelines used to interpret the principles of GMP laid down in the GMP Directives..

The pharmacovigilance legislation imposes a duty on Member States to collect information on the risks of products with regards to patients' or public health. That information must refer to adverse events arising from the use of the medicinal product within the terms of the marketing authorization as well as use outside the authorized indication and use associated with occupational exposure.

There is a similar obligation on the marketing authorization holder (MAH) to operate a robust pharmacovigilance system equivalent to that of the relevant Member State. The MAH must evaluate all safety and effectiveness information scientifically, consider the options for risk minimization and take appropriate measures as necessary. As part of the pharmacovigilance system, the MAH must have permanently and continuously an appropriately qualified person responsible for pharmacovigilance, maintain a pharmacovigilance master file, operate a risk management system for each medicinal product, monitor the outcome of risk minimization measures contained in the risk management program and continually update the risk management system and monitor the pharmacovigilance system to determine whether there are new risks or changes to the risk-benefit profile of the product(s).

Two recent developments have been introduced which further expand the European regulatory framework: the Falsified Medicines Directive and the Pharmacovigilance Directive. The Falsified Medicines Directive obliges manufacturers of medicinal products to audit their suppliers of active substances to ensure compliance with GMP. It also introduces a new obligation on product manufacturers to inform the competent authority (e.g., ANSM) and the marketing authorization holder if they become aware that these products may be falsified, whether they are being distributed through the legitimate supply chain or by illegal means. The Pharmacovigilance Directive obliges marketing authorization holders to monitor the safety of authorized products and detect any change in their risk-benefit profile. A new pan-European clinical trial data information database has been created that will be complementary to the database established for pharmacovigilance (Regulation (EC) No 726/2004 with respect to centrally authorized medicinal products). In addition, Commission Implementing Regulation (EU) No 520/2012 outlines the practical implications for marketing authorization holders, national competent authorities, and the EMA. Also, Commission Delegated Regulation (EU) No 357/2014 on post-authorization efficacy studies specifies the situations in which such studies may be required. Post-authorization efficacy studies may be required where concerns relating to some aspects of efficacy of the medicinal product are identified and can be resolved only after the medicinal product has been marketed, or where the understanding of the disease, the clinical methodology or the use of the medicinal product under real-life conditions indicate that previous efficacy evaluations might have to be revised significantly. Brexit will disrupt the operation of pre- and post-authorization clinical trial infrastructure. The rules around GMP and pharmacovigilance in the UK currently remain similar to the EU requirements. However, the Falsified Medicines Directive will not apply in Great Britain though it is likely that the UK will implement a procedure to minimise the risk of falsified medicines.

In addition, in May 2016, the EU formally adopted the General Data Protection Regulation, or GDPR, which applies to all EU member states from May 25, 2018 and replaced the European Union Data Protection Directive. The GDPR has imposed many new or additional requirements including, but not limited to, obtaining consent of the individuals to whom the personal data relates, the nature and scope of notifications provided to the individuals, the security and confidentiality of the personal data, data breach notification and using third party processors in connection with the processing of the personal data. Failure to comply with the GDPR could subject us to regulatory sanctions, delays in clinical trials, criminal prosecution and/or civil fines or penalties. Additionally, GDPR creates a direct cause of action by individual data subjects. The GDPR is a complex law and the regulatory guidance is still evolving, including with respect to how the GDPR should be applied in the context of clinical trials or other transactions from that we may gain access to personal data. Beginning in 2021, the UK will be a "third country" under the GDPR. These changes in the law will increase our costs of compliance and result in greater legal risks. Other countries maintain different privacy laws that we are subject to.

Approval Outside the United States/European Union

For marketing outside the United States and the European Union, we are subject to foreign regulatory requirements governing human clinical testing and marketing approval for our products. Whether or not FDA or European Commission approval has been obtained for a product, approval of the product by comparable regulatory authorities of countries outside of the United States or the European Union, as the case may be, must be obtained prior to marketing the product in those countries. Approval in one country does not assure that a product will be approved in another country. In certain countries, regulatory requirements and approval processes are similar to those in the United States and the European Union, where approval decisions by regulators are based on the regulators' review of the results of clinical trials performed for specific indications. Other countries may have a less comprehensive review process in terms of data requirements and may rely on prior marketing approval from a foreign regulatory authority in other countries such as the United States or the European Union. In many countries outside of the United States, approvals for pricing, coverage and reimbursement offered by third-party payers, including government payers and private insurance plans, are also required.

Employees and Human Capital Resources

As of December 31, 2020, we had 69 active employees, of which 14 had M.D. or Ph.D. degrees and 46 were engaged in research and development activities. None of our employees are represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Corporate Information

We were incorporated in Delaware in May 2003 as Phenome Systems, Inc. and changed our name to ProNAi Therapeutics, Inc. in April 2004. Shortly thereafter, we merged with SenseGene Therapeutics Inc., a Michigan corporation, with ProNAi Therapeutics, Inc. being the surviving corporation. We changed our name to Sierra Oncology, Inc. in January 2017. Our principal executive offices are located at 1820 Gateway Drive, Suite 110, San Mateo, California 94404, and our telephone number is (650) 376-8679. Our website address is www.sierraoncology.com. Information contained on, or that can be accessed through, our website is not incorporated by reference into this Annual Report, and you should not consider information on our website to be part of this Annual Report.

Available Information

We file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other information with the Securities and Exchange Commission (SEC). Our filings with the SEC are available free of charge on the SEC's website at *www.sec.gov* and on our website under the "Investors" tab as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

Item 1A. Risk Factors.

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this report, including our consolidated financial statements and the related notes 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 growth prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment.

Summary Risk Factors

The below summary of risk factors provides an overview of many of the risks we are exposed to in the normal course of our business activities. As a result, the below summary risks do not contain all of the information that may be important to you, and you should read the summary risks together with the more detailed discussion of risks set forth following this section under the heading "Risk Factors," as well as elsewhere in this Annual Report on Form 10-K. Additional risks, beyond those summarized below or discussed elsewhere in this Annual Report on Form 10-K, may apply to our activities or operations as currently conducted or as we may conduct them in the future or in the markets in which we operate or may in the future operate. Consistent with the foregoing, we are exposed to a variety of risks, including risks associated with the following:

- We have incurred net losses in every year since our inception and anticipate that we will continue to incur net losses for the foreseeable future.
- Our business is highly dependent on the success of momelotinib. If we are unable to successfully develop, obtain regulatory approval for and commercialize momelotinib, or experience significant delays in doing so, our business will be materially harmed.
- If further preclinical development or clinical trials of momelotinib, or any other future product candidates that we may develop or acquire fail to demonstrate acceptable safety and efficacy or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of current or future product candidates.
- Our business, results of operations and financial condition have been adversely affected and may be materially adversely affected by the COVID-19 pandemic.
- We will need to acquire additional capital to complete the development and commercialization of momelotinib and any future product candidates.
- The manufacture of momelotinib and the comparator, danazol, requires outsourced, custom manufacturing and we may encounter difficulties in production, particularly with respect to formulation, process development or scaling up of our manufacturing capabilities. If our third-party manufacturers or suppliers encounter such difficulties, our ability to provide supply of momelotinib for preclinical studies, clinical trials or our products for patients, if approved, or danazol for the MOMENTUM trial could be delayed or stopped, or we may be unable to maintain a commercially viable cost structure.
- Our reliance on third-party manufacturing partners or suppliers may cause our supply of research and development, preclinical and clinical development materials to become limited or interrupted or fail to be of satisfactory quantity or quality.
- We face significant competition from other hematology and oncology companies, and our operating results will suffer if we fail to compete effectively.

- If we are unable to adequately prepare the market for the potential future commercialization of a product, we may not be able to generate product revenue once marketing authorization is obtained. We currently have no marketing and sales organization and have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell momelotinib or any future product candidates, we may not be able to generate product revenue.
- We may be unable to obtain U.S. or foreign regulatory approval of momelotinib, and, as a result, we may be unable to commercialize momelotinib.
- Our internal information technology systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches.
- If we or any of our independent contractors, consultants, collaborators, manufacturers, vendors or service providers fail to comply with healthcare and data privacy laws and regulations, we or they could be subject to enforcement actions, which could result in penalties and affect our ability to develop, market and sell momelotinib or any future product candidates and may harm our reputation.
- If we are not able to obtain and enforce patent protection for our technologies or momelotinib, development and commercialization of our product candidates may be adversely affected.

Risks Related to Our Business and Industry

We have incurred net losses in every year since our inception and anticipate that we will continue to incur net losses for the foreseeable future.

We are a clinical stage hematology and oncology company with a limited operating history. Since inception, we have incurred significant operating losses. Our net losses were $80.9 million, $88.3 million and $53.3 million for the years ended December 31, 2020, 2019 and 2018, respectively. As of December 31, 2020, we had an accumulated deficit of $846.6 million. Investment in hematology and oncology product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, gain regulatory approval and become commercially viable. For example, in June 2016, we decided to suspend the development of our former lead product candidate PNT2258 after an interim analysis of data from a Phase 2 clinical trial of PNT2258 indicated only modest efficacy. We have also decided to suspend the continued development of SRA141, which was licensed to Carna Biosciences in June 2020, to focus our resources on the development of momelotinib and potentially SRA737. We have no products approved for commercial sale and have not generated any revenue to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue the development of momelotinib, fund research and preclinical studies and clinical trials, seek to identify additional product candidates, in-license additional products or technologies, seek regulatory approval, prepare for potential commercialization which will require a significant investment in areas related to contract manufacturing and inventory buildup and continue to operate as a public company.

Even if we succeed in commercializing momelotinib, or any future product candidates we may acquire or develop, we will continue to incur substantial research and development and other expenditures to develop and market these and other product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

Our business is highly dependent on the success of momelotinib. If we are unable to successfully develop, obtain regulatory approval for and commercialize momelotinib, or experience significant delays in doing so, our business will be materially harmed.

Our business and future success depends on our ability to successfully develop, obtain regulatory approval for and commercialize momelotinib, a potent, selective and orally-bioavailable JAK1, JAK2 and ACVR1 inhibitor. Momelotinib has been investigated in two completed Phase 3 trials for the treatment of myelofibrosis, and we launched our MOMENTUM Phase 3 clinical trial for momelotinib in the fourth quarter of 2019 after receiving regulatory feedback concerning the design of the trial.

While momelotinib is a late-stage product candidate for which previous Phase 3 clinical trial data suggest the potential to provide promising safety and efficacy in patients who are JAK inhibitor-naïve and in patients who have previously received a JAK inhibitor such as ruxolitinib, it will require additional clinical testing, including at least one additional adequate and well-controlled Phase 3 clinical trial, before we can seek regulatory approval and begin commercialization, if it all. While the FDA has provided regulatory clarity concerning the design of MOMENTUM, our Phase 3 clinical trial for momelotinib, there is no guarantee that we will obtain regulatory approval and be able to begin commercialization. Before we can generate any revenue from sales of momelotinib, we must complete additional development activities, including the submission of marketing applications such as New Drug Applications (NDAs) or foreign equivalents, for regulatory review and approval in at least one jurisdiction, make substantial investments, obtain access to sufficient commercial manufacturing capacity and engage in significant marketing and commercial access efforts.

We cannot commercialize momelotinib in the United States without first obtaining regulatory approval from the FDA. Similarly, we cannot commercialize momelotinib outside of the United States without obtaining regulatory approval from similar regulatory authorities outside of the United States, such as the EMA in Europe and the Medicines and Healthcare products Regulatory Agency (MHRA) in the United Kingdom. Applications for regulatory approval and regulatory approval of momelotinib could be delayed or be denied for many reasons, including but not limited to the following:

- the FDA or foreign regulatory authorities may disagree with the number, design or implementation of our clinical trials;
- the population studied in the clinical trial may not be considered sufficiently broad or representative to assure safety in the full population for which we seek approval;
- the FDA or foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of momelotinib may not meet the level of statistical or clinical significance required by the FDA or foreign regulatory authorities or may otherwise not be sufficient to support the submission of an NDA, marketing authorization application or other submission or to obtain regulatory approval in the United States, the European Union or elsewhere;
- the FDA or foreign regulatory authorities may require us to conduct additional preclinical studies and clinical trials;
- we may be unable to demonstrate to the FDA or foreign regulatory authorities that our product candidate’s response rate, duration of response or risk-benefit ratio for its proposed indication is acceptable;
- the FDA or foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications applicable to the manufacture of momelotinib, the facilities of third-party manufacturers with which we contract for clinical and commercial supplies may fail to maintain a compliance status acceptable to the FDA or foreign regulatory authorities or foreign regulatory authorities may fail to approve facilities of third-party manufacturers with which we contract for clinical and commercial supplies;
- we or any third-party service providers may be unable to demonstrate compliance with current good manufacturing practices (cGMPs) and/or good clinical practices (GCPs) to the satisfaction of the FDA or foreign regulatory authorities, which could result in delays in regulatory approval;
- the regulations or policies of the FDA or foreign regulatory authorities may change in a manner rendering our clinical data insufficient for approval;
- political factors surrounding the approval process, such as government shutdowns, political instability or global pandemics such as the outbreak of the novel strain of coronavirus, COVID-19; or
- we may be unable to fully enroll or otherwise complete our MOMENTUM Phase 3 clinical trial due to the COVID-19 pandemic.

Even if momelotinib were to be approved by the FDA or foreign regulatory authorities, any approval might contain significant limitations related to use restrictions for specified patient populations, age groups, warnings, precautions or contraindications, or may be subject to burdensome post-approval study or risk management requirements. If we are unable to obtain regulatory approval for momelotinib or any future product candidate in one or more jurisdictions, or if any approval contains significant limitations, we may not be able to obtain sufficient funding or generate sufficient revenue to continue the development, marketing or commercialization of momelotinib or any future product candidate. If competitive products developed by third parties show significant benefit in the indications in which we are developing momelotinib, any planned supportive or primary registration trials may be delayed, altered, terminated or not initiated and any future product candidates may never receive regulatory approval. Our clinical development programs for momelotinib or any future product candidates may also not receive regulatory approval if we have inadequate financial or other resources to advance these product candidates through the clinical trial process. Furthermore, even if we obtain regulatory approval for momelotinib or any future product candidates, we will still need to develop sales, marketing and commercialization infrastructure, or collaborate with a third party for the commercialization of such product candidates, establish commercially viable pricing and obtain approval for coverage and adequate reimbursement from third parties, including government payors. If we are unable to successfully commercialize momelotinib or any future product candidate, we may not be able to generate sufficient revenues to continue our business.

If further preclinical development or clinical trials of momelotinib, or any other future product candidates that we may develop or acquire fail to demonstrate acceptable safety and efficacy or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of current or future product candidates.

Before obtaining marketing approval from regulatory authorities, including the FDA, for the sale of momelotinib or any future product candidates, we must complete preclinical development and conduct extensive clinical trials to demonstrate the safety and efficacy of such product candidates in humans.

The outcome of preclinical testing and early clinical trials may not be predictive of the success of later preclinical testing and clinical trials, and interim results of a clinical trial do not necessarily predict final results. Many companies in the biotechnology industry have suffered significant setbacks in later-stage clinical trials after achieving positive results in early-stage development, and there is a high failure rate for product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. For example, in June 2016, we announced that we decided to suspend the development of our former lead product candidate PNT2258 after an interim analysis of data from a Phase 2 clinical trial of PNT2258 indicated only modest efficacy. We cannot guarantee that we will be successful in obtaining the required efficacy and safety profile from momelotinib, or any future product candidate. A failure of one or more preclinical studies or clinical trials can occur at any stage of testing.

We previously acquired from Gilead momelotinib, a potent, selective and orally-bioavailable JAK1, JAK2 and ACVR1 inhibitor. Momelotinib has been investigated in two completed Phase 3 trials for the treatment of myelofibrosis, SIMPLIFY-1 and SIMPLIFY-2. Based on the results of the prespecified analyses, neither trial was considered sufficiently compelling to justify the submission of an application for regulatory approval. Although SIMPLIFY-1 met its primary efficacy endpoint of non-inferior spleen volume reduction, it did not meet its key secondary efficacy endpoint of non-inferior reduction in total symptom score; and although SIMPLIFY-2 did not meet its primary efficacy endpoint of superior reduction in spleen volume, it did meet its key secondary efficacy endpoint of superior reduction in total symptom score. In both SIMPLIFY studies, additional secondary endpoints related to transfusion independence rate, transfusion dependence rate, and rate of red blood cell transfusions all favored momelotinib over control and supported the potential for momelotinib to provide meaningful anemia benefits. Based on post hoc analyses of the data for these trials that we subsequently conducted, we believe the trials showed promising substantive spleen and constitutional symptom control. In addition, we believe momelotinib has the potential to provide a differentiated therapeutic profile encompassing anemia-related benefits. As such, we have determined that there is substantial clinical justification for further development of momelotinib. However, while we believe the safety and efficacy profile of momelotinib in patients with myelofibrosis appears promising based on the prior Phase 3 trial results, the MOMENTUM Phase 3 trial we recently commenced in those patients may not be successful. This could occur for a variety of reasons related to efficacy or safety outcomes observed in the trial or to issues related to study conduct or study feasibility, including, but not limited to the following:

- failure to identify sufficient countries willing to import and sites equipped to handle the active comparator danazol, a controlled substance in some countries;

- delays in initiation and execution of the study in certain countries due to momelotinib and/or controlled substance danazol manufacturing, labeling, shipping and distribution logistical challenges;
- failure to enroll or retain sufficient numbers of subjects because of competing studies, complexity of study design and/or the potential for patients to be randomized to the danazol-comparator arm;
- delays in initiation of trial sites due to implementation of privacy and data protection legislation;
- delays in initiation of trial sites or enrollment of patients due to the COVID-19 pandemic;
- issues with data retention due to lack of adherence to privacy and data protection legislation;
- delays in study initiation due to the collection of the primary endpoint data via patient reported outcomes on an electronic device, which requires questionnaire licensing, language translation and programming to support the global study;
- failure to collect sufficient primary endpoint data for the study given its source of patient reported outcomes, including due to patients not accurately or consistently reporting their primary endpoint data or the device itself experiencing technical issues that result in inadequate primary data collection;
- failure to demonstrate sufficiently improved efficacy over the comparator arm of danazol either because momelotinib's efficacy in the trial is less robust than expected or because danazol performs better than expected, given danazol's limited data availability, on the efficacy endpoints; the SIMPLIFY-1 Phase 3 trial, for example, conducted by Gilead in ruxolitinib-naive patients did not demonstrate non-inferiority to its comparator arm of ruxolitinib for the key secondary endpoint of total symptom score; and
- failure to observe meaningful anemia benefits in our planned Phase 3 trial, which could reduce the potential future value of momelotinib as we believe an anemia benefit could potentially provide a competitive advantage over existing therapies.

Additionally, the results of MOMENTUM could be altered, or the trial results could be difficult to interpret, if there is inadvertent unblinding of the treatment assignment of subjects prior to the subject being evaluable for the primary efficacy endpoint or if too many subjects drop out of the study or discontinue the randomized study treatment prior to the subject being evaluable for the primary endpoint. Although danazol, the comparator selected for use in this trial, is not approved for the treatment of myelofibrosis, it is recommended by myelofibrosis guidelines as a treatment option for myelofibrosis associated anemia. Danazol's ability to control myelofibrosis disease manifestations may not be sufficient, and thus subjects randomized to the danazol arm may experience symptomatic deterioration which may increase the risk of inadvertent unblinding, early study discontinuation and/or early discontinuation of randomized treatment. Similarly, momelotinib may also not sufficiently control myelofibrosis disease manifestations in all subjects randomized to the momelotinib arm, and thus subjects in either treatment arm may also be at risk for early discontinuation.

Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and even if the trials are successfully completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit momelotinib for approval. 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. To the extent that the results of our studies and trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of momelotinib may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of momelotinib.

We may experience numerous unforeseen events during, or as a result of, preclinical studies and clinical trials that could delay or prevent our ability to receive marketing approval or commercialize momelotinib, including, but not limited to:

- undesirable side effects or other unexpected characteristics of momelotinib, causing us or our investigators, regulators or IRBs to suspend or terminate the trials;
- regulators or IRBs may not authorize us or our investigators to initiate a clinical trial, conduct a clinical trial at a prospective trial site, or amend a clinical trial;

- government or regulatory delays and changes in regulatory requirements, policy and guidelines, including as a result of the COVID-19 pandemic;
- delays in reaching or failure to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites and contract research organizations (CROs), or failure by such CROs or trials sites to carry out the clinical trial in accordance with the terms of our agreements with them;
- negative or inconclusive results of preclinical studies or clinical trials;
- decision by us to conduct additional preclinical studies or clinical trials or abandon product development programs;
- a higher number of patients being required for clinical trials, slower than expected enrollment, greater than expected competition for patients or higher than expected drop out rates;
- clinical sites electing to terminate their participation in one of our clinical trials, which would likely have a detrimental effect on subject enrollment;
- delays or difficulties with respect to our clinical trials as a result of the COVID-19 pandemic, such as delays in clinical site initiations and the enrollment of patients in our clinical trials, including difficulties in recruiting clinical site investigators and clinical site staff, as well as delays or difficulties in the distribution of clinical trial materials, study monitoring and data analysis;
- failure of third-party contractors to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- inability or unwillingness of patients or medical investigators to follow our clinical trial protocols;
- suspension or termination of clinical trials for various reasons, including unacceptable health risks;
- imposition of a clinical hold for safety reasons or following an inspection of our clinical trial operations or site by the FDA or foreign regulatory authorities;
- greater than expected cost of clinical trials;
- insufficient supply or quality of momelotinib or other materials, necessary to conduct clinical trials;
- failure to obtain sufficient quantities of the comparator drug danazol, in view of its current global shortage to complete the trial as planned;
- FDA rejecting or disagreeing with our statistical plan;
- FDA disagreeing with the interpretation of our clinical data;
- delays or additional costs as a result of the United Kingdom’s decision to leave the European Union and resulting need to decouple the United Kingdom’s regulatory system from that of the European Union; and
- revision of legal or regulatory requirements for approving momelotinib.

If we are required to conduct additional preclinical studies or clinical trials or other testing of momelotinib beyond those that we currently contemplate, if we are unable to successfully complete preclinical studies and clinical trials of momelotinib or other testing, or if the results of these studies, trials or tests do not reflect an acceptable safety or efficacy profile, we may:

- be delayed or unable to submit additional CTAs or equivalents in one or more countries;
- not have the permission of the FDA or other health authorities to commence clinical trials, or may have a clinical hold placed on one or more of our clinical trials;
- be delayed in obtaining marketing approval;
- not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;

- 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, including boxed warnings;
- be subject to additional post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

Product development costs will also increase if we experience delays in testing or marketing approvals. We do not know whether any preclinical studies or clinical trials will continue as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical studies and clinical trial delays also could allow our competitors to bring products to market before we do and could impair our ability to successfully commercialize momelotinib, any of which may harm our business and results of operations.

The outbreak of COVID-19, or similar public health crises, could have a material adverse impact on our business, financial condition and results of operations, including the execution of our clinical trials and the use and sufficiency of our existing cash.

The extent to which COVID-19 impacts our business and operating results will depend on future developments that are highly uncertain and cannot be accurately predicted, including new information that may emerge concerning COVID-19 and the actions to contain the virus or treat its impact.

For instance, our MOMENTUM Phase 3 clinical trial for momelotinib has been and may continue to be affected by the pandemic. We launched MOMENTUM in the fourth quarter of 2019 and site initiation, participant recruitment and enrollment, participant dosing, distribution of clinical trial materials, study monitoring and data analysis have been and may be delayed due to changes in hospital or university policies, federal, state or local regulations, prioritization of hospital resources toward pandemic efforts, or other reasons related to the pandemic. Additionally, some participants and clinical investigators may not be able to comply with clinical trial protocols. For example, quarantines or other travel limitations (whether voluntary or required) may impede participant movement, affect sponsor access to study sites, or interrupt healthcare services, and we may be unable to conduct our clinical trial. We have adopted mitigation strategies, but if the global effort to control the spread of COVID-19 and treat COVID-19 patients continues on the current trajectory for an extended period of time, we risk a delay in activating sites and enrolling subjects as previously projected. Any such delays to our planned MOMENTUM timeline could also impact the use and sufficiency of our existing cash reserves, and we may be required to raise additional capital earlier than we had previously planned. We may be unable to raise additional capital if and when needed, which may result in further delays or suspension of our development plans. Challenging and uncertain economic conditions can make capital raising costly and dilutive.

We currently utilize third parties to, among other things, manufacture raw materials, momelotinib and danazol (the comparator in the MOMENTUM trial), components, parts, and consumables, perform quality testing and distribute drug product. If either we or any third-party in the supply chain for materials used in the production of momelotinib or danazol, are adversely impacted by restrictions resulting from the COVID-19 pandemic, our supply chain may be disrupted, limiting our ability to source drug substance and drug product for our clinical trials.

Further, infections and deaths related to COVID-19 are disrupting certain healthcare and healthcare regulatory systems globally. Such disruptions could divert healthcare resources away from, or materially delay review by, the FDA and comparable foreign regulatory agencies. As a result of the FDA's updated industry guidance for conducting clinical trials issued on March 18, 2020, we may experience delays in or temporary suspension of the enrollment of patients in our ongoing clinical trials. Based on these and new regulatory guidance, we may be required to make certain adjustments to our clinical trials, which could delay the submission of our NDA and regulatory approval and increase our costs. It is unknown how long these disruptions could continue, were they to occur. Any elongation or de-prioritization of our clinical trial or delay in regulatory review resulting from such disruptions could materially adversely affect the development and study of momelotinib. COVID-19 may also impact the resources and the availability of FDA to provide feedback and regulatory review or to conduct pre-approval inspections on a timely basis, which will delay our regulatory approval and increase our costs.

In response to the COVID-19 pandemic, we have closed our office with our employees continuing their work outside of our office. In the event of a shelter-in-place order or other mandated local travel restrictions, third parties conducting clinical or manufacturing activities may not be able to access laboratory or manufacturing space, and our core activities may be significantly limited or curtailed, possibly for an extended period of time.

The spread of COVID-19, which has caused a broad impact globally, including restrictions on travel and quarantine policies put into place by businesses and governments, may have a material adverse effect on our business. While the potential economic impact brought by and the duration of the pandemic may be difficult to assess or predict, it has already caused, and is likely to result in further, significant disruption of global financial markets and the trading prices for our common stock and other biopharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic, which may reduce our ability to access capital either at all or on favorable terms. In addition, a recession, depression or other sustained adverse market event resulting from the global effort to control COVID-19 infections could materially and adversely affect our business and the value of our common stock.

The ultimate impact of the current pandemic, or any other health 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. However, these effects could have a material adverse impact on our operations, and we will continue to monitor the situation closely. To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described in this “Risk Factors” section.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The Phase 3 MOMENTUM trial may be especially difficult to enroll because the trial is blinded and because the comparator arm does not contain a JAK inhibitor. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the trial until its conclusion. The enrollment of patients depends on many factors, including, but not limited to:

- the number and size of clinical trials for other product candidates in the same therapeutic area that are currently in clinical development, and our ability to compete with such trials for patients and clinical trial sites;
- the patient eligibility criteria defined in the protocols;
- the size of the specific patient populations such as those whose tumors harbor the applicable genetic mutations, if required or other defined subsets of a larger patient population;
- the risk that disease progression will result in death or clinical deterioration before the patient can enroll in clinical trials or before sufficient data has been collected such that the patient contributes no meaningful information for the clinical trial in which the patient is enrolled;
- the proximity and availability of clinical trial sites for prospective patients;
- the design of the trials, including the inclusion of a placebo or comparator arm in a trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents;
- the risk that patients enrolled in clinical trials will drop out of the trials before completion; and
- delays and difficulties in enrollment or patient retention in the trial due to the COVID-19 pandemic.

Our clinical trials compete with other clinical trials for product candidates that are in the same therapeutic areas as momelotinib. This competition reduces the number and types of patients and qualified clinical investigators available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors or clinical trial sites may not allow us to conduct our clinical trial at such site if competing trials are already being conducted there. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in such clinical trial site. We may also encounter difficulties finding a clinical trial site at which to conduct our trials. Moreover, because momelotinib is experimental, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy, radiation and other approved therapies, rather than enroll patients in any one of our clinical trials. Global pandemics, such as COVID-19, have negatively affected site initiation, as well as recruitment and retention, at sites in regions or cities whose health care system have become overwhelmed due to the pandemic. For example, as a result of COVID-19, several of our clinical trial sites have paused enrollment or are not prioritizing clinical trial activities or allowing enrollment, and of those sites still conducting clinical trial activities, the availability for patients to visit sites and have screening conducted may be limited. We may also experience delays or pauses in the delivery of required site activity equipment.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of our planned clinical trials, which could prevent completion of these clinical trials and adversely affect our ability to advance the development of momelotinib or any future product candidates we may develop.

We will need to acquire additional capital to complete the development and commercialization of momelotinib and any future product candidates.

We expect to spend substantial capital to advance momelotinib or any future product candidates, in preclinical and clinical development, seek regulatory approvals for such product candidates, establish a commercial sales force to market and manufacture products, if any, that are approved for commercial sale. We also incur significant compliance and administrative costs as a result of operating as a public company.

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

- the progress and results of our MOMENTUM Phase 3 trial and our other planned preclinical studies and clinical trials;
- the scope, progress, results and costs of product candidate discovery, preclinical development, laboratory testing and clinical trials for our current and future product candidates;
- the costs, timing and outcome of regulatory review of momelotinib and any other future product candidates;
- the costs of medical affairs and pre-commercialization activities, including regulatory and reimbursement analysis and market research;
- the costs of future commercialization activities, including drug sales, marketing, manufacturing and distribution, for momelotinib or any future product candidates for which we receive marketing approval, to the extent that such sales, marketing, manufacturing and distribution are not the responsibility of any collaborator;
- the extent to which we acquire or in-license other drugs and technologies, or to which we out-license our own products and technologies;
- the extent to which we acquire or invest in business, products or technologies, although we currently have no commitments or agreements relating to any of these types of transactions;
- the extent to which we are able to enter into strategic partnerships and alliances or licensing arrangements with third parties for the commercialization of momelotinib in certain global regions;
- our ability to establish and maintain collaborations on favorable terms, if at all;
- the success of any collaborations that we may enter into with third parties;

- the timing and amount of milestone and royalty payments;
- the amount of revenue, if any, received from commercial sales of momelotinib or any future product candidates, should any such product candidates receive marketing approval;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims; and
- the compliance and administrative costs associated with being a public company.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve drug sales. In addition, momelotinib, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of momelotinib, if approved, which we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives.

We cannot be certain that additional funding will be available on acceptable terms, or at all. We have no committed source of additional capital, other than our outstanding warrants, and it may be difficult to raise the amount of capital needed to support planned development of momelotinib. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of momelotinib or other research and development initiatives. In particular, we do not have sufficient funds on hand to adequately prepare for future momelotinib commercialization, if approved. We could also be required to seek collaborators for momelotinib, at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available or relinquish or license on unfavorable terms our rights to such product candidates in markets where we otherwise would seek to pursue development or commercialization ourselves. We also may be unable to acquire additional promising product candidates.

We have acquired momelotinib from a third party that had already conducted or was in the process of conducting clinical trials. Our acquisition of momelotinib has resulted in us being required to take over responsibility for conducting ongoing momelotinib trials. We may discover that development efforts of the third parties, including but not limited to historical studies and trials conducted by third parties, did not comply with all applicable rules and regulations. Further development and commercialization of momelotinib will require significant financial and operational resources from us.

Prior to our acquisition of momelotinib, third parties had been responsible for all development activities including, drug process, preclinical and clinical development activities, submission of CTAs and INDs, development of the trial protocols, establishment and management of clinical and safety databases, submission of a pediatric investigation plan (PIP), and other activities. Although we believe the historical development activities were conducted in accordance with applicable rules and regulations in material respects, we cannot assure you that we will not discover inaccuracies or noncompliance in prior development activities that have an adverse effect on the future development of momelotinib. For example, a regulatory authority may choose to inspect an investigational site and/or vendor such as a CRO for a momelotinib study that was previously conducted by Gilead such as the SIMPLIFY-1 or SIMPLIFY-2 studies. Findings from such inspections could have an impact on the review of any future marketing applications by the FDA or foreign regulatory authorities.

In connection with our acquisition of momelotinib, we have assumed the responsibility for ongoing clinical studies with momelotinib, including related expenses and manufacturing and regulatory activities, which were previously managed and funded by Gilead. This includes responsibility for the ongoing extended access study, which provides extended access of momelotinib to certain patients previously enrolled in Gilead-sponsored studies, who are currently receiving treatment with momelotinib and have not experienced progression of disease. Further, extended access programs provide supportive safety information for regulatory review. Any adverse events or reactions experienced by subjects in the extended access program may be attributed to momelotinib and may limit our ability to obtain regulatory approval with labeling that we consider desirable, or at all.

From time to time we may amend the clinical protocols for momelotinib to include additional objectives that could yield important scientific information critical to our overall development strategy. The protocol amendment process requires review and approval by several review bodies, including regulatory agencies and scientific, regulatory and ethics boards. These protocol amendments may not be accepted by the review bodies in the form submitted, or at all, which may delay our planned enhancements to the clinical development program and/or limit or change the type of information we may gather from those studies.

While regulatory feedback was obtained concerning the design of our Phase 3 clinical trial for momelotinib from both the United States and European Union regulatory authorities, additional regulatory, scientific, ethics committee, and possibly other reviews will be required during the activation process for the MOMENTUM Phase 3 trial before the protocol is active at any particular site. It is possible that these reviews could require changes to the design of the study. If the FDA, EMA, MHRA, an ethics committee or scientific review board, or another regulatory authority objects to or otherwise does not accept or approve any future protocols or protocol amendments or requires us to further modify trial protocols, our related planned clinical development program may be delayed or suspended and/or we may not be able to gather information we think would be useful to advance development of momelotinib, and our development program may be adversely affected.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or momelotinib.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. In November 2019 we conducted a public equity offering where we raised net proceeds of approximately $97.7 million in a substantially dilutive transaction to our pre-existing investors. In August 2020, we filed a prospectus supplement pursuant to which we can issue and sell an aggregate of up to $20.0 million of our common stock from time to time in ATM offerings. During the year ended December 31, 2020, we sold 732,752 shares under the ATM program for net proceeds of $8.9 million, net of commissions and offering expenses. In January 2021, we sold an additional 450,000 shares under the ATM program for proceeds of $7.1 million, net of commissions. In addition, in February 2021, we filed a prospectus supplement pursuant to which we can issue and sell an aggregate of up to $30.0 million of our common stock from time to time in ATM offerings. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our stockholders will be further diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our stockholders. The incurrence of indebtedness would result in increased fixed payment obligations and could involve certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or momelotinib or grant licenses on terms unfavorable to us.

We may expend our limited resources to pursue a particular product candidate, such as momelotinib, and fail to capitalize on product candidates that may later prove to be more profitable or for which there is a greater likelihood of success. In addition, we may intentionally halt or terminate programs in order to conserve capital and focus on our remaining program or programs, which may increase our reliance on those programs to be successful.

Because we have limited financial and managerial resources, we focus our research and development efforts on our product candidate, momelotinib. As a result, we may advertently or inadvertently forgo or delay pursuit of opportunities with other product candidates, including SRA737, that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable product candidates. In addition, if we halt or terminate programs in order to conserve capital and focus on our remaining program or programs, it may increase our reliance on the success of such programs and raise our exposure to the risk of failure among any of our programs.

While we have currently deprioritized development of SRA737, we are exploring options for future development of this product candidate, if any. However, there can be no assurance that we will successfully obtain development support or the funding necessary to advance SRA737 on commercially reasonable terms, or at all. If we are unable to obtain such support or funding, we may need to permanently cease development of SRA737.

If we do not achieve our projected development goals in the timeframes we announce and expect, our stock price may decline.

From time to time, we estimate the timing of the anticipated accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials and the submission of regulatory filings. From time to time, we may publicly announce the expected timing of some of these milestones. All of these milestones are and will be based on numerous assumptions. The actual timing of these milestones can vary dramatically compared to our estimates, in some cases for reasons beyond our control. If we do not meet these milestones as publicly announced, our stock price may decline.

The manufacture of momelotinib and the comparator, danazol requires outsourced, custom manufacturing and we may encounter difficulties in production, particularly with respect to formulation, process development or scaling up of our manufacturing capabilities. If our third-party manufacturers or suppliers encounter such difficulties, our ability to provide supply of momelotinib for preclinical studies, clinical trials or our products for patients, if approved, or danazol for the MOMENTUM trial could be delayed or stopped, or we may be unable to maintain a commercially viable cost structure.

As product candidates are developed, it is common that various aspects of the development program, such as manufacturing methods, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives, and any of these changes could cause momelotinib to perform differently and affect the results of planned preclinical studies or future clinical trials.

Currently, momelotinib is manufactured using an optimized drug substance process by third-party manufacturers. If either we or any third-party in the supply chain for materials used in the production of momelotinib are adversely impacted by restrictions resulting from the COVID-19 outbreak, our supply chain may be disrupted, limiting the ability of our third-party manufacturers to manufacture momelotinib for our clinical trials.

Supply chain logistics are complex for the MOMENTUM Phase 3 clinical trial of momelotinib, as it requires the administration of both an active drug (momelotinib) and a comparator (danazol) and there are risks associated with this process throughout the supply chain, from manufacturing, labeling, to distribution, dispensing, and administration. Although we have secured sufficient quantities of drug substance and drug product to supply our current momelotinib program, starting with the MOMENTUM Phase 3 clinical trial of momelotinib, we will need to obtain additional supplies from third-party manufacturers that we have engaged, or expect to engage. We have also secured sufficient quantities of danazol drug product to supply the comparator for the initial subjects who will enroll in the study. However, additional sourcing of danazol will be necessary in the future in order to complete the MOMENTUM Phase 3 clinical trial. Currently, there is a global shortage of danazol. We will need to obtain additional supplies from third-party manufacturers that we have engaged or expect to engage. We are also working with regulatory agencies to extend the shelf life of our current supply of danazol to ensure that our current supply will not expire before we complete our Phase 3 clinical trial. Simultaneously, we are also working with our current supplier to manufacture more danazol. While we are taking multiple measures to ensure sufficient supply of danazol required to complete the Phase 3 trial, we could nevertheless face challenges that potentially impact the ability to execute and complete the MOMENTUM trial as we anticipate. Any shortage in the clinical supplies could delay our clinical trial plan.

Furthermore, if third-party manufacturers of danazol, or any third-party in the supply chain, are adversely impacted by restrictions resulting from the COVID-19 outbreak, we may be unable to secure the supply required for our MOMENTUM study. Any potential limitation in supply of either momelotinib or danazol during the conduct of the MOMENTUM trial could be exacerbated due to the use of several regional depots and the number of sites that are participating in the study. Drug is shipped to sites as they enter a patient into screening. If the rate of screening exceeds expectations, there could be logistic challenges in refilling the supply at the depot. Although additional drug

product could be shipped from another regional depot, logistic challenges could delay this as well. If the supply in a regional depot becomes depleted, screening in that region might need to be temporarily suspended until the supply is replenished. Although we are working to develop commercially viable manufacturing processes, doing so is a difficult and uncertain task, and there are risks associated with scaling to the level required for advanced clinical trials or commercialization, including, among others, cost overruns, potential problems with process scale up or formulation, process reproducibility, stability issues, lot consistency and timely availability of reagents or raw materials.

Any of these challenges could delay completion of preclinical studies or clinical trials, require bridging studies or trials, or the repetition of one or more studies or trials, increase development costs, delay approval of momelotinib, impair commercialization efforts, increase our cost of goods and have an adverse effect on our business, financial condition, results of operations and growth prospects.

Our reliance on third-party manufacturing partners or suppliers may cause our supply of research and development, preclinical and clinical development materials to become limited or interrupted or fail to be of satisfactory quantity or quality.

We do not have any manufacturing facilities or personnel. We currently rely, and expect to continue to rely, on third parties for the manufacture and supply of preclinical study and clinical trial materials in relation to momelotinib, including materials for any combination trials that we may undertake, and any future potential product candidates that we may develop for preclinical and clinical testing, as well as for commercial manufacture if momelotinib receives marketing approval. We have engaged, or expect to engage, third-party manufacturers to obtain materials and consumables necessary for the manufacture of momelotinib.

We may be unable to establish further agreements with third-party manufacturers and suppliers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers and suppliers entails additional risks, including, but not limited to:

- reliance on the third party for sufficient quantity and quality;
- the possible breach of the manufacturing or supply agreement by the third party;
- failure to manufacture or supply the product according to our specifications;
- failure to manufacture or supply the product according to our schedule or at all;
- the possible mislabeling of clinical supplies, potentially resulting in the wrong dose amounts being supplied or active drug or comparator not being properly identified;
- misappropriation of our proprietary information, including our trade secrets and know-how;
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us;
- the possibility of clinical supplies not being delivered to clinical sites on time, leading to clinical trial interruptions; and
- the reliance on the third party for regulatory compliance, quality assurance and safety reporting.

While we require our third-party manufacturers and suppliers to comply with cGMPs in the manufacture of clinical trial materials and commercial supply, should we obtain approval of momelotinib, these third-party manufacturers and suppliers may cease to continue to comply with cGMPs—which are FDA requirements for ensuring product quality control—or similar regulatory requirements outside the United States. Our contract manufacturers and suppliers are subject to continual review and periodic inspections to assess compliance with cGMPs. Accordingly, although we are not involved in the day-to-day operations of our contract manufacturers or suppliers, we are ultimately responsible for ensuring that our products and product candidates, and any other materials that may be used in our preclinical or clinical studies or trials, are manufactured or supplied in accordance with cGMPs. Therefore, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, quality control and quality assurance. Our failure, or the failure of our third-party manufacturers or suppliers, to comply with applicable regulations could result in momelotinib not being approved or sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of momelotinib or approved products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our medicines and harm our business and results of operations.

Additionally, our third-party manufacturers may experience manufacturing difficulties due to resource constraints or as a result of labor disputes, or unstable political environments, or medical pandemics such as the COVID-19 outbreak. For example, many of our raw materials for manufacture of momelotinib are produced in Asia which could impact our ability to manufacture and supply material for clinical and commercial supply. If our contract manufacturers were to encounter any manufacturing difficulties or delays due to these factors, our ability to provide momelotinib to patients in clinical trials, or to provide product for treatment of patients once approved, would be jeopardized.

We rely on third-party suppliers for the supply of the raw materials required for the production of our product candidates, and we expect to some extent continue to rely on third-party manufacturers for the commercial supply of any of our product candidates for which we obtain marketing approval. Our dependence on these third-party suppliers and the challenges we may face in obtaining adequate supplies of raw materials involve several risks, including limited control over pricing, availability, quality, and delivery schedules and non-exclusivity. As a small company, our negotiation leverage is limited, and we are likely to get lower priority than our competitors who are larger than we are. We do not have long-term supply agreements, and we purchase our required supplies on a development manufacturing services agreement or purchase order basis. We cannot be certain that our suppliers will continue to provide us with the quantities of these raw materials that we require to satisfy our anticipated specifications and quality requirements. Any supply interruption in limited or sole sourced raw materials could materially harm our ability to manufacture our product candidates until a new source of supply, if any, could be identified and qualified. We may be unable to find a sufficient alternative supply channel in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the development and potential commercialization of our product candidates, including limiting supplies necessary for clinical trials and regulatory approvals, which would have a material adverse effect on our business.

Any performance failure on the part of our existing or future manufacturers or suppliers, any interruption or poor yield or quality of manufactured or supplied materials, or any interruption or delay caused by a third party being subject to governmental regulations or moratoriums could result in additional costs, not having sufficient quantities or sufficient quality and may delay, prevent or impair our development, commercialization or marketing efforts. We do not currently have arrangements in place for redundant supply. If any one of our current contract manufacturers or suppliers cannot perform as agreed, we may be required to replace that manufacturer or supplier. Although we believe that there are several potential alternative manufacturers or suppliers who could manufacture or supply momelotinib or the materials for trials relating to momelotinib, we may incur added costs and delays in identifying and qualifying any such replacement.

If our third-party manufacturers or suppliers use hazardous and biological materials in a manner that causes injury or violates applicable law, we may be liable for damages. Our research and development activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by our third-party manufacturers or suppliers. Our manufacturers and suppliers are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe that our manufacturers' and our suppliers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Thus, our current and anticipated future dependence upon others for the manufacture or supply of momelotinib or related medicines and materials may adversely affect our development timeline, our future profit margins or our ability to commercialize momelotinib or any future product candidates that receive marketing approval on a timely and competitive basis.

Our product candidates including momelotinib may cause undesirable side effects or have other properties that could halt their development, prevent their regulatory approval, limit their commercial potential or result in significant negative consequences.

It is possible that the FDA or foreign regulatory authorities may not agree with any assessment of the safety profile of momelotinib. Undesirable side effects caused by momelotinib could cause us, IRBs, our CROs, the FDA or foreign regulatory authorities to interrupt, delay or discontinue development and could result in a clinical hold on any clinical trial, or the denial of regulatory approval by the FDA or foreign regulatory authorities for any or all targeted indications. This, in turn, could prevent us from commercializing momelotinib and generating revenues from their sale. In addition, if any of our products cause serious or unexpected side effects or are associated with other safety risks after receiving marketing approval, a number of potential significant negative consequences could result, including, but not limited to:

- regulatory authorities may withdraw their approval of this product;
- we may be required to recall the product, change the way it is administered, conduct additional clinical trials or change the labeling of the product;
- the product may be rendered less competitive and sales may decrease;
- our reputation may suffer generally both among clinicians and patients;
- we may be exposed to potential lawsuits and associated legal expenses, including costs of resolving claims;
- regulatory authorities may require certain labeling statements, such as warnings or contraindications or limitations on the indications for use, or impose restrictions on distribution in the form of a Risk Evaluation and Mitigation Strategy (REMS) in connection with approval, if any;
- we may be required to change the way the product is administered or conduct additional preclinical studies or clinical trials; or
- we may be required to change or stop other ongoing clinical studies that may negatively impact the development of the agent for other indications.

If preliminary data demonstrate that momelotinib has an unfavorable safety profile and is unlikely to receive regulatory approval or be successfully commercialized, we may voluntarily suspend or terminate future development of momelotinib.

Any one or a combination of these events could prevent us from obtaining approval and achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing momelotinib, which in turn could delay or prevent us from generating significant revenues from the sale of the product.

We do not have our own laboratory facilities. We rely on third parties to conduct our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize momelotinib.

We do not have our own laboratory facilities. We depend upon independent investigators and collaborators, such as universities, medical institutions, CROs and strategic partners to conduct our preclinical studies and clinical trials. We expect to have to negotiate budgets and contracts with CROs and trial sites, which may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our preclinical studies and clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCPs and GLPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for clinical and non-clinical research intended to support a submission or application to FDA or the comparable foreign authority. Regulatory authorities enforce these requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable requirements, the data generated in our studies and trials

may be deemed unreliable and the FDA or foreign regulatory authorities may require us to perform additional studies or trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our studies or trials comply with the GCP or GLP requirements. In addition, our studies and trials must be conducted with drug product produced under cGMPs. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat studies or trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our preclinical studies and clinical trials will not be our employees and, except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical studies or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our protocols or regulatory requirements or for other reasons, our studies and trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize momelotinib. As a result, our financial results and the commercial prospects for momelotinib would be harmed, our costs could increase and our ability to generate revenue could be delayed.

We may be required to suspend, repeat or terminate our clinical trials if they are not conducted in accordance with regulatory requirements, the results are negative or inconclusive, or the trials are not well-designed.

Regulatory agencies, IRBs or data safety monitoring boards may at any time recommend the temporary or permanent discontinuation of our clinical trials or request that we cease using investigators in the clinical trials if they believe that the clinical trials are not being conducted in accordance with applicable regulatory requirements, or that they present an unacceptable safety risk to participants. Clinical trials must be conducted in accordance with GCPs, or other applicable foreign regulatory authority guidelines. Clinical trials are subject to oversight by the FDA, foreign regulatory authorities and IRBs at the study sites where the clinical trials are conducted. In addition, clinical trials must be conducted with product candidates produced in accordance with applicable cGMPs. Clinical trial data may be rejected by the FDA or foreign regulatory authorities or clinical trials may be suspended by the FDA, foreign regulatory authorities, or us for various reasons, including, but not limited to:

- deficiencies in the conduct of the clinical trials, including failure to conduct the clinical trial in accordance with regulatory requirements or clinical protocols or to obtain or maintain clinical trial data in accordance with applicable regulatory requirements;
- deficiencies in the clinical trial operations or trial sites;
- the product candidate may have unforeseen adverse side effects;
- deficiencies in the trial designs necessary to demonstrate efficacy;
- fatalities or other adverse events (AEs) arising during a clinical trial due to medical problems that may or may not be related to clinical trial treatments;
- the product candidates may not appear to be more effective than current therapies;
- the quality or stability of the product candidates may fall below acceptable standards; or
- failure to adequately demonstrate study conduct oversight, ensure data integrity, and that clinical study sites complied with the principles of GCPs.

Although we have never been asked by a regulatory agency, IRB or data safety monitoring board to temporarily or permanently discontinue a clinical trial, if we elect or are forced to suspend or terminate a clinical trial of momelotinib or any future product candidates, the commercial prospects for that product will be harmed and our ability to generate product revenue from that product may be delayed or eliminated. For example, in June 2016, we decided to suspend the development of our former lead product candidate PNT2258 after an interim analysis of data from a Phase 2 clinical trial on PNT2258 indicated only modest efficacy. Furthermore, any of these events could prevent us or our partners from achieving or maintaining market acceptance of the affected product and could substantially increase the costs of commercializing momelotinib and impair our ability to generate revenue from the commercialization of these products either by us or by our collaboration partners.

Even if we receive regulatory approval to market momelotinib, the market may not be receptive to our product.

Even if we obtain regulatory approval for momelotinib, it may not gain market acceptance among physicians, patients, healthcare payors and/or the medical community. We believe that the degree of market acceptance will depend on a number of factors, including, but not limited to:

- timing of market introduction of momelotinib and competitive product;
- safety and efficacy of our product;
- prevalence and severity of any side effects;
- potential advantages or disadvantages over alternative treatments;
- strength of marketing and distribution support;
- price of our products, both in absolute terms and relative to alternative treatments;
- availability of coverage and reimbursement from government and other third-party payors; and
- sequencing of available products.

If momelotinib is approved for commercial sale and fails to achieve market acceptance, we may not be able to generate significant revenue or achieve or sustain profitability.

We may be subject to requests for access to momelotinib. Demand for compassionate use of our unapproved therapies could strain our resources, delay our drug development activities, negatively impact our regulatory approval or commercial activities, and result in losses.

We are developing momelotinib to treat a life-threatening illness for which there are currently limited therapeutic options. Other companies in our field have been the target of campaigns requesting access to unapproved drugs. If we experience similar request for access campaigns, we may experience significant disruption to our business which could result in losses. We are a small company with limited resources, and any unanticipated trials or access programs resulting from requests for access could deplete our drug supply, increase our capital expenditures, reduce the availability of potentially eligible clinical trial participants, and otherwise divert our resources from our primary goals.

In addition, legislation referred to as "Right to Try" laws have been introduced at the local and national levels, which are intended to give patients access to unapproved therapies. New and emerging legislation regarding expanded access to unapproved drugs for life-threatening illnesses could negatively impact our business in the future. Either activism or legislation related to requests for access may require us to initiate an unanticipated expanded access program or to make momelotinib more widely available sooner than anticipated.

Patients who receive access to unapproved drugs through compassionate use or expanded access programs have life-threatening illnesses and generally have exhausted all other available therapies. The risk for serious adverse events, including those which may be unrelated to momelotinib, in this patient population is high and could have a negative impact on the safety profile of momelotinib, which could cause significant delays or an inability to successfully commercialize momelotinib and could materially harm our business. In addition, in order to perform the controlled clinical trials required for regulatory approval and successful commercialization of momelotinib, we may receive adverse publicity or experience other disruptions if we do not provide compassionate use access or expanded access programs in response to requests for access from patients in the US or elsewhere in the world. Should we agree to provide compassionate use access or decide to initiate an expanded access program, we could experience adverse publicity or other disruptions related to current or potential participants in such programs. Similarly, we could experience adverse publicity or other disruptions if we were to restructure or pause any compassionate use and/or expanded access program after initiating such a program or after the provision of our product through compassionate access to an individual patient or patients.

We do not have our own laboratory facilities or the ability to discover product candidates. We rely on licensing, acquisition and other forms of strategic relationship to grow our pipeline. Our efforts to acquire additional product candidates and grow our pipeline may be unsuccessful.

We do not have our own laboratory facilities or the ability to discover product candidates. We rely on licensing, acquisition and other forms of strategic relationship to grow our pipeline. We may acquire, or enter into strategic relationships to identify, license and develop, one or more additional product candidates to grow our pipeline. In addition, we may desire to renegotiate our currently existing licensing or asset purchase agreements for any of our product candidates. The identification, evaluation, development and potential acquisition or licensing of additional product candidates is expensive and time-consuming, and our efforts may not lead to the acquisition or licensing of any additional product candidates, that can be successfully developed and commercialized. Competition for viable product candidates is intense, and the acquisition or licensing of product candidates may be more expensive than we are able to afford or may require us to seek additional financing. If our efforts do not lead to the acquisition or successful identification, development and licensing of suitable product candidates, we may be unable to grow our pipeline. In addition, if our efforts to grow our pipeline require us to pursue additional dilutive capital or debt financing strategies, we may experience harm to our financial position and stability.

Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development. For example, they may be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be drugs that will receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize product candidates based upon our approach, we will not be able to obtain product revenue in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price.

We face significant competition from other hematology and oncology companies, and our operating results will suffer if we fail to compete effectively.

The hematology and oncology industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. We may face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with existing therapies that are available for the indication or indications for which they are approved and new therapies that may become available in the future.

To our knowledge, there are currently two approved myelofibrosis drugs that specifically rely on JAK inhibition, ruxolitinib, marketed by Incyte Corporation as Jakafi® in the United States and by Novartis as Jakavi in the rest of the world and fedratinib, marketed by Celgene Corporation as Inrebic® in the United States. Fedratinib was also recently approved in Europe. In addition, there is one additional JAK inhibitor competitor in clinical development, at a similar state of development or more advanced than us. CTI Biopharma Corporation is developing pacritinib, for a subset of myelofibrosis patients with platelet counts less than 50,000/uL and commenced its rolling NDA submission in October 2020. However, to our knowledge, there are no drugs that target JAK1, JAK2 and ACVR1 on the market, nor in development. Other competitors developing myelofibrosis therapeutics include Acceleron, Constellation Pharma, AbbVie, Kartos and Incyte. Celgene and Acceleron are developing luspatercept in a Phase 3 clinical trial for myelofibrosis. Constellation Pharma is developing pelabresib (CPI-0610), a BET inhibitor in Phase 3 clinical trial in combination with ruxolitinib. AbbVie announced two Phase 3 clinical trials in combination with ruxolitinib for JAKi naïve and previously JAKi treated patients. Kartos announced clinical trial plans for KRT-232, a MDM2 inhibitor for JAKi relapsed or refractory MF patients. Incyte launched Phase 3 clinical trials to evaluate parsaclisib, in combination with ruxolitinib. In addition, there are several Phase 1 and Phase 2 clinical trials being conducted in myelofibrosis by various companies, including a Phase 2 study of a deuterated form of momelotinib being run by Zelgen Biopharmaceuticals in China. Several additional companies are advancing assets in the early stages of development potentially for the myelofibrosis market. If momelotinib is approved, it will compete with existing therapies for the indication or indications for which it is approved. While we believe that momelotinib may have the ability to provide an anemia benefit in addition to treating the other manifestations of myelofibrosis, which we believe is unique within the JAK inhibitor class of agents, the market for momelotinib is competitive, and physicians and other prescribers may not recommend or prescribe momelotinib over other competing products.

Many of the companies against which we may compete have significantly greater financial and other resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the hematology and oncology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or that may be necessary for, our momelotinib program. Development efforts and clinical results of other companies may be unsuccessful or terminated, which could result in a negative perception of momelotinib, decreases in our stock price and adverse regulatory impacts, which could have a material and adverse effect on our ongoing development programs and our business.

Our commercial opportunity could be reduced or eliminated if any 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 any drugs that we may develop. Our competitors also may obtain FDA or foreign regulatory approval for their product candidates more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors who may place restrictions on patient access to our drugs in seeking to encourage the use of generic or cheaper drugs. If we fail to complete effectively, our business and operating results would be harmed.

We are dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive oncology industry depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We have in the past and may in the future continue to experience changes in our executive management team resulting from the departure of executives or subsequent hiring of new executives, which may be disruptive to our business. Any changes in business strategies can create uncertainty, may negatively impact our ability to execute our business strategy and advance development, and may ultimately be unsuccessful. The impact of hiring new executives may not be immediately realized. We are substantially dependent on the continued service of our existing management, scientific and medical personnel, including Dr. Stephen Dilly, our President and Chief Executive Officer, Dr. Barbara Klencke, our Chief Development Officer, and Dr. Mark Kowalski, our Chief Medical Officer, because of their familiarity with momelotinib and our development efforts. The loss of the services of any of our executive officers, other key employees and other scientific and medical advisors, including due to illness resulting from COVID-19, and our inability to find suitable replacements, could result in delays in product development and harm our business.

Our operations are conducted in regions where significant competition exists for key personnel and employees. Many other oncology companies and academic and research institutions are located in these regions. Competition for skilled personnel in these markets is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain “key man” insurance policies on the lives of these individuals or the lives of any of our other employees.

Should momelotinib receive marketing approval in the United States, Canada, or elsewhere in the world, we would need to hire a substantial number of specialized personnel, including field-based personnel, unless we were to collaborate with a third party to commercialize momelotinib. If we are responsible for commercializing momelotinib, we would need to increase our administrative headcount to support such expanded development and commercialization operations with respect to momelotinib. Our ability to attract and retain qualified personnel in the future is subject to intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses and our current financial position. The loss of the services of any of our senior management could delay or prevent the development and commercialization of momelotinib or have other adverse effects on our business for an indefinite term. In particular, if we lose any members of our current senior management team, we may not be able to find suitable replacements in a timely fashion, if at all, and our business may be harmed as a result.

We may encounter difficulties in managing our expected growth and in expanding our operations successfully.

Prior to acquiring momelotinib, our most advanced product candidate was in Phase 1/2 development. Advancing momelotinib through Phase 3 development, will require us to develop or expand our development, regulatory, manufacturing, medical affairs, marketing and sales capabilities or contract with third parties to provide these capabilities for us. We must also successfully integrate the employees and operations related to the development of momelotinib. Maintaining additional relationships and managing our future growth will impose significant added responsibilities on members of our management. We must be able to manage our development efforts effectively, manage our clinical trials effectively, hire, train and integrate additional management, development, medical affairs, administrative and sales and marketing personnel, improve our managerial, development, operational and finance systems, and expand our facilities, all of which may impose a strain on our administrative and operational infrastructure. Our future financial performance will depend, in part, on our ability to manage this growth effectively. We may not be able to accomplish these tasks, failure of which could prevent us from successfully developing and potentially commercializing momelotinib.

We may form or seek strategic alliances, licensing arrangements or other collaborations in the future. We may be unable to form or enter into such alliances or arrangements, and we may not realize the expected benefits of any such transaction.

We may form or seek strategic alliances or licensing arrangements, or create joint ventures or collaborations with third parties that we believe will complement or augment our development and commercialization efforts with respect to momelotinib and any future product candidates that we may acquire or develop, or that may provide for other economic value. For example, in June 2020, we licensed SRA141 back to Carna Biosciences, the original licensor. We may be entitled to certain profit share on royalty and non-royalty income and royalties on product sales. If Carna Biosciences or its collaborators fail to successfully develop and commercialize SRA141, we will receive limited to no value from this transaction. This or any future strategic transactions and relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders, disrupt our management and business, forego potential future economic value or result in the loss of strategic value. These transactions and relationships also may result in a delay in the development of momelotinib or any future product candidates if we become dependent upon the other party and such other party does not prioritize the development of such product candidates relative to its other development activities.

In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for momelotinib because it may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view momelotinib as having the requisite potential to demonstrate safety and efficacy. We cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that would justify such transaction.

Past and future acquisitions could disrupt our business and harm our financial condition and operating results.

We may acquire additional businesses or product candidates from third parties that we believe will complement or augment our existing momelotinib program. For example, in August 2018, we entered into an Asset Purchase Agreement with Gilead whereby we acquired worldwide rights to the pharmaceutical product momelotinib, an investigational orally-bioavailable JAK1, JAK2 and ACVR1 inhibitor together with all related intellectual property rights and certain other related assets. Even if the assets we acquire have promising markets or technologies, we may not be able to realize the benefit of acquiring such assets if we are unable to successfully integrate them with our existing operations and company culture. We may encounter numerous difficulties in developing, manufacturing and marketing any new product candidates resulting from an acquisition, including momelotinib, which may delay or prevent us from realizing their expected benefits or enhancing our business. We cannot assure you that, following any such acquisition, we will achieve the expected synergies or benefits from the asset to justify the transaction. The risks we face in connection with acquisitions, including our acquisition of momelotinib, include, but are not limited to:

- diversion of management time and focus from operating our business to addressing acquisition integration challenges;
- integration of research and development efforts;
- hiring or training of key employees with knowledge regarding the acquired asset;
- changes in relationships with strategic partners as a result of product acquisitions or strategic positioning resulting from the acquisition;
- cultural challenges associated with integrating employees, knowledge and processes related to the acquired asset into our organization;
- unanticipated write-offs or charges; and
- litigation or other claims in connection with the acquired asset.

Our failure to address these risks or other problems encountered in connection with acquisitions could cause us to fail to realize the anticipated benefits of these transactions, cause us to incur unanticipated liabilities and harm the business generally. There is also a risk that future acquisitions will result in the incurrence of debt, contingent liabilities, amortization expenses or incremental operating expenses, any of which could harm our financial condition or operating results.

If we are unable to adequately prepare the market for the potential future commercialization of a product, we may not be able to generate product revenue once marketing authorization is obtained. We currently have no marketing and sales organization and have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell momelotinib or any future product candidates, we may not be able to generate product revenue.

We have not yet begun to prepare for potential future commercialization, and currently have limited commercialization expertise, including no sales, marketing or distribution capabilities and no experience in marketing products. Advancing momelotinib through Phase 3 development and closer to potential approval will require us to begin commercialization preparation activities and incur related expenses before we obtain final trial results and know whether MOMENTUM will support regulatory approval. These activities will include, among other things, the development of an in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other companies to recruit, hire, train and retain qualified marketing and sales personnel. If we are unable to adequately prepare the market for the potential future commercialization of a product, we may not be able to generate product revenue once marketing authorization is obtained.

Additionally, if we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue collaborative arrangements regarding the sales and marketing of our products, however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements on commercially reasonable terms, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized momelotinib or any future product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of momelotinib.

We cannot guarantee that we will be able to develop in-house commercialization expertise, including sales and distribution capabilities, or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or overseas.

We depend on our information technology and infrastructure.

We rely on the efficient and uninterrupted operation of information technology systems, including mobile technologies, to manage our operations, to process, transmit and store electronic and financial information, and to comply with regulatory, legal and tax requirements. We also depend on our information technology infrastructure for communications among our personnel, contractors, consultants and vendors. System failures or outages, including any potential disruptions due to significantly increased global demand on certain cloud based systems during the COVID-19 situation, could compromise our ability to perform these functions in a timely manner, which could harm our ability to conduct business or delay our financial reporting. Such failures could materially adversely affect our operating results and financial condition.

In addition, we depend on third parties to operate and support our information technology systems. These third parties vary from multi-disciplined to boutique providers, and they may have access to our computer networks, mobile networks, and our confidential information. Many of these third parties subcontract or outsource some of their responsibilities to other third parties. As a result, our information technology systems, including those functions that are performed by third parties who are involved with or have access to our systems, are very large and complex. Failure by any of these third-party providers to adequately deliver the contracted services, or maintain confidentiality and adequate security controls, could have an adverse effect on our business, which in turn may materially adversely affect our operating results and financial condition. Although we take measures designed to prevent security breaches and cyberattacks, these efforts may not completely eliminate the risk of such incidents and we cannot guarantee security incidents will not impact us in the future. We may need to continuously increase cost and resources to protect security threats and their consequences. If our information technology systems were to fail or be breached, such failure or breach could materially adversely affect our ability to perform critical business functions and sensitive and confidential data could be compromised.

Our internal information technology systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches.

Despite our efforts to implement effective administrative, technical, and physical security measures and controls, our internal information technology systems and those of our CROs and other contractors and consultants may become vulnerable to damage from security breaches and/or unauthorized access. The prevalent use of mobile devices also increases the risk of data security incidents resulting from lost or stolen devices or compromised security controls. In the ordinary course of our business, we collect, store, process and transmit large amounts of sensitive information, including intellectual property, proprietary business information, personal information, health information, financial information, and other confidential information. It is critical that we do so in a secure manner in order to ensure the confidentiality, integrity, and availability of such sensitive information. We have in the past experienced, and may in the future experience, a security breach. When we have experienced security breaches in the past, we took immediate action to prevent any additional unauthorized access, put further security controls in place and worked with outside counsel for any necessary reporting requirements. Any material system failure or security breach could cause interruptions in our operations and could result in a material disruption of our development programs and our business operations. For example, the loss of data from completed or future preclinical studies or clinical trials could result in significant delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on other third parties for the manufacture of momelotinib and to conduct studies and trials, and similar events relating to their information technology systems could also have a material adverse effect on our business. 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 personal and sensitive information, we could incur liability and the further development and commercialization of momelotinib could be significantly delayed.

Unstable or unfavorable global market and economic conditions may have adverse consequences on our business, financial condition and stock price.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. Global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. We cannot assure you that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy and stock price may be adversely affected by any such economic downturn, volatile business environment or large-scale unpredictable or unstable market conditions, including a prolonged government shutdown or as a result of a global pandemic such as the COVID-19 pandemic. While the potential economic impact brought by and the duration of the pandemic may be difficult to assess or predict, it has already caused, and is likely to result in further, significant disruption of global financial markets, which may reduce our ability to access capital either at all or on favorable terms. In addition, a recession, depression or other sustained adverse market event resulting from the spread of COVID-19 could materially and adversely affect our business and the value of our common stock.

If the current equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget.

Our employees, independent contractors, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of fraud or other illegal activity by our employees, independent contractors, consultants, commercial partners and vendors. Misconduct by such individuals could include intentional failures to comply with FDA or international regulations, provide accurate information to the FDA or foreign regulatory authorities, comply with manufacturing standards, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data timely, completely and accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Misconduct by third parties could also involve the improper use of information obtained in the course of clinical trials.

We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, disgorgement, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of momelotinib outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Even if approved, our product candidates may not achieve adequate market acceptance among physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

Even if our product candidates receive regulatory approval, they may not gain adequate market acceptance among physicians, patients, healthcare payors and others in the medical community. The degree of market acceptance of any of our approved product candidates will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in clinical trials compared to alternative treatments;
- the timing of market introduction of the product candidate as well as competitive products;
- the clinical indications for which the product candidate is approved;
- restrictions on the use of our product candidates, such as boxed warnings or contraindications in labeling, or a REMS, if any, which may not be required of alternative treatments and competitor products;
- the potential and perceived advantages of product candidates over alternative treatments;
- the cost of treatment in relation to alternative treatments;
- pricing and the availability of coverage and adequate reimbursement by third-party payors, including government authorities;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the effectiveness of sales and marketing efforts;
- unfavorable publicity relating to our products or product candidates or similar approved products or product candidates in development by third parties; and
- the approval of other new therapies for the same indications.

If any of our product candidates is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors and patients, we may not generate or derive sufficient revenue from that product candidate and our financial results could be negatively impacted.

We have never commercialized a product candidate before and may lack the necessary expertise, personnel and resources to successfully commercialize any products on our own or together with suitable collaborators.

We have never commercialized a product candidate. We may license certain rights with respect to our product candidates to collaborators, and, if so, we will rely on the assistance and guidance of those collaborators. For product candidates for which we retain commercialization rights and marketing approval, we will have to develop our own sales, marketing and supply organization or outsource these activities to a third party.

Factors that may affect our ability to commercialize our product candidates, if approved, on our own include recruiting and retaining adequate numbers of effective sales and marketing personnel, developing adequate educational and marketing programs to increase public acceptance of our approved product candidates, ensuring regulatory compliance of our company, employees and third parties under applicable healthcare laws, and other unforeseen costs associated with creating an independent sales and marketing organization. Developing a sales and marketing organization will be expensive and time-consuming and could delay the launch of our product candidates upon approval. We may not be able to build an effective sales and marketing organization. If we are unable to build our own distribution and marketing capabilities or to find suitable partners for the commercialization of our product candidates, we may not generate revenues from them or be able to reach or sustain profitability.

If the market opportunity for any product candidate that we develop is smaller than we believe, our revenue may be adversely affected, and our business may suffer.

We intend to initially focus our product candidate development on treatments for various oncology indications, including myelofibrosis. The addressable patient populations that may benefit from treatment with our product candidates, if approved, are based on our estimates. These estimates, which have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations and market research, may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these diseases. Any regulatory approval of our product candidates would be limited to the therapeutic indications examined in our clinical trials and as determined by the FDA, which would not permit us to market our products for any other therapeutic indications not expressly approved by the FDA. Additionally, the potentially addressable patient population for our product candidates may not ultimately be amenable to treatment with our product candidates. Even if we receive regulatory approval for any of our product candidates, such approval could be conditioned upon label restrictions that materially limit the addressable patient population. Our market opportunity may also be limited by future competitor treatments that enter the market. If any of our estimates prove to be inaccurate, the market opportunity for any product candidate that we or our strategic partners develop could be significantly diminished and have an adverse material impact on our business.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of momelotinib.

We face an inherent risk of product liability as a result of the testing of momelotinib and will face an even greater risk if we commercialize any products. For example, we may be sued if momelotinib causes or is perceived to cause injury or is found to be otherwise unsuitable during testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of momelotinib. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in, but are not limited to:

- decreased demand for momelotinib;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management’s time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize momelotinib; and
- a decline in our stock price.

We currently hold liability insurance coverage, but that coverage may not be adequate to cover any and all liabilities that we may incur. We would need to increase our insurance coverage when we begin the commercialization of momelotinib, if ever. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

A variety of risks associated with marketing our product candidates internationally may materially adversely affect our business.

We plan to eventually seek regulatory approval of our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements in foreign countries, such as the lack of pathways for accelerated drug approval, may result in foreign regulatory approvals taking longer and being more costly than obtaining approval in the United States;
- foreign regulatory authorities may disagree with the design, implementation or results of our clinical trials or our interpretation of data from nonclinical studies or clinical trials;
- approval policies or regulations of foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval;
- impact of the COVID-19 pandemic on our ability to produce our product candidates and conduct clinical trials in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with legal requirements applicable to privacy, data protection, information security and other matters;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes and government payors in foreign countries;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with international operations may materially adversely affect our ability to attain or maintain profitable operations.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be significantly limited, or entirely restricted.

As of December 31, 2020, we had gross U.S. federal net tax operating loss carryforwards of 54.8 million that are eligible for an indefinite carryforward, and gross state operating loss carryforwards of $52.4 million expiring in years ranging from 2022 to 2040. As of December 31, 2020, we also had U.S. net tax credit carryforwards of $4.6 million which begin to expire in 2039 and net tax credit carryforwards in a foreign jurisdiction of $0.5 million which begin to expire in 2038.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes, such as research tax credits, to offset its post-change income and taxes may be limited. In general, an "ownership change" generally occurs if there is a cumulative change in our ownership by "5% stockholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws.

We have experienced ownership changes in the past, including in 2017 and 2019, and may experience ownership changes in the future as a result of future transactions in our stock, some of which may be outside our control. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards, or other pre-change tax attributes, to offset U.S. federal and state taxable income and taxes may be subject to limitations. We may have exposure to greater than anticipated tax liabilities, which could adversely impact our operating results.

We are a U.S.-based multinational company subject to tax in certain U.S. and foreign tax jurisdictions. U.S. federal, state and local, as well as international tax laws and regulations are extremely complex and subject to varying interpretations. Although we believe that our tax estimates and tax positions are reasonable, there can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge. If we are unsuccessful in such a challenge, the relevant tax authorities may assess additional taxes, which could result in adjustments to, or impact the timing or amount of, taxable income, deductions or other tax allocations, which may adversely affect our results of operations and financial position.

Our quarterly operating results may fluctuate significantly, which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including, but not limited to:

- variations in the level of expense related to momelotinib or future development programs;
- results of preclinical studies and clinical trials, or the addition or termination of preclinical studies, clinical trials or funding support;
- the timing of the release of results from any preclinical studies and clinical trials;
- the timing and amount of milestone and royalty payments;
- changes in the competitive landscape or market opportunity for momelotinib;
- our execution of any new collaboration, licensing or similar arrangement, and the timing of payments we may make or receive under such existing or future arrangements or the termination or modification of any such existing or future arrangements;
- any intellectual property infringement lawsuit or opposition, interference or cancellation proceeding in which we may become involved;
- any securities or other litigation in which we may become involved;
- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures,
- strategic investments or changes in business strategy;

- the receipt of regulatory approval for momelotinib, and market acceptance and demand for momelotinib;
- regulatory developments affecting momelotinib or those of our competitors; and
- changes in general market and economic conditions, including global pandemics such as COVID-19.

If our quarterly operating results or expected results from development of momelotinib fall outside the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

Risks Related to Government Regulation

We may be unable to obtain U.S. or foreign regulatory approval of momelotinib, and, as a result, we may be unable to commercialize momelotinib. Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Momelotinib is, and any future product candidates that we may develop will be, subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, import, export, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing, distribution, import and export of drugs. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required to be successfully completed before a new drug can be marketed in the United States and in many foreign jurisdictions. Satisfaction of these and other regulatory requirements is costly, time-consuming, uncertain and subject to unanticipated delays. It is possible that none of the product candidates we may develop will obtain the regulatory approvals necessary for us or our collaborators to begin selling them.

As a company, we have very limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA or foreign regulatory authorities, and, as a company, we have no experience in obtaining approval of any product candidates. The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the initiation of clinical trials, depending upon the type, complexity and novelty of the product candidate. We may encounter delays or rejections during any stage of the regulatory review and approval process based upon the failure of clinical or laboratory data to demonstrate compliance with, or upon the failure of the product candidates to meet, the FDA's or foreign regulatory authorities' requirements for safety, efficacy and quality.

The standards that the FDA and foreign regulatory authorities use when regulating us are not always applied predictably or uniformly and can change. Because the product candidates we are developing or may develop may represent a new class of drug, the FDA and foreign regulatory authorities have not yet established any definitive policies, practices or guidelines in relation to these drugs. The lack of policies, practices or guidelines may hinder or slow review by the FDA or foreign regulatory authorities of any regulatory filings that we may submit. Moreover, the FDA or foreign regulatory authorities may respond to these submissions by defining requirements we may not have anticipated. Such responses could lead to significant delays in the development of momelotinib or any future product candidates.

Any analysis we perform of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA or foreign regulatory authority policy during the period of product development, clinical trials and regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulatory authority, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

In addition, the FDA and/or foreign regulatory authorities may delay, limit, or deny approval of a product candidate for many reasons, including, but not limited to:

- the FDA or foreign regulatory authorities may disagree with the design or implementation of our clinical trials, including our statistical plan;
- we may be unable to demonstrate to the satisfaction of the FDA or foreign regulatory authorities that a product candidate is safe and effective for any indication;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the results of our clinical trials may not demonstrate the safety or efficacy required by the FDA or foreign regulatory authorities for approval;
- we may be unable to demonstrate the integrity of the clinical trial data to the satisfaction of the FDA or foreign regulatory authorities;
- we may be unable to demonstrate the proper conduct of the clinical trial at all clinical trial sites, by our vendors, and by the Sponsor to the satisfaction of the FDA or foreign regulatory authorities;
- we may encounter difficulties coming to agreement with the FDA or foreign regulatory authorities on a pediatric investigation or study plan or may encounter difficulties meeting the terms of the plan, once agreed;
- the FDA or foreign regulatory authorities may find deficiencies in our manufacturing processes or facilities;
- the FDA or foreign regulatory authorities may lack resources or are delayed in conduct pre-approval inspections due to reasons related to COVID-19; and
- the FDA's or foreign regulatory authorities' approval policies or regulations may significantly change in a manner rendering our clinical data insufficient for approval.

Even if we comply with all of the regulatory requirements of the FDA and foreign regulatory authorities, we may not obtain regulatory approval for momelotinib. If we fail to obtain regulatory approval for momelotinib, we will have no commercialized products and correspondingly no revenue.

In addition, because there may be approved treatments for some of the diseases for which we may seek approval, in order to receive regulatory approval, we may need to demonstrate through clinical trials that the product candidates we develop to treat these diseases, if any, are not only safe and effective, but safer or more effective than existing products. Furthermore, in recent years, there has been increased public and political pressure on the FDA with respect to the approval process for new drugs, and the FDA's standards, especially regarding drug safety, appear to have become more stringent.

Any delay or failure in obtaining required approvals could have a material adverse effect on our ability to generate revenues from the particular product candidate for which we are seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which we may market the product or the labeling or other restrictions. In addition, the FDA has the authority to require a REMS plan as part of or after approval, which may impose further requirements or restrictions on the distribution or use of an approved product, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. These limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

If we or any collaborators, manufacturers or service providers fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions, which could affect our ability to develop, market and sell our products successfully and could harm our reputation and lead to reduced acceptance of our products by the market. These enforcement actions include, among others:

- adverse regulatory inspection findings;
- warning letters;
- voluntary or mandatory product recalls or public notification or medical product safety alerts to healthcare professionals;
- restrictions on, or prohibitions against, marketing our products;
- restrictions on, or prohibitions against, importation or exportation of our products;
- suspension of review or refusal to approve pending applications or supplements to approved applications;
- exclusion from participation in government-funded healthcare programs;
- exclusion from eligibility for the award of government contracts for our products;
- suspension or withdrawal of product approvals;
- product seizures;
- injunctions; and
- civil and criminal penalties and fines.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries and may include all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA does not ensure approval by regulatory authorities outside the United States and vice versa.

In Europe, the implementation of the Clinical Trials Regulation depends on confirmation of full functionality of the Clinical Trials Information System (CTIS) through an independent audit, which commenced in September 2020. The system is currently planned to go live in December 2021. The new clinical trial portal and database will be maintained by the EMA in collaboration with the European Commission and the European Union Member States. The objectives of the new regulation include consistent rules for conducting trials throughout the European Union, consistent data standards and adverse events listing, and consistent information on the authorization status. Information on the conduct and results of each clinical trial carried out in the European Union will be made publicly available.

In addition, a new pan-European clinical trial data information database has been created that will be complementary to the database established for pharmacovigilance (Regulation (EC) No 726/2004 with respect to centrally authorized medicinal products). In addition, Commission Implementing Regulation (EU) No 520/2012 outlines the practical implications for marketing authorization holders, national competent authorities, and the EMA. Also, Commission Delegated Regulation (EU) No 357/2014 on post-authorization efficacy studies specifies the situations in which such studies may be required. Post-authorization efficacy studies may be required where concerns relating to some aspects of efficacy of the medicinal product are identified and can be resolved only after the medicinal product has been marketed, or where the understanding of the disease, the clinical methodology or the use of the medicinal product under real-life conditions indicate that previous efficacy evaluations might have to be revised significantly.

Brexit is also expected to disrupt the operation of pre- and post-authorization clinical trial infrastructure. The rules around GMP and pharmacovigilance in the UK currently remain similar to the EU requirements. However, the Falsified Medicines Directive will not apply in Great Britain though it is likely that the UK will implement a procedure to minimise the risk of falsified medicines.

Uncertainty in the regulatory framework and future legislation can lead to disruption in the execution of international multi-center clinical trials, the monitoring of adverse events in through pharmacovigilance programs, the evaluation of the benefit-risk profiles of new medicinal products, and determination of marketing authorization across different jurisdictions. There could also be disruption to the supply and distribution as well as the import/export both of active pharmaceutical ingredients (API) and finished product. Such a disruption could create supply difficulties for ongoing clinical trials and may damage the integrity of the pharmacovigilance database for the safety of new products.

The cumulative effects of the disruption to the regulatory framework, uncertainty in future regulation, and changes to existing regulations may add considerably to the development lead time to marketing authorization and commercialization of products in the European Union and/or the United Kingdom and increase our costs. We cannot predict the impact of such changes and future regulation on our business or the results of our operations.

Even if we receive regulatory approval of any product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for any product candidates we may develop will require surveillance to monitor the safety and efficacy of the product candidate, and may require us to conduct post-approval clinical studies. The FDA may also require a REMS in order to approve momelotinib or any future product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a foreign regulatory authority approves momelotinib, the manufacturing processes, labeling, packaging, distribution, AE reporting, storage, advertising, promotion, import, export and recordkeeping for momelotinib will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval.

Moreover, if we obtain regulatory approval for momelotinib, we will only be permitted to market our products for the indication approved by FDA or foreign regulatory authority, and such approval may involve limitations on the indicated uses or promotional claims we may make for our products, or otherwise not permit labeling that sufficiently differentiates momelotinib from competitive products with comparable therapeutic profiles. For example, we will not be able to claim that our products have fewer side effects, or improve compliance or efficacy unless we can demonstrate those attributes to FDA or foreign regulatory authority in comparative clinical trials. Communications that occur prior to obtaining regulatory approval for momelotinib could also be considered promotional and thus may also be subject to certain FDA or foreign regulatory authority requirements.

Later discovery of previously unknown problems with momelotinib, including adverse effects of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of momelotinib, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- manufacturing delays and supply disruptions where regulatory inspections identify observations of noncompliance requiring remediation;
- revisions to the labeling, including limitation on approved uses or the addition of additional warnings, contraindications or other safety information, including boxed warnings;
- imposition of a REMS, which may include distribution or use restrictions;
- requirements to conduct additional post-market clinical trials to assess the safety of the product;
- fines, warning letters, or untitled letters;
- holds on clinical trials;

- refusal by the FDA or foreign regulatory authorities to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of momelotinib; and
- injunctions, the imposition of civil penalties or criminal prosecution.

The FDA's and foreign regulatory authorities' policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, and we may not achieve or sustain profitability.

Moreover, the FDA strictly regulates the promotional claims that may be made about drug products. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant civil, criminal and administrative penalties. The occurrence of any event or penalty described above may inhibit our ability to commercialize our product candidates and generate revenue and could require us to expend significant time and resources in response and could generate negative publicity.

A Fast Track designation by the FDA, even if granted for momelotinib or any future product candidates, may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that such product candidates will receive marketing approval.

If a drug is intended for the treatment of a serious or life-threatening condition and the drug demonstrates the potential to address unmet medical needs for this condition, the drug sponsor may apply for FDA Fast Track designation for a particular indication. Marketing applications filed by sponsors of products in Fast Track development may qualify for priority review under the policies and procedures offered by the FDA, but the Fast Track designation does not assure any such qualification or ultimate marketing approval by the FDA. We previously announced that the FDA had granted Fast Track designation to momelotinib for the treatment of patients with intermediate/high-risk myelofibrosis who have previously received a JAK inhibitor. Receipt of Fast Track designation may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures. In addition, the FDA may withdraw any Fast Track designation at any time if it believes that the designation is no longer supported by data from our clinical development program. We may seek Fast Track designation for any future product candidates, but there is no assurance that the FDA will grant this status to any future proposed product candidates.

If we or any of our independent contractors, consultants, collaborators, manufacturers, vendors or service providers fail to comply with healthcare and data privacy laws and regulations, we or they could be subject to enforcement actions, which could result in penalties and affect our ability to develop, market and sell momelotinib or any future product candidates and may harm our reputation.

We are or may in the future be subject to federal, state, and foreign healthcare and data privacy laws and regulations pertaining to, among other things, fraud and abuse, data protection and patients' rights. These laws and regulations include, but are not limited to:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual for a healthcare item or service, or the purchasing or ordering of an item or service, for which payment may be made under a federal healthcare program such as Medicare or Medicaid;
- the U.S. federal false claims and civil monetary penalties laws, including the federal civil False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting or causing to be presented, claims for payment by government funded programs such as Medicare or Medicaid that are false or fraudulent, and which may apply to us by virtue of statements and representations made to customers or third parties;

- the U.S. federal Health Insurance Portability and Accountability Act (HIPAA), which created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing or attempting to execute a scheme to defraud healthcare programs;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH), which imposes requirements on certain types of people and entities relating to the privacy, security, and transmission of individually identifiable protected health information (PHI), and requires notification to affected individuals and regulatory authorities of certain breaches of security of PHI;
- the federal Physician Payment Sunshine Act, which 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, to report annually to the Centers for Medicare & Medicaid Services information related to payments and other transfers of value to physicians, other healthcare providers and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members, which is published in a searchable form on an annual basis; effective January 1, 2022, we will also be required to report on transfers of value to physician assistants, nurse practitioners or clinical nurse specialists, certified registered nurse anesthetists, and anesthesiologist assistants, and certified nurse-midwives; and
- state laws comparable to each of the above federal laws, such as, for example, anti-kickback and false claims laws that may be broader in scope and also apply to commercial insurers and other non-federal payors, requirements for mandatory corporate regulatory compliance programs, and laws relating to patient data privacy and security. Other state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government; require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

In the European Union (EU), the General Data Protection Regulation (GDPR) was adopted in 2016 and took effect on May 25, 2018. The GDPR is intended to harmonize data protection requirements across the EU Member States by establishing new and expanded operational requirements for entities that process, or control personal data generated in the EU, including consent requirements for disclosing the way personal information will be used, information retention requirements, notification requirements in the event of a data breach, and other requirements. In addition, the GDPR imposes strict rules on the transfer of personal data out of the EU to the United States. These obligations may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other requirements or our practices. Recent developments have also created uncertainty regarding the rules around such data transfers.

A breach of the GDPR could result in regulatory investigations, reputational damage, orders to cease or change our processing of our data, enforcement notices, or assessment notices (for a compulsory audit). We may also face civil claims including representative actions and other class action type litigation (where individuals have suffered harm), potentially amounting to significant compensation or damages liabilities, as well as associated costs, diversion of internal resources, and reputational harm. Beginning in 2021, the UK will be a "third country" under the GDPR. We may, however, incur liabilities, expenses, costs, and other operational losses under GDPR and applicable EU Member States and the United Kingdom privacy laws in connection with any measures we take to comply with them. In particular, from January 2021, after the end of the Brexit transitional period, we could potentially be exposed to two parallel regimes, each with the power to impose fines up to the greater of either 4% of total global annual revenue, or €20 million (for the EU) or £17.5 million (for the United Kingdom).

On July 16, 2020, the Court of Justice of the EU (ECJ) invalidated the EU-U.S. Privacy Shield as a mechanism for managing personal data transfers between the EU and the U.S. and onward to other countries. While the ECJ upheld the adequacy of EU-specified standard contractual clauses (SCCs), a form of contract approved by the EU commission as an adequate data transfer mechanism, it made clear that reliance on them alone may not necessarily be sufficient in all circumstances and that their use must be assessed on a case-by-case basis taking into account the surveillance laws and right of individuals in the U.S and other onward countries. The ECJ went on to state that, if the competent supervisory authority in an EU country believes that the SCCs cannot be complied with in the recipient country and the required level of protection cannot be secured by other means, such supervisory authority is under an obligation to suspend or prohibit that transfer unless the data exporter has already done so itself. For example, German and Irish supervisory authorities have indicated that the SCCs alone provide inadequate protection for EU-U.S. data transfers.

We are currently certified under the EU-U.S. Privacy Shield and the Swiss-U.S. Privacy Shield with respect to our transfer of certain personal data from the EU to the U.S. however, we have evaluated and are in the process of updating the mechanisms we currently use to transfer personal data from the EU and the United Kingdom to the U.S., and any additional mechanisms that may be required to maintain adequate safeguards for personal data transfer. As a result, we may be unsuccessful in maintaining appropriate compliance mechanisms for our transfer and receipt of personal data from the EU or the United Kingdom and to the U.S. and may be at risk of experiencing reluctance or refusal of European or multi-national partners, clinical trial sites or other third parties with whom we do business and incurring potential regulatory penalties, which may have an adverse effect on our reputation and business.

As supervisory authorities continue to issue further guidance on personal data transfers, we could suffer additional costs, complaints, or regulatory investigations or fines, and if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

In the United States, state and federal lawmakers and regulatory authorities have increased their attention on the collection and use of personal information. In the United States, non-sensitive personal information generally may be used under current rules and regulations, subject to certain restrictions, so long as the person does not affirmatively "opt-out" of the collection or use of such data. If an "opt-in" model or additional required "opt-outs", were to be adopted in the United States, less data would be available, and the cost of data would be higher. For example, California recently enacted the CCPA, which became operative on January 1, 2020 and became enforceable by California Attorney General on July 1, 2020, along with related regulations which came into force on August 14, 2020.

The CCPA gives California residents new rights to access and require deletion of their personal information, opt out of certain personal information sharing, and receive detailed information about how their personal information is collected, used, and shared. Given that CCPA enforcement began on July 1, 2020, it remains unclear whether modifications will be made to this legislation or how it will be interpreted. Additionally, the CCPA has prompted a number of proposals for new federal and state-level privacy legislation. Further, in November 2020, California voters passed the California Privacy Rights Act (CPRA). The CPRA, which is expected to take effect on January 1, 2023 and to create obligations with respect to certain data relating to consumers as of January 1, 2022, significantly expands the CCPA, including by introducing additional obligations such as data minimization and storage limitations, granting additional rights to consumers, such as correction of personal information and additional opt-out rights, and creates a new entity, the California Privacy Protection Agency, to implement and enforce the law. The CCPA and CPRA present many unresolved compliance complexities. The CCPA and CPRA may increase our compliance costs and potential liability. In addition to the CCPA, numerous other states' legislatures are considering similar laws that will require ongoing compliance efforts and investment.

Additionally, if our operations are found to be in violation of any such health care and data privacy laws and regulations, we may be subject to penalties, including administrative, civil and criminal penalties, monetary damages, disgorgement, imprisonment, the curtailment or restructuring of our operations, loss of eligibility to obtain approvals from the FDA or foreign regulatory authorities, fees from regulators, fines, significant settlements or judgments resulting from the CCPA's private right of action, or exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, any of which could adversely impact our financial results. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation by a private party or governmental agency could cause us to incur significant legal expenses, adversely impact our reputation, and could divert our management's attention from the operation of our business, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

The insurance coverage and reimbursement status of newly approved products is uncertain. Any products we develop may become subject to unfavorable pricing regulations, third-party coverage and reimbursement practices or healthcare reform initiatives, thereby harming our business.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drugs vary widely from country to country. Many countries require approval of the sale price of a drug before it can be marketed. The pricing review period begins after marketing or product licensing approval is granted in most cases. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. Although we intend to monitor these regulations, our momelotinib program is currently in development and we will not be able to assess the impact of price regulations for a few years. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenues we are able to generate from the sale of the product in that country.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other third-party payors. In many jurisdictions, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. Obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. If we are not currently capturing the scientific and clinical data that will be required for reimbursement approval, we may be required to conduct additional trials, which may delay or suspend reimbursement approval. Additionally, in the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of momelotinib to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. In general, the prices of medicines under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for medicines, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

In the United States and markets in other countries, patients generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance. Even if we succeed in bringing one or more products to the market, these products may not be considered cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. Because our programs are still in clinical development, we are unable at this time to determine their cost effectiveness or the likely level or method of reimbursement. Increasingly, the third-party payors, such as government and private insurance plans, who reimburse patients or healthcare providers, are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed for pharmaceutical products. If the level of reimbursement provided for any products we develop is inadequate in light of our development and other costs, our return on investment could be adversely affected.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA), established the Medicare Part D program to provide a voluntary prescription drug benefit to patients with disabilities and seniors. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that will provide coverage of outpatient prescription drugs, such as momelotinib, if approved. Medicare Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee.

The Bipartisan Budget Act of 2018 also amended the ACA, effective January 1, 2019, by increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. In addition, CMS has published a final rule to give states greater flexibility, starting in 2020, in setting benchmarks for insurers in the individual and small group marketplaces, which may have the effect of relaxing the essential health benefits required under the ACA for plans sold through such marketplaces. The American Taxpayer Relief Act of 2012, or ATRA, among other things, reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. Other legislative changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and will remain in effect through 2030 with the exception of a temporary suspension implemented under various COVID-19 relief legislation from May 1, 2020 through March 31, 2021, unless additional Congressional action is taken.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. There has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, the Trump administration's budget for fiscal year 2021 includes allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. Additionally, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. On July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. The FDA also released a final rule in September 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, in November 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturer. It is these and future regulations that the Biden administration may take will affect our business.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical 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 health care authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for momelotinib or additional pricing pressures.

We may face difficulties from changes to current regulations and future legislation. Healthcare legislative measures aimed at reducing healthcare costs may have a material adverse effect on our business and results of operations.

The United States and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system that could prevent or delay marketing approval of our product candidates or any future product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell a product for which we obtain marketing approval. Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example:

- changes to our manufacturing arrangements;
- additions or modifications to product labeling;
- the recall or discontinuation of our products; or
- additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

Our revenue prospects could be affected by changes in healthcare spending and policy in the United States and abroad. We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability, the method of delivery or payment for healthcare products and services could negatively impact our business, operations and financial condition.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future, including revisions to the PPACA. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to obtain coverage and reimbursement approval for a product;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

We expect that the PPACA, as well as 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. Further, it is possible that additional governmental action is taken to address the COVID-19 pandemic. 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 product candidates. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for biotechnology products. We cannot be sure to what extent these and future legislative and regulatory efforts, whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

Disruptions at the FDA, the Securities and Exchange Commission and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire and retain key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved or commercialized in a timely manner or at all, or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the Securities and Exchange Commission, or the SEC, and other government agencies on which our operations may rely, including those that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, in recent years, including in 2018 and 2019, the U.S. government shut down several times and certain regulatory agencies, such as the FDA and the SEC, had to furlough critical employees and stop critical activities. Separately, in response to the COVID-19 pandemic, on March 10, 2020 the FDA announced its intention to postpone most inspections of foreign manufacturing facilities and products through April 2020. On March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities and provided guidance regarding the conduct of clinical trials. In May 2020, FDA announced that it will continue to postpone domestic and foreign routine surveillance inspections due to COVID-19. While the FDA indicated that it will consider alternative methods for inspections and could exercise discretion on a case-by-case basis to approve products based on a desk review, if a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns or delays could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Obtaining and maintaining regulatory approval for momelotinib or any future product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of any of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval for momelotinib or any future product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval for a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical studies conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. 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 products in certain countries. If we fail to comply with the regulatory requirements in international markets or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of momelotinib or any future product candidates will be harmed.

If we or our third-party manufacturers fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

Our research and development activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by ourselves and our third-party manufacturers. Our manufacturers are subject to federal, state and local laws and regulations in the United States and abroad governing laboratory procedures and the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe that our manufacturers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental, health and safety laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Although we maintain workers' compensation insurance to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

We are subject to certain U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations. We can face serious consequences for violations.

Among other matters, U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, which are collectively referred to as Trade Laws, prohibit companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors, and other partners from authorizing, promising, offering, providing, soliciting, or receiving directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of trade laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We also expect our non-U.S. activities to increase in time. We plan to engage third parties for clinical trials and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals and we can be held liable for the corrupt or other illegal activities of our personnel, agents, or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

The Tax Cuts and Jobs Act could increase our tax burden and adversely affect our business and financial condition.

In December 2017, the U.S. government enacted comprehensive tax legislation referred to as the Tax Cuts and Jobs Act (Tax Act) that includes significant changes to the taxation of business entities. These changes include, among others, (i) a permanent reduction to the corporate income tax rate, (ii) revisions to uses and limitations of net operating loss carryforwards (iii) a partial limitation on the deductibility of business interest expense, and (iv) a shift of the U.S. taxation of multinational corporations from a tax on worldwide income to a participation exemption system (along with certain rules designed to prevent erosion of the U.S. income tax base).

In addition, beginning in 2022, the tax legislation will require U.S. research and experimental expenditures to be capitalized and amortized ratably over a five-year period. Any such expenditures attributable to research conducted outside the U.S. must be capitalized and amortized over a 15-year period. Further, the Tax Act, among other things, reduces the orphan drug credit from 50% to 25% of qualifying expenditures. When and if we become profitable, this amortization of research and experimental expenditures and reduction in orphan drug tax credits may result in an increased federal income tax burden, as it may cause us to pay federal income taxes earlier under the revised tax law than under the prior law and, despite being partially off-set by a reduction in the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, may increase our total federal tax liability.

Risks Related to Our Intellectual Property

If we are not able to obtain and enforce patent protection for our technologies or momelotinib, development and commercialization of our product candidates may be adversely affected.

Our success depends in part on our ability to obtain and maintain patents and other forms of intellectual property rights, methods used to manufacture momelotinib and methods for treating patients using momelotinib, as well as our ability to preserve our trade secrets, to prevent third parties from infringing upon our proprietary rights and to operate without infringing upon the proprietary rights of others.

We and our future licensors and licensees may not be able to apply for or prosecute patents on certain aspects of momelotinib or our technologies at a reasonable cost in a timely fashion or at all. It is also possible that we or our current licensors, or any future licensors or licensees, will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Therefore, our patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, such as with respect to proper priority claims, inventorship, claim scope or patent term adjustments. If our current licensors, or any future licensors or licensees, are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised and we might not be able to prevent third parties from making, using, and selling competing products. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Moreover, our competitors may independently develop equivalent knowledge, methods, and know-how. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business, financial condition and operating results.

There is no guarantee that any of our pending patent applications will result in issued or granted patents, that any of our issued or granted patents will not later be found to be invalid or unenforceable or that any issued or granted patents will include claims that are sufficiently broad to cover momelotinib or our technologies or to provide meaningful protection from our competitors. Moreover, the patent position of oncology companies can be highly uncertain because it involves complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our current and future proprietary technology and momelotinib are covered by valid and enforceable patents or are effectively maintained as trade secrets. If third parties disclose or misappropriate our proprietary rights, it may materially and adversely impact our position in the market.

The U.S. Patent and Trademark Office (USPTO) and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case. The standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in oncology patents. Moreover, changes in either the patent laws or in the interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. As such, we do not know the degree of future protection that we will have on our proprietary products and technology. While we will endeavor to try to protect momelotinib with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time-consuming, expensive and sometimes unpredictable.

Further, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after it is filed (or 20 years after the filing date of the first non-provisional US patent application to which it claims priority). Various extensions may be available; however, the life of a patent, and the protection it affords, is limited. Without patent protection for momelotinib, we may be open to competition from generic versions of momelotinib. Further, the extensive period of time between patent filing and regulatory approval for a product candidate limits the time during which we can market a product candidate under patent protection, which may particularly affect the profitability of momelotinib.

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 protection for certain aspects of momelotinib and our technologies, we also consider trade secrets, including confidential and unpatented know-how important to the maintenance of our competitive position. We protect trade secrets and confidential and unpatented know-how, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants that obligate them to maintain confidentiality and assign their inventions to us.

Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts in the United States and certain foreign jurisdictions are less willing or unwilling to protect trade secrets. 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 from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect momelotinib.

Numerous recent changes to the patent laws and proposed changes to the rules of the USPTO may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the Leahy-Smith America Invents Act (AIA) enacted in 2011 involves significant changes in patent legislation. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a “first-to-file” system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. A third party that files a patent application in the USPTO after that date but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by the third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application.

Further, the Supreme Court has ruled on several patent cases in recent years, some of which cases either narrow the scope of patent protection available in certain circumstances or weaken the rights of patent owners in certain situations. These changes have led to increasing uncertainty with regard to the scope and value of our issued patents and to our ability to obtain patents in the future.

Among some of the other changes introduced by the AIA are changes that limit where a patentee may file a patent infringement suit and providing opportunities for third parties to challenge any issued patent in the USPTO. This applies to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action.

Depending on decisions by the U.S. Congress, the U.S. federal courts, the USPTO or similar authorities in foreign jurisdictions, the laws and regulations governing patents could change in unpredictable ways that may weaken our and our licensors' ability to obtain new patents or to enforce existing patents we and our licensors or partners may obtain in the future.

Once granted, patents may remain open to opposition, interference, re-examination, post-grant review, inter partes review, nullification derivation and opposition proceedings in court or before patent offices or similar proceedings for a given period after allowance or grant, during which time third parties can raise objections against such initial grant. In the course of such proceedings, which may continue for a protracted period of time, the patent owner may be compelled to limit the scope of the allowed or granted claims thus attacked, or may lose the allowed or granted claims altogether.

We or any future strategic partners may become subject to third-party claims or litigation alleging infringement of patents or other proprietary rights or seeking to invalidate patents or other proprietary rights.

We or any future strategic partners may be subject to third-party claims for infringement or misappropriation of patent or other proprietary rights that prevent us from developing and commercializing our products. If we, our licensors or any future strategic partners are found to infringe a third-party patent or other intellectual property rights, we could be required to pay substantial damages, potentially including treble damages and attorneys' fees, if we are found to have willfully infringed. In addition, we or any future strategic partners may choose to seek, or be required to seek, a license from a third party, which may not be available on acceptable terms, if at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. If we fail to obtain a required license, we may be unable to effectively market product candidates, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. Alternatively, we may need to redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. In addition, we may find it necessary to pursue claims or initiate lawsuits to protect or enforce our patent or other intellectual property rights. The cost to us in defending or initiating any litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation would divert our management's attention. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

We may be involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. If we were to initiate legal proceedings against a third party to enforce a patent covering one of our products or our technology, the defendant could counterclaim that our patent is 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, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one or more of our products or certain aspects of our platform technology. Such a loss of patent protection could have a material adverse impact on our business. Patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without legally infringing our patents or other intellectual property rights.

In addition, in an infringement proceeding, a court 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 patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

Interference proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation or interference proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

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. 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.

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

We have limited foreign intellectual property rights and may not be able to protect our intellectual property rights throughout the world.

We have limited intellectual property rights outside the United States. Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. 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 practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from 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 oncology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent 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 and 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 rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

If we fail to comply with our obligations under our purchase agreement with Gilead, we may be required to pay damages.

In connection with our acquisition of momelotinib from Gilead, we are required to make aggregate milestone payments of up to $190.0 million to Gilead upon the achievement of certain regulatory and commercial milestones, as well as low double-digit to high-teens percent tiered combined royalties based upon net sales and additional tiered milestone payments upon reaching certain sales milestones. If we breach any of these obligations, we may be required to indemnify the Seller, subject to certain limitations set forth in the momelotinib purchase.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other oncology companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

Risks Related to Ownership of Our Common Stock

The market price of our common stock has been and may continue to be volatile, and you may be unable to sell your shares at or above the price at which you purchased them.

The market price of our common stock has been and may continue to be subject to wide fluctuations. For example, we experienced a significant decrease in our stock price after we announced the suspension of the development of our former lead product candidate PNT2258 and the DNAi platform in June 2016 and after we announced the preliminary clinical data from our two Phase 1/2 studies of SRA737 in June 2019. In addition, the trading prices for our common stock and other biopharmaceutical companies have been highly volatile as a result of the COVID-19 pandemic. Factors affecting the market price of our common stock include, but are not limited to:

- the success of existing or new competitive products;
- the timing and results of development activities related to our product candidates including momelotinib;
- our capital requirements, financings and the related dilution;
- the commencement, enrollment or results of future clinical trials we may conduct, or changes in the development status of our product candidates including momelotinib;
- any delay in our regulatory filings for our product candidates including momelotinib and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings;
- any disputes with Gilead regarding our acquisition of momelotinib and assumption of the related clinical trials;
- our ability to acquire or in-license new product candidates to grow our pipeline;
- adverse results or delays in preclinical studies or clinical trials;
- changes in laws or regulations applicable to our product candidates including momelotinib, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations if needed, or to out-license our product candidates including momelotinib or technologies on favorable terms or at all;

- our failure to commercialize our product candidates including momelotinib;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates including momelotinib;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- the size and growth of our initial target markets;
- our ability to successfully treat additional types of cancers or at different stages;
- actual or anticipated variations in quarterly operating results;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or immunotherapy in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- the low trading volume and limited public market for our common stock;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- actions instituted by activist shareholders or others;
- general political and economic conditions, including global pandemics such as COVID-19;
- fiscal and monetary stimulus measures to counteract the impact of the COVID-19 pandemic; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and oncology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. Securities class action litigation is often instituted against companies following periods of volatility in the market price of a company's securities. For example, we have previously vigorously defended purported securities class action lawsuits against us and certain of our executive officers. This type of litigation could result in substantial costs and a diversion of management's attention and resources, which could harm our business, operating results or financial condition.

Market volatility arising from the COVID-19 pandemic may lead to increased shareholder activism if we experience a market valuation that they believe are not reflective of their intrinsic value. Activist campaigns that contest or conflict with our strategic direction or seek changes in the composition of our board of directors could have an adverse effect on our operating results and financial condition.

The issuance or sale of shares of our common stock, or rights to acquire shares of our common stock could depress the trading price of our common stock.

We may conduct future offerings of our common stock, preferred stock or other securities that are convertible into or exercisable for our common stock to finance our operations or fund acquisitions, or for other purposes. For example, in November 2019, we conducted a public equity offering where we raised net proceeds of approximately $97.7 million in a substantially dilutive transaction to our pre-existing investors. In August 2020, we filed a prospectus supplement pursuant to which it can issue and sell an aggregate of up to $20.0 million of our common stock from time to time in ATM offerings. During the year ended December 31, 2020, we sold 732,752 shares under the ATM program for net proceeds of $8.9 million, net of commissions and offering expenses. In January 2021, we sold an additional 450,000 shares under the ATM program for proceeds of $7.1 million, net of commissions. In addition, in February 2021, we filed a prospectus supplement pursuant to which we can issue and sell an aggregate of up to $30.0 million of our common stock from time to time in ATM offerings. If we issue additional shares of our common stock or rights to acquire shares of our common stock, if any of our existing stockholders sells a substantial amount of our common stock, or if the market perceives that such issuances or sales may occur, then the trading price of our common stock, and, accordingly, the trading price of our common stock may significantly decrease. In addition, our issuance of additional shares of common stock, including upon exercise of our outstanding warrants, will dilute the ownership interests of our existing common stockholders.

We incur significantly increased costs and devote substantial management time as a result of operating as a public company.

As a public company, we incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the stock exchange upon which our common stock is listed and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations increase our legal and financial compliance costs and make some activities more time-consuming and costly. However, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404, we are required to furnish a report by our management on our internal control over financial reporting. However, while we remain a non-accelerated filer, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we are engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404.

In addition, since it has been more than five years since we completed our initial public offering, we are no longer an “emerging growth company” and may no longer take advantage of certain exemptions from various reporting requirements that are applicable to other public companies. This increase in reporting requirements will further increase our compliance burden. As a “smaller reporting company,” however, we are still able to take advantage of certain exemptions available to both emerging growth companies and smaller reporting companies.

We have in the past and may in the future identify material weaknesses or significant deficiencies in internal control over financial reporting. Under standards established by the Public Company Accounting Oversight Board, a deficiency in internal control over financial reporting exists when the design or operation of a control does not allow management or personnel, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A material weakness is a deficiency or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected and corrected on a timely basis. We cannot assure you that there will not be additional material weaknesses or significant deficiencies that our independent registered public accounting firm or we will identify. If we identify such issues or if we are unable to produce accurate and timely financial statements, our stock price may be adversely affected and we may be unable to maintain compliance with the Nasdaq Stock Market listing requirements.

Provisions in our restated certificate of incorporation and restated bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our restated certificate of incorporation and restated bylaws contain provisions that could depress the market price of our common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- establish a classified board of directors so that not all members of our board are elected at one time;
- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed “for cause” and only with the approval of two-thirds of our stockholders;
- require super-majority voting to amend some provisions in our restated certificate of incorporation and restated bylaws;
- authorize the issuance of “blank check” preferred stock that our board could use to implement a stockholder rights plan (also known as a “poison pill”);
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit cumulative voting; and
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

In addition, Section 203 of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company. Section 203 imposes certain restrictions on mergers, business combinations and other transactions between us and holders of 15% or more of our common stock.

Section 22 of the Securities Act of 1933, as amended (the Securities Act), creates concurrent jurisdiction for federal and state courts over all claims brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. In April 2020, we amended and restated our restated bylaws to provide that the federal district courts of the United States of America will, to the fullest extent permitted by law, be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act (a Federal Forum Provision). Our decision to adopt a Federal Forum Provision followed a decision by the Supreme Court of the State of Delaware holding that such provisions are facially valid under Delaware law. While there can be no assurance that federal or state courts will follow the holding of the Delaware Supreme Court or determine that the Federal Forum Provision should be enforced in a particular case, application of the Federal Forum Provision means that suits brought by our stockholders to enforce any duty or liability created by the Securities Act must be brought in federal court and cannot be brought in state court.

Section 27 of the Exchange Act creates exclusive federal jurisdiction over all claims brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. In addition, neither the exclusive forum provision nor the Federal Forum Provision applies to suits brought to enforce any duty or liability created by the Exchange Act. Accordingly, actions by our stockholders to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder must be brought in federal court.

Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder.

Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to our exclusive forum provisions, including the Federal Forum Provision. These provisions may limit a stockholders' ability to bring a claim in a judicial forum of their choosing for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees.

Certain of our 5% stockholders hold a majority of the voting power and may be able to exert significant control over matters subject to stockholder approval.

As of January 31, 2021, our executive officers, directors and 5% stockholders beneficially owned a majority of our outstanding voting shares. Further, four of our current directors are affiliates of certain 5% stockholders. Therefore, these holders may have the ability to influence us through their ownership position and through representation on our board of directors as they hold half of the board seats. These holders may be able to determine all matters requiring stockholder approval. For example, these holders may be able to control the vote with respect to elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock.

General Risks

We may be unable to adequately protect our information technology systems from cyberattacks, which could result in the disclosure of confidential information, damage our reputation, and subject us to significant financial and legal exposure.

Cyberattacks upon systems, across industries, are increasing in their frequency, persistence, and sophistication, and are being conducted by sophisticated, well-funded, and organized groups and individuals. These cyberattacks may occur on our systems or those of our third-party providers or partners. Additionally, certain threats are designed to remain dormant or undetectable until launched against a target and we may not be able to implement adequate preventative measures. Such cyberattacks could include wrongful conduct by hostile foreign governments, industrial espionage, the deployment of harmful malware, ransomware attacks, denial-of-service, and/or other means to threaten data confidentiality, integrity and availability. Those engaging in attacks may implement social engineering techniques to induce our employees or contractors to disclose passwords or other sensitive information or take other actions to gain improper access to data or systems. Further, security breaches and other security incidents may result from employee or contractor malfeasance, error or negligence or those of service providers on which we rely. A successful cyberattack could cause serious negative consequences for us, including, without limitation, the disruption of operations, the loss or misappropriation of confidential business information and trade secrets, unauthorized access to or other compromise of personal information or other sensitive information, and the disclosure of corporate strategic plans. We have in the past experienced, and may in the future experience, a compromise of our data or information technology systems that results in one or more third parties obtaining access to confidential information about our company or sensitive information about individuals, such as employees or clinical trial participants. Although we devote resources to protect our information technology systems and continue to assess and, as necessitated, enhance our cybersecurity protection, we realize that cyberattacks are a threat, and there can be no assurance that our efforts will prevent information security breaches that would result in business, legal or reputational harm to us, or would have a material adverse effect on our operating results and financial condition. We also may be required to incur significant costs in an effort to detect and prevent security breaches and other security-related incidents. Confidential information obtained by third parties in connection with past or future attacks could be used in ways that adversely affect our company or our stockholders. The majority of our workforce works remotely rather than in our offices, and we may be more susceptible to security breaches and incidents as a result. Further, we engage third-party service providers to store and otherwise process sensitive and personal information, including our CROs. Our CROs and other service providers face substantial risks of security breaches and incidents. Our service providers may be more susceptible to security breaches and other security incidents while social distancing measures restrict the ability of their employees to work at offices to combat the COVID-19 pandemic. Depending on the nature of any information compromised, in the event of a data breach or other unauthorized access to our sensitive information, we may also have obligations to notify affected individuals and regulators about the incident, and we may be required or find it appropriate to provide some form of remedy, such as a subscription to credit monitoring services, pay significant fines to one or more regulators, or pay compensation in connection with a class-action settlement (including under the new private right of action under the California Consumer Privacy Act of 2018 (the CCPA)). Laws and regulations relating to cybersecurity and notification and other obligations in connection with security breaches and incidents continue to evolve and may be inconsistent from one jurisdiction to another. Complying with these obligations and otherwise responding to any security breach or incident could cause us to incur substantial costs and could increase negative publicity surrounding any incident that compromises, or is perceived to have compromised, sensitive data.

While our insurance policies include liability coverage for certain of these matters, subject to applicable deductibles, our insurance coverage might not be adequate for data handling or data security liabilities actually incurred, such insurance may not continue to be available to us in the future on economically reasonable terms, or at all, and insurers may deny us coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, including our financial condition, operating results, and reputation.

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

Our operations, and those of our CROs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemic, such as the COVID-19 pandemic, and other natural or man-made disasters or business interruptions, for which we may not have insurance coverage. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. In particular, the potential effects on our business due to the COVID-19 pandemic may be significant and could materially harm our business, operating results and financial condition. We rely on third-party manufacturers to produce and process momelotinib. Our ability to obtain supplies of momelotinib could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption. Our corporate headquarters are located in San Mateo, California, which is near a major earthquake fault. Our operations and financial condition could suffer in the event of a major earthquake or other natural disaster near any of our locations.

We face risks related to securities litigation that could result in significant legal expenses and settlement or damage awards.

We have in the past and may in the future become subject to claims and litigation alleging violations of the securities laws or other related claims, which could harm our business and require us to incur significant costs. Any future litigation may require significant attention from management and could result in significant legal expenses, settlement costs or damage awards that could have a material impact on our financial position, results of operations and cash flows.

Changes in interpretation or application of generally accepted accounting principles may adversely affect our operating results.

We prepare our financial statements to conform to United States Generally Accepted Accounting Principles. These principles are subject to interpretation by the Financial Accounting Standards Board, American Institute of Certified Public Accountants, the Public Company Accounting Oversight Board, the Securities and Exchange Commission and various other regulatory or accounting bodies. A change in interpretations of, or our application of, these principles can have a significant effect on our reported results and may even affect our reporting of transactions completed before a change is announced. Additionally, as we are required to adopt new accounting standards, our methods of accounting for certain items may change, which could cause our results of operations to fluctuate from period to period.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the securities or industry analysts who publish research about us downgrade our stock or publish inaccurate or unfavorable evaluations of our company or our stock, the price of our stock could decline. If one or more of these analysts cease coverage of our company, our stock may lose visibility in the market, which in turn could cause our stock price to decline.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters are located in San Mateo, California, where we occupy approximately 3,800 square feet of office space under a lease that expires in approximately March 2025. We believe that this facility is sufficient to meet our current needs.

Item 3. Legal Proceedings.

From time to time, we may become subject to other legal proceedings, claims and litigation arising in the ordinary course of business. In addition, we may receive letters alleging infringement of patents or other intellectual property rights. We are not currently a party to any other material legal proceedings, nor are we aware of any pending or threatened litigation that, in the opinion of our management, would have a material adverse effect on our business, operating results, cash flows or financial conditions should such litigation be resolved unfavorably. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

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.

Our common stock is listed on the Nasdaq Global Market. Our stock trades under the symbol "SRRA". As of March 8, 2021, there were 56 holders 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.

Dividend Policy

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. We do not intend to pay cash dividends on our common stock for the foreseeable future.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Securities Authorized for Issuance under Equity Compensation Plans

The information called for by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders. See Part III, Item 12 "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

Item 6. Selected Consolidated Financial Data.

The following tables set forth certain selected consolidated financial data. You should read the selected consolidated financial data below in conjunction with Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results that may be expected in the future.

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(in thousands except share and per share data)				
Consolidated Statements of Operations Data:					
Collaboration revenue	$ 300	$ —	$ —	$ —	$ —
Operating expenses (1):					
Research and development	45,118	53,249	41,078	30,157	33,895
General and administrative	20,123	13,743	14,339	12,462	14,180
Total operating expenses	65,241	66,992	55,417	42,619	48,075
Loss from operations	(64,941)	(66,992)	(55,417)	(42,619)	(48,075)
Other income (expense), net:					
Changes in fair value of warrant liabilities	(16,240)	(20,926)	—	—	—
Other income (expense), net	421	(517)	1,780	760	351
Total other income (expense), net	(15,819)	(21,443)	1,780	760	351
Loss before provision for (benefit from) income taxes, net	(80,760)	(88,435)	(53,637)	(41,859)	(47,724)
Provision for (benefit from) income taxes, net	142	(160)	(302)	156	143
Net loss	(80,902)	(88,275)	(53,335)	(42,015)	(47,867)
Net loss per share, basic and diluted (2)	$ (7.70)	$ (30.30)	$ (30.16)	$ (33.68)	$ (63.32)
Weighted-average shares used in computing net loss per share, basic and diluted (2)	10,506,739	2,913,487	1,768,480	1,247,482	756,006

(1) Includes the following stock-based compensation:

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(in thousands)				
Stock-based compensation:					
Research and development	$ 4,316	$ 3,873	$ 4,499	$ 3,966	$ 3,635
General and administrative	5,154	1,822	2,297	1,939	1,875
Total stock-based compensation	$ 9,470	$ 5,695	$ 6,796	$ 5,905	$ 5,510

(2) Basic and diluted net loss per share is computed based on the weighted-average number of shares of common stock outstanding during each period. In 2019, basic and diluted net loss per share is computed based on the weighted-average number of common stock and preferred stock with characteristics of common stock outstanding during the period.

	December 31,				
	2020	2019	2018	2017	2016
	(in thousands)				
Consolidated Balance Sheets Data:					
Cash and cash equivalents	$ 104,055	$ 147,528	$ 106,046	$ 100,348	$ 109,007
Working capital (1)	97,117	85,288	98,653	94,253	102,625
Total assets	107,487	151,328	109,469	102,198	110,973
Operating lease liability	175	374	—	—	—
Term loan	—	—	4,891	—	—
Total liabilities (1)	9,528	64,983	14,990	7,472	7,725
Accumulated deficit	(846,589)	(765,687)	(677,412)	(624,077)	(582,054)
Total stockholders' equity	97,959	86,345	94,479	94,726	103,248

(1) At December 31, 2019, warrant liabilities of $45,935 and a securities issuance obligation of $10,485 were included in current liabilities. See Note 8 and Note 11 to the financial statements under Item 8 of this Form 10-K.

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

The following discussion contains management's discussion and analysis of our financial condition and results of operations and should be read together with the historical consolidated financial statements and the notes thereto included in Part II, Item 8 "Consolidated Financial Statements and Supplementary Data." This discussion and other parts of this Annual Report contain forward-looking statements that reflect our plans, objectives, expectations, intentions and beliefs and involve numerous risks and uncertainties, including but not limited to those described in the "Risk Factors" section of this Annual Report. Actual results may differ materially from those contained in any forward-looking statements. You should carefully read "Special Note Regarding Forward-Looking Statements" and Part I, Item 1A, "Risk Factors."

Overview

We are a late-stage biopharmaceutical company on a quest to deliver targeted therapies that treat rare forms of cancer. Our main focus is the development of momelotinib, an investigational agent for the treatment of myelofibrosis. Currently, momelotinib is in a global Phase 3 clinical trial for patients with myelofibrosis, called the MOMENTUM study, that if successful will be registration enabling. At its completion, approximately 1,000 myelofibrosis patients will have received momelotinib, and several of our clinical trial patients remain on treatment more than 10 years later.

In the third quarter of 2018, we acquired momelotinib from Gilead Sciences, Inc. (Gilead), which had completed several late-stage trials of the drug candidate in patients with myelofibrosis. Myelofibrosis is characterized by progressive anemia and thrombocytopenia and currently approved JAK inhibitor therapies, ruxolitinib and fedratinib, can induce or further exacerbate this myelosuppression, limiting their use in first line treatment and resulting in a population of second line patients who are no longer able to benefit from such therapies. Momelotinib is a novel, orally-bioavailable JAK1 (Janus kinase 1), JAK2 (Janus kinase 2) and ACVR1 (Activin A receptor type 1) inhibitor with a differentiated mechanism of action, enabling it to potentially address all three hallmarks of disease in myelofibrosis: anemia of inflammation, constitutional symptoms and enlarged spleen.

In December 2018, we reported new data for momelotinib collated from the two completed SIMPLIFY Phase 3 clinical trials and a translational biology study in transfusion dependent patients with myelofibrosis. Data from the latter study were also concurrently presented in a poster at the 60th American Society of Hematology Annual Meeting & Exposition in San Diego, California. We reported aggregated transfusion independence responses from more than 150 intermediate and high-risk transfusion dependent myelofibrosis patients demonstrating robust and consistent response rates within and across the clinical studies. More than 44% of these patients became transfusion free for at least 12 weeks and nearly 50% were transfusion independent for at least 8 weeks.

In the second quarter of 2019, we announced that we had obtained regulatory clarity with the U.S. Food and Drug Administration (FDA) concerning the design of a Phase 3 clinical trial intended to support potential registration of momelotinib. We also announced that the FDA had granted Fast Track designation to momelotinib for the treatment of patients with intermediate/high-risk myelofibrosis who have previously received a JAK inhibitor.

Following receipt of this clarity, we announced the design of the MOMENTUM Phase 3 clinical trial in myelofibrosis, which we subsequently launched in the fourth quarter of 2019. MOMENTUM is a randomized double-blind trial designed to enroll 180 myelofibrosis patients who are symptomatic and anemic and have been treated previously with a JAK inhibitor. The Primary Endpoint of the trial is the Total Symptom Score (TSS) response rate of momelotinib compared to danazol at Week 24 (99% power; p-value < 0.05). Danazol has been selected as an appropriate treatment comparator given its use to ameliorate anemia in myelofibrosis patients, as recommended by National Comprehensive Cancer Network (NCCN) and European Society for Medical Oncology (ESMO) guidelines. Patients are being randomized 2:1 to receive either momelotinib or danazol. After 24 weeks of treatment, patients on danazol are being allowed to crossover to receive momelotinib.

During the fourth quarter of 2019, we reported new analyses of red blood cell (RBC) transfusion data from SIMPLIFY-1, a double-blind Phase 3 trial of momelotinib head-to-head versus ruxolitinib in JAK inhibitor-naïve patients, which were presented in a poster by Dr. Ruben Mesa, Director of the Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center, at the 61st American Society of Hematology (ASH) Annual Meeting in Orlando, Florida. These analyses demonstrated that patients who received momelotinib had significantly decreased transfusion requirements compared to those treated with ruxolitinib, including an odds ratio of nearly 10 for receiving no transfusions during the 24-week study period. Transfusion dependency and moderate to severe anemia are critical negative prognostic factors for overall survival in myelofibrosis.

During the second quarter of 2020, at the 25th European Hematology Association (EHA) Virtual Congress, we reported favorable Long-Term Safety and Dose Intensity data for momelotinib from more than 550 patients across the two previously conducted SIMPLIFY Phase 3 studies and their subsequent ongoing extended treatment periods. More than 90 SIMPLIFY-1 and SIMPLIFY-2 patients continued to receive momelotinib for 3.5 years or longer. These data were presented in posters by Professor Claire Harrison, Guy's and St. Thomas' NHS Foundation Trust, London, United Kingdom, and Dr. Vikas Gupta, Princess Margaret Cancer Centre, Toronto, Canada. The key findings were:

- Consistent with prior data, and reflecting momelotinib's differentiated pharmacological profile, our new long-term safety analyses continue to show a rapid and sustained increase in hemoglobin levels during momelotinib therapy, in contrast to the significant decrease in hemoglobin for patients receiving ruxolitinib. Patients treated with momelotinib also experienced significantly higher mean platelet counts compared to those receiving ruxolitinib. Importantly, patients who switched from ruxolitinib to momelotinib also achieved a sustained improvement in hemoglobin in both studies, and platelets in SIMPLIFY-1. In addition to an absence of significant rates of high-grade hematological toxicities, long-term tolerability was favorable with no new safety signals or evidence of cumulative toxicity.
- Momelotinib's safety profile and durable benefits facilitated sustained dose intensity across the continuum of JAK inhibitor-naïve and previously JAK inhibitor treated myelofibrosis patients. While the starting doses for ruxolitinib were often attenuated due to low platelets, further reductions in dose intensity were also commonly required for ruxolitinib. In contrast, momelotinib was initiated at full dose for all subjects enrolled to the SIMPLIFY studies and high dose intensity was maintained in the majority over extended durations. Patients who switched from ruxolitinib to momelotinib saw an immediate and sustained improvement in dose intensity.
- The data from the two interrelated presentations suggest that the favorable effect on hemoglobin and platelets allows momelotinib to be initiated at full dose intensity and maintained for the majority of patients at full dose intensity over extended durations while retaining a favorable long-term safety profile. Notably, some patients continued to receive momelotinib 10 years after enrolling in the initial momelotinib Phase 2 trials while 90 Phase 3 SIMPLIFY patients who enrolled into those trials 4 to 6 years ago continued to receive momelotinib. We believe the dosing and safety profile may contribute to momelotinib’s potential ability to provide sustained benefits over extended durations.

Most recently, we released updated analyses from the previously completed Phase 3 SIMPLIFY studies of momelotinib at the American Society of Hematology Annual Meeting in December 2020, including overall survival data as well as efficacy data for momelotinib compared to ruxolitinib in patients with low platelet levels. The overall survival data received an oral presentation by Dr. Srdan Verstovsek of the University of Texas MD Anderson Cancer Center in Houston, Texas, USA; efficacy data by platelet strata were presented in a poster by Dr. Jean-Jacques Kiladjian, Saint Louis Hospital, Paris, France. Key findings were:

- Robust overall survival was observed in both JAK inhibitor-naïve and previously ruxolitinib treated patients. Sustained transfusion independence was observed with extended momelotinib treatment, and the median duration of TI in the momelotinib arm has not been reached after more than three years of follow up. We believe these data, in combination with previously reported safety data, further highlight where momelotinib may be a viable treatment option for myelofibrosis patients including those who are not ideal candidates for currently approved therapies.

- The retrospective analysis of the two Phase 3 SIMPLIFY studies demonstrate that the relative benefit-risk profile of momelotinib and ruxolitinib is influenced by baseline platelet count. In SIMPLIFY-1, momelotinib achieved substantially higher Transfusion Independence (TI) and splenic response rates and had a similar symptomatic response relative to ruxolitinib in patients whose baseline platelet count was <150 x 10^9L. For patients whose platelet count was 150 – 300 x 10^9/L, momelotinib achieved a higher TI response rate and generally similar splenic and symptom response rates. In patients with platelet counts >300 x 10^9/L, ruxolitinib achieved higher splenic and symptom response rates than momelotinib, and the TI rate remained higher with momelotinib. These updated analyses complement previous findings that demonstrate the ability to initiate and maintain near-maximal momelotinib dose intensity regardless of baseline platelet count, suggesting that this durable dosing contributes to its efficacy profile.

During 2020, we continued to operationalize the MOMENTUM trial on a global basis, and we anticipate closing screening in the first half of 2021 and remain on track to complete enrollment in mid-2021. Top-line data are currently anticipated in the first half of 2022 and we anticipate filing for regulatory approval of momelotinib in the second half of 2022. Due to the recent global outbreak of COVID-19, our clinical trials have been and may continue to be affected, and we are likely to experience delays in anticipated timelines and milestones, which will be difficult to predict until we have more visibility on the duration and impact of the COVID-19 pandemic and the potential institution of additional public health orders. We have experienced and may continue to experience some delays in planned site initiations and activations and may experience future delays in overall enrollment.

We believe that our current resources will be sufficient to execute on our development strategy for momelotinib into the second half of 2022, subject to the potential impact of COVID-19. We are also starting to explore non-dilutive options that could provide additional capital to support our North American commercialization strategy.

Our portfolio also includes SRA737, a selective, orally bioavailable small molecule inhibitor of Checkpoint kinase 1 (Chk1), an emerging target for the treatment of cancer which has a key role in the DNA Damage Response (DDR). In November 2020, we entered into an amendment to the License Agreement with CRT Pioneer Fund (CPF) to allow for the potential future clinical development of SRA737.

We wholly own momelotinib, subject to future milestone payments and royalties, and retain the global commercialization rights to SRA737.

Since inception, we have devoted substantially all of our resources to research and development activities, including the clinical development of momelotinib and SRA737 as well as SRA141 and PNT2258, our former product candidates, and to provide general and administrative support for our operations. We have never generated product revenue and have incurred significant net losses since inception. Our net losses were $80.9 million, $88.3 million and $53.3 million for the year ended December 31, 2020, 2019 and 2018, respectively. As of December 31, 2020, we had an accumulated deficit of $846.6 million, of which approximately $428.0 million pertained to the revaluation and conversion of redeemable convertible preferred stock upon our initial public offering in July 2015, $37.2 million related to changes in fair value of our Series A and Series B warrant liabilities until their reclassification to equity in the first quarter of 2020, and $12.0 million pertained to a securities issuance obligation settled during the first quarter of 2020.

The extent of the impact of COVID-19 on our operational and financial performance will depend on certain developments, including the duration and spread of the outbreak, impact on our clinical studies, employee or industry events, and effect on our suppliers and manufacturers, all of which are uncertain and cannot be predicted. The COVID-19 pandemic and its adverse effects have become more prevalent in the locations where we, our CROs, suppliers or third-party business partners conduct business and as a result, we have begun to experience more pronounced disruptions in our operations. We may experience constrained supply of momelotinib or comparator drug required for our ongoing Phase 3 trial, or, with respect to our clinical trials, delays in enrollment, site initiation, participant dosing, distribution of clinical trial materials, study monitoring and data analysis that could materially adversely impact our business, results of operations and overall financial performance in future periods. Specifically, we may experience impact from changes in how we and companies worldwide conduct business due to the COVID-19 pandemic, including but not limited to restrictions on travel and in-person meetings, prioritization of hospital resources toward pandemic effort, delays in review by the FDA and comparable foreign regulatory agencies, and disruptions in our supply chain for momelotinib. Any such delays to our planned MOMENTUM timeline could also

impact the use and sufficiency of our existing cash reserves, and we may be required to raise additional capital earlier than we had previously planned. We may be unable to raise additional capital if and when needed, which may result in further delays or suspension of our development plans. As of the filing date of this Annual Report on Form 10-K, the extent to which COVID-19 may impact our financial condition, results of operations or guidance is uncertain. The effect of the COVID-19 pandemic will not be fully reflected in our results of operations and overall financial performance until future periods. See the section entitled “Risk Factors” included elsewhere in this report for further discussion of the possible impact of the COVID-19 pandemic on our business.

We have funded our operations to date primarily from the issuance and sale of our common stock and convertible voting preferred stock and accompanying warrants through public offerings (including At-The-Market (ATM) equity offerings), and our convertible and redeemable convertible preferred stock in private financings and, to a lesser extent, through exercises of our preferred stock warrants in private financings. As of December 31, 2020, we had cash and cash equivalents of $104.1 million.

Components of Statements of Operations

Collaboration Revenue

Collaboration revenue consists of upfront license fees recognized under a collaboration agreement with Carna Biosciences, Inc.

Operating Expenses

Research and Development

Research and development expenses consist primarily of the following:

- fees, milestone payments or other expenses incurred in connection with license and asset purchase agreements and their related amendments;
- personnel-related costs, which include salaries, benefits, stock-based compensation, recruitment fees and travel costs;
- costs associated with research and preclinical studies, clinical trials, regulatory activities and manufacturing activities to support clinical activities;
- fees paid to external service providers that conduct certain research and development, clinical and manufacturing activities on our behalf; and
- facility-related costs, which include direct and allocated expenses for rent and maintenance of facilities, depreciation and amortization expenses and other supplies.

The largest recurring component of our total operating expenses has historically been our investment in research and development activities, including the development of momelotinib. We expect our research and development expenses will increase over the next few years as we advance momelotinib, potentially including combination studies as the field of myelofibrosis evolves, achieve regulatory milestones that trigger payments due under our Asset Purchase Agreement with Gilead, pursue regulatory approval of momelotinib in the United States and other jurisdictions, expand our portfolio of product candidates and prepare for potential commercialization, which will require a significant investment in areas related to contract manufacturing and inventory buildup.

The process of conducting clinical trials necessary to obtain regulatory approval is costly and time consuming. We may never succeed in achieving marketing approval for our lead product candidate, momelotinib. The probability of success of our product candidates may be affected by numerous factors, including clinical data, regulatory developments, competition, manufacturing capability and commercial viability. As a result, 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 of momelotinib.

General and Administrative

General and administrative expenses consist of personnel-related costs, facility-related costs, business insurance, allocated expenses and professional fees for services, including legal, pre-commercialization activities, patent prosecution and maintenance, human resources, audit and accounting services. Personnel-related costs consist of salaries, benefits, stock-based compensation, recruitment fees, severance costs and travel costs.

We expect to incur additional expenses associated with supporting our growing research and development activities, preparing for potential commercialization, continuing to operate as a public company and other administration and professional services.

Other Income (Expense), net

Changes in Fair Value of Warrant Liabilities

Our common stock warrants issued in connection with our November 2019 financing were classified as liabilities on our consolidated balance sheets and, as such, were re-measured to fair value until January 2020, when they were no longer considered derivative instruments. Changes in fair value, which were directly attributable to changes in the fair value of the underlying stock and discount for lack of marketability, were recorded as an expense in the consolidated statement of operations.

Other Income (Expense), net

Other income (expense), net primarily consists of interest earned on our cash and cash equivalents and foreign currency exchange gains and losses related to transactions and monetary asset and liability balances denominated in currencies other than the U.S. dollar. Foreign currency exchange gains and losses may fluctuate in the future due to changes in foreign currency exchange rates. In 2019, other income (expense), net also included interest expense associated with our term loan, including final payment and prepayment fees and the full non-cash amortization of debt issuance costs, until its repayment and offering expenses incurred pertaining to the issuance of warrants.

Provision for (Benefit from) Income Taxes, net

Provision for (benefit from) income taxes, net consists of federal and state income taxes in the United States, income tax benefit resulting from research and development tax credits in Canada, income taxes in Canada and Australia, as well as deferred income taxes reflecting the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, and changes in related valuation allowance.

We did not record a provision for U.S. federal income taxes for the year ended December 31, 2020. Our income tax provision relates to income taxes in Canada and Australia and our tax benefit relates to research and development tax credits in Canada. Our net U.S. deferred tax assets continue to be offset by a full valuation allowance.

Results of Operations

A discussion regarding our financial condition and results of operations for the year ended December 31, 2019 compared to the year ended December 31, 2018 is included in Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 3, 2020.

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

	Year Ended December 31,		Change	
	2020	2019	$	%
	(in thousands, except percentages)			
Collaboration revenue	$ 300	$ —	$ 300	100%
Operating expenses:				
Research and development	45,118	53,249	(8,131)	(15%)
General and administrative	20,123	13,743	6,380	46%
Total operating expenses	65,241	66,992	(1,751)	(3%)
Loss from operations	(64,941)	(66,992)	2,051	(3%)
Other income (expense), net:				
Changes in fair value of warrant liabilities	(16,240)	(20,926)	4,686	(22%)
Other income (expense), net	421	(517)	938	(181%)
Total other income (expense), net	(15,819)	(21,443)	5,624	(26%)
Loss before provision for (benefit from) income taxes, net	(80,760)	(88,435)	7,675	(9%)
Provision for (benefit from) income taxes, net	142	(160)	302	(189%)
Net loss	$ (80,902)	$ (88,275)	$ 7,373	(8%)

Collaboration Revenue

Collaboration revenue of $0.3 million was recognized during the year ended December 31, 2020 pursuant to the upfront fee received from a collaboration agreement (see Note 8 in the Notes to Consolidated Financial Statements).

Research and Development

Research and development expenses decreased $8.1 million, from $53.2 million in 2019 to $45.1 million in 2020. The decrease was primarily due to a non-cash charge of $10.5 million that was recognized during the year ended December 31, 2019, pertaining to an obligation to issue common stock and a warrant to Gilead in consideration for meaningfully reduced royalty rates and elimination of a milestone payment, partially offset by a $1.5 million non-cash charge during the year ended December 31, 2020 to recognize the change in fair value of the securities until their issuance in January 2020. Also contributing to the decrease was a reduction of $7.6 million in clinical trial, third-party manufacturing, and research and preclinical costs for SRA737 and a $0.9 million decrease in personnel-related and allocated overhead costs for the year ended December 31, 2020. These decreased costs were offset by a $9.4 million increase in clinical trial and development costs related to momelotinib for the year ended December 31, 2020.

General and Administrative

General and administrative expenses increased $6.4 million, from $13.7 million in 2019 to $20.1 million in 2020. The increase was attributable to a $4.9 million increase in personnel-related and allocated overhead costs, including a $3.4 million increase in non-cash stock-based compensation and $1.0 million of severance charges that were primarily related to the resignation of an executive, and an increase of $1.5 million in professional fees primarily relating to pre-commercial costs for momelotinib for the year ended December 31, 2020.

Changes in Fair Value of Warrant Liabilities

The changes in the fair value of our warrant liabilities were directly attributable to the change in the fair value of the underlying stock and discount for lack of marketability until such time the warrants were no longer considered derivative instruments.

Other Income (Expense), net

Other income (expense), net increased $0.9 million, from $0.5 million of other expense, net in 2019 to $0.4 million of other income, net in 2020. The change was primarily attributable to offering expenses pertaining to the issuance of warrants of $1.3 million and interest expense incurred on the term loan of $0.9 million incurred during the year ended December 31, 2019. These charges were not incurred in 2020. This change was offset by a $1.2 million decrease in interest income, due to a lower interest rates, and a $0.1 million increase in foreign exchange loss for the year ended December 31, 2020.

Provision for (Benefit from) Income Taxes, net

Net provision for income taxes of $0.1 million in 2020 and net benefit from income taxes of $0.2 million in 2019 represented foreign income taxes.

Liquidity and Capital Resources

Capital Resources

Since our inception, we have never generated product revenue and have incurred significant net losses. We have funded our operations to date primarily from the issuance and sale of our common stock and convertible voting preferred stock and accompanying warrants through public offerings (including ATM equity offerings), our convertible and redeemable convertible preferred stock in private financings and, to a lesser extent, through exercises of our preferred stock warrants issued in private financings. Our net losses for the year ended December 31, 2020 and 2019 were $80.9 million and $88.3 million, respectively. As of December 31, 2020, we had an accumulated deficit of $846.6 million, of which approximately $428.0 million pertained to the revaluation and conversion of redeemable convertible preferred stock upon our initial public offering in July 2015, $37.2 million related to changes in fair value of our Series A and Series B warrant liabilities until their reclassification to equity, and $12.0 million pertained to a securities issuance obligation settled in the first quarter of 2020. Our principal sources of liquidity as of December 31, 2020 were cash and cash equivalents of $104.1 million.

In November 2019, we completed an underwritten public offering of an aggregate of (i) 103,000 shares of Series A Preferred Stock, that all converted into 7,803,273 shares of common stock in January 2020, (ii) Series A warrants to purchase up to an aggregate of 7,802,241 shares of our common stock at an exercise price equal to $13.20, and (iii) Series B warrants to purchase up to an aggregate of 2,574,727 shares of common stock at an exercise price equal to $13.20. Each share of Series A Preferred Stock and the accompanying Series A and Series B warrants were issued at a combined price to the public of $1,000. The aggregate net proceeds received by us from the offering were $97.7 million, net of underwriting discounts and commissions and offering expenses. The Series A warrants contain a cash and/or cashless exercise provision and the Series B warrants may only be exercised by paying the exercise price in cash.

In August 2020, we entered into an open market sales agreement, pursuant to which we can issue and sell an aggregate of up to $20.0 million of our common stock from time to time in ATM offerings. During the year ended December 31, 2020, we sold 732,752 shares under the ATM program for proceeds of $8.9 million, net of commissions and offering expenses. In January 2021, we sold an additional 450,000 shares under the ATM program for proceeds of $7.1 million, net of commissions. In addition, in February 2021, we filed a prospectus supplement pursuant to which we can issue and sell an aggregate of up to $30.0 million of our common stock from time to time in ATM offerings.

We expect to incur significant expenses and increasing operating losses for the foreseeable future. We anticipate that our expenses will increase substantially as we:

- invest to further develop momelotinib, potentially including combination studies as the field of myelofibrosis evolves;
- hire additional clinical, regulatory, scientific, drug development and management personnel, as well as personnel to support any future commercialization efforts;

- invest in scaling our manufacturing capacity to support development and our global commercialization strategy;
- seek regulatory and marketing approvals for any product candidates that we may develop;
- achieve regulatory milestones that trigger payments due under our Asset Purchase Agreement with Gilead;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any drugs for which we may obtain marketing approval;
- acquire or in-license additional product candidates and technologies;
- develop additional product candidates;
- defend against potential lawsuits or other legal issues;
- maintain, expand and protect our intellectual property portfolio; and
- add operational, financial and management information systems and personnel related to commercialization and to continue to operate as a public company.

To fund our operating plans, we will need to raise additional capital. Our existing cash and cash equivalents will not be sufficient for us to complete development and prepare for commercializing momelotinib. Accordingly, we will continue to require substantial additional capital to continue our clinical development and potential commercialization activities; however, we believe that our existing cash and cash equivalents will be sufficient to fund our current operating plans into the second half of 2022, subject to the potential impact of COVID-19. In addition, Series B warrants, if fully exercised, would provide approximately $34.0 million in proceeds to us. We cannot assure you that the Series B warrants will be exercised, or that we will ever be profitable or generate positive cash flow from operating activities. However, our forecast for the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary materially. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our preclinical and clinical development efforts, including any potential impacts of the COVID-19 pandemic on our clinical development efforts, costs related to momelotinib commercialization efforts, costs related to potentially develop momelotinib in combination studies or costs to develop additional product candidates.

We plan to continue to fund our operating plans' needs through equity financings or other arrangements, such as strategic partnerships and alliances or licensing arrangements. To the extent that we raise additional capital through future equity financings, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing common stockholders. If we raise additional funds through the issuance of debt securities, these securities could contain covenants that would restrict our operations. If we raise additional funds through strategic partnerships and alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or momelotinib or grant licenses on terms unfavorable to us. There can be no assurance that such additional financing, if available, can be obtained on terms acceptable to us. If we are unable to obtain such additional financing, we would need to reevaluate our future operating plans. We are exploring options to support the potential continued development of SRA737 in the future. There can be no assurance that we will successfully obtain the funding or support necessary to advance SRA737 or obtain such funding or support on commercially reasonable terms.

Cash Flows

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

	Year Ended December 31,	
	2020	2019
	(in thousands)	
Cash used in operating activities	$ (52,367)	$ (51,183)
Cash used in investing activities	(12)	(39)
Cash provided by financing activities	8,901	92,738
Effect of foreign exchange rate changes on cash, cash equivalents and restricted cash	5	(34)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ (43,473)	$ 41,482

Cash Flows from Operating Activities

In 2020, cash used in operating activities of $52.4 million was attributable to a net loss of $80.9 million, partially offset by $27.7 million in non-cash and other adjustments and a net change of $0.8 million in our net operating assets and liabilities. The non-cash charges consisted primarily of a $16.2 million change in fair value of our warrant liabilities, a $1.5 million non-cash charge relating to the securities issuable to Gilead in connection with the amendment to the Asset Purchase Agreement, and $9.5 million of non-cash stock-based compensation. The change in net operating assets and liabilities was primarily attributable to an increase in our accounts payable of $1.2 million, partially offset by a decrease in our accrued, other and operating lease liabilities of $0.4 million.

In 2019, cash used in operating activities of $51.2 million was attributable to a net loss of $88.3 million and a net change of $2.0 million in our net operating assets and liabilities, partially offset by $39.1 million in non-cash and other adjustments. The non-cash and other adjustments consisted primarily of a $20.9 million change in fair value of our warrant liabilities, a $10.5 million non-cash expense relating to the securities issuable to Gilead in connection with the amendment to the Asset Purchase Agreement, $5.7 million of non-cash stock-based compensation, and a $1.7 million reclassification of cash flows, pertaining to the issuance of warrants and repayment of debt, to financing activities. The change in net operating assets and liabilities was primarily attributable to a decrease in our accrued and other liabilities and operating lease liabilities.

Cash Flows from Investing Activities

Cash used in investing activities for each of December 31, 2020 and 2019 was primarily attributable to the purchase of property and equipment.

Cash Flows from Financing Activities

In 2020, cash provided by financing activities of $8.9 million consisted of net proceeds (gross proceeds of $9.3 million) from the sale of 732,752 shares under the ATM program.

In 2019, cash provided by financing activities was $92.7 million, attributable to net proceeds of $97.7 million received from our November 2019 financing and $0.4 million of proceeds received from the exercise of options to purchase common stock, partially offset by a $5.4 million payment to settle our term loan and related repayment obligations.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of December 31, 2020, which represent material expected or contractually committed future obligations.

	Payments Due By Period				
	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years
	(in thousands)				
Purchase commitments(1)	$ 22,267	$ 12,979	$ 9,262	$ 26	$ —
Operating lease obligations(2)	1,203	296	849	58	—
Total contractual obligations	$ 23,470	$ 13,275	$ 10,111	$ 84	$ —

(1) Reflects payments we are required to make pursuant to clinical trial and manufacturing agreements.

(2) Reflects payments we are required to make under operating lease agreements. Minimum lease payments have not been reduced by base rent of $0.4 million due in the future under sublease agreement. Taxes and other operating costs payable to the landlord and recoverable from the subtenant are not included in the amounts disclosed. (See Note 6 to the financial statements under Item 8 of this Form 10-K.)

Under the terms of the agreements with Gilead and CRT Pioneer Fund LP (CPF), we will be required to pay future milestones if certain developmental, regulatory and commercial milestones are achieved. Future milestones for which we cannot reliably estimate the timing have been excluded from the table above.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Research and Development Expenses

As part of the process of preparing financial statements, we are required to estimate and accrue expenses, a significant portion of which are research and development expenses. Costs for certain research and development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and our clinical sites. This process involves the following:

- reviewing quotations and contracts, identifying services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost;
- estimating and accruing expenses in our financial statements as of each balance sheet date based on facts and circumstances known to us at the time; and
- periodically confirming the accuracy of our estimates with selected service providers and making adjustments, if necessary.

Estimated research and development expenses that we accrue include clinical trial costs under arrangements with third parties, such as contract research organizations (CROs), manufacturing costs under agreements with contract manufacturing organizations (CMOs), external research and development expenses incurred under arrangement with third parties and consultants, and license fees for technology that has not reached technological feasibility and does not have an alternative future use.

We base our expense accruals related to clinical trials on patient enrollment and our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions that conduct and manage clinical trials on our behalf. The financial terms of these agreements vary for each contract and may result in uneven payment flows. Payments under some of these contracts depend on several factors, such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates. For service contracts entered into that include a nonrefundable prepayment for service, the upfront payment is deferred and recognized in the statement of operations as the services are rendered.

Contingent milestone payment obligations due to third parties under license and asset purchase agreements are expensed when the milestones are considered probable of occurring. To the extent that an obligation is to be settled by future issuance of securities, the fair value of the instruments is recorded in research and development expense until the securities are issued.

To date, we have not experienced significant changes in our estimates of accrued research and development expenses after a reporting period. However, due to the nature of estimates, we cannot assure you that we will not make changes to our estimates in the future as we become aware of additional information about the status or conduct of our clinical trials and other research activities.

Stock-Based Compensation

Stock-based compensation costs related to stock options granted to employees are measured at the date of grant based on the estimated fair value of the award. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. For stock-based awards that vest subject to the satisfaction of a service requirement, the grant date fair value of the awards is recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards. For stock-based awards subject to the satisfaction of a service requirement and performance component, the fair value of the award, which is measured on the date of grant, is recognized over the requisite service period as achievement of the performance objective becomes probable. The fair value of any options issued to non-employees is recorded as expense over the vesting period, which is generally the service period.

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

Expected Term—The expected term represents the period that stock-based awards are expected to be outstanding. As our historical share option exercise is limited due to a lack of sufficient data points, and does not provide a reasonable basis upon which to estimate an expected term, we estimate the expected term by using the midpoint between the weighted-average vesting term and the contractual expiration period of the stock-based award.

Expected Volatility—The expected volatility is derived from a weighted volatility using both the trading history for our common stock and the historical stock volatilities of peer public companies within our industry that are considered to be comparable to our business over a period equivalent to the expected term of the stock-based awards.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the stock-based awards' expected term.

Expected Dividend Rate—The expected dividend is zero as we have not paid nor anticipate paying any dividends on our common stock in the foreseeable future.

Forfeiture Rate—We account for forfeitures when they occur.

We will continue to use judgment in evaluating the expected volatility and expected terms utilized for our stock-based compensation calculations on a prospective basis.

Warrant Liabilities

Warrants for the purchase of shares of our common stock issued in connection with our November 2019 financing were classified as derivative liabilities on our consolidated balance sheets at their fair value on the date of issuance. At the end of each reporting period, changes in estimated fair value during the period were recognized as a component of other income (expense), net in our consolidated statement of operations. We revalued the warrant liabilities until they ceased to be derivative instruments, at which time they were reclassified to additional paid-in capital at their fair value.

We estimated the fair value of these liabilities using assumptions that were based on the individual characteristics of the warrants on the valuation dates. We used the Black-Scholes option-pricing model and the fair value of the underlying stock to determine the fair value of these liabilities. The valuation model was based on inputs as of the valuation dates, including the estimated volatility of our stock, the remaining contractual term of the warrants and the risk-free interest rates. An estimated non-marketable discount was also applied if applicable.

Securities Issuance Obligation

The obligation to issue shares of our common stock and a warrant to purchase the same number of shares of common stock pursuant to the amendment to the Asset Purchase Agreement with Gilead was classified as a liability on our consolidated balance sheet at their fair values on the date such obligations arose. At the end of each reporting period, changes in estimated fair values during the period were recognized as research and development expense on our consolidated statement of operations. We adjusted the fair values of the obligations until the securities issuance obligation was settled, at which time the liabilities were reclassified to common stock and additional paid-in capital at their fair values.

We estimated the fair values of these obligations using assumptions that were based on the individual characteristics of the securities to be issued. We used the fair value of the underlying stock and estimated non-marketable discount to determine the common stock issuance obligation, and the Black-Scholes option-pricing model and the fair value of the underlying stock to determine the fair value of the warrant issuance obligation. The valuation model was based on inputs as of the valuation dates, including the estimated volatility of our stock, the remaining contractual term of the warrants and the risk-free interest rates. An estimated non-marketable discount was also applied if applicable.

Off-Balance Sheet Arrangements

As of December 31, 2020, we did not have any off-balance sheet financing arrangements or any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities.

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 include interest rate sensitivities and foreign currency risk.

Interest Rate Sensitivity

We had cash and cash equivalents of $104.1 million as of December 31, 2020, which consisted primarily of bank deposits and money market funds. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. While the instruments in our portfolio are of short-term nature and a sudden change in market interest rates would not be expected to have a material impact, a zero-rate environment for an extended period of time could adversely affect our results of operations. We do not believe that our cash or cash equivalents have significant risk of default or illiquidity.

Foreign Currency Risk

Our consolidated results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. A substantial majority of our expenses are denominated in U.S. Dollars, with the remainder in Canadian Dollars, British Pounds and Australian Dollars. Our consolidated results of operations and cash flow are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. To date, we have not entered into any hedging arrangements with respect to foreign currency risk or other derivative instruments. The effect of a hypothetical 10% change in foreign currency exchanges rates applicable to our business would not have a material impact on our operating loss.

Item 8. Consolidated Financial Statements and Supplementary Data.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Sierra Oncology, Inc.:
San Mateo, California

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sierra Oncology Inc. and subsidiaries (the "Company") as of December 31, 2020 and 2019, the related consolidated statements of operations and comprehensive loss, shareholders' equity, 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 "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of 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 accounting principles generally accepted in the United States of America.

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 Public Company Accounting Oversight Board (United States) (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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

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 Accounting Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accrued Liabilities and Prepaid Expenses – Management’s Estimates of Accrued and Prepaid Research and Development Costs Associated with Clinical Trials - Refer to Notes 2 and 5 to the Financial Statements

Critical Accounting Matter Description

The Company recognizes research and development costs for clinical trials based on an evaluation of the progress to completion of specific tasks using information and data provided by contract research organizations (CROs) and other third parties. Depending on the timing of payments to providers of research and development services, the Company recognizes prepaid expenses or accrued expenses related to these costs. These prepaid or accrued expenses are based on management’s estimates of the work performed under service agreements and milestones achieved.

We identified accrued and prepaid research and development costs related to clinical trials as a critical audit matter because of the judgments necessary for management to estimate the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of actual cost. The volume and complexity of the service agreements required a high degree of auditor judgment and an increased extent of effort when performing audit procedures to audit management's estimates of services performed and costs incurred and evaluating the results of those procedures.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to clinical trial accrued and prepaid expenses include the following, among others:

- We evaluated publicly available information (such as press releases and investor presentations) and board of directors' materials regarding the status of clinical trial activities.
- We made selections of specific amounts recognized as research and development expense as well as those recognized as accrued and prepaid expenses to evaluate management's estimates of the services performed and costs incurred and performed the following procedures:
    - Obtained and read the related service agreements, amendments thereto, purchase orders, invoices, or other supporting documentation (such as communications between the Company and CROs).
    - Performed corroborating inquiries with Company management and clinical operations personnel.
    - Evaluated management's judgments compared to the evidence obtained.

/s/ Deloitte & Touche LLP

Grand Rapids, Michigan
March 11, 2021

We have served as the Company's auditor since 2014.

SIERRA ONCOLOGY, INC.

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

	December 31, 2020	December 31, 2019
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 104,055	$ 147,528
Prepaid expenses and other current assets	2,415	2,369
Total current assets	106,470	149,897
Property and equipment, net	52	113
Operating lease right-of-use asset	318	589
Other assets	647	729
TOTAL ASSETS	$ 107,487	$ 151,328
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accrued and other liabilities	$ 7,148	$ 7,170
Accounts payable	2,205	1,019
Warrant liabilities	—	45,935
Securities issuance obligation	—	10,485
Total current liabilities	9,353	64,609
Operating lease liability	175	374
TOTAL LIABILITIES	9,528	64,983
Commitments and Contingencies (Note 8)		
STOCKHOLDERS' EQUITY:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized as of December 31, 2020 and December 31, 2019; nil shares issued and outstanding as of December 31, 2020 and 103,000 shares of Series A convertible voting preferred stock issued and outstanding as of December 31, 2019	—	1
Common stock, $0.001 par value; 500,000,000 shares authorized as of December 31, 2020 and December 31, 2019; 11,128,484 and 1,867,176 shares issued and outstanding as of December 31, 2020 and 2019	11	74
Additional paid-in capital	944,537	851,957
Accumulated deficit	(846,589)	(765,687)
TOTAL STOCKHOLDERS' EQUITY	97,959	86,345
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 107,487	$ 151,328

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

SIERRA ONCOLOGY, INC.

Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	Year Ended December 31,		
	2020	**2019**	**2018**
Collaboration revenue	$ 300	$ —	$ —
Operating expenses:			
Research and development	45,118	53,249	41,078
General and administrative	20,123	13,743	14,339
Total operating expenses	65,241	66,992	55,417
Loss from operations	(64,941)	(66,992)	(55,417)
Other income (expense), net:			
Changes in fair value of warrant liabilities	(16,240)	(20,926)	—
Other income (expense), net	421	(517)	1,780
Total other income (expense), net	(15,819)	(21,443)	1,780
Loss before provision for (benefit from) income taxes, net	(80,760)	(88,435)	(53,637)
Provision for (benefit from) income taxes, net	142	(160)	(302)
Net loss and comprehensive loss	$ (80,902)	$ (88,275)	$ (53,335)
Net loss per common share, basic and diluted	$ (7.70)	$ (30.30)	$ (30.16)
Weighted-average shares used in computing net loss per common share, basic and diluted	10,506,739	2,913,487	1,768,480

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

SIERRA ONCOLOGY, INC.
Consolidated Statements of Stockholders' Equity
(in thousands, except share data)

	Series A Convertible Voting Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount			
Balance—December 31, 2017	—	$ —	1,309,856	$ 52	$ 718,751	$ (624,077)	$ 94,726
Issuance of common stock for exercise of stock options	—	—	3,014	—	180	—	180
Stock-based compensation	—	—	—	—	6,796	—	6,796
Issuance of common stock, net of offering costs of $3.2 million	—	—	546,250	22	45,974	—	45,996
Issuance of common stock warrant	—	—	—	—	116	—	116
Net loss	—	—	—	—	—	(53,335)	(53,335)
Balance—December 31, 2018	—	—	1,859,120	74	771,817	(677,412)	94,479
Issuance of common stock for exercise of stock options	—	—	8,056	—	445	—	445
Stock-based compensation	—	—	—	—	5,695	—	5,695
Issuance of convertible voting preferred stock, net of offering costs of $4.0 million	103,000	1	—	—	74,000	—	74,001
Net loss	—	—	—	—	—	(88,275)	(88,275)
Balance—December 31, 2019	103,000	1	1,867,176	74	851,957	(765,687)	86,345
Conversion of Series A convertible voting preferred stock to common stock	(103,000)	(1)	7,803,273	8	(7)	—	—
Reclassification of warrant liabilities to equity	—	—	—	—	62,175	—	62,175
Issuance of common stock in connection with an amendment to the asset purchase agreement	—	—	725,283	1	8,781	—	8,782
Issuance of warrant in connection with an amendment to the asset purchase agreement	—	—	—	—	3,188	—	3,188
Reverse stock split adjustment	—	—	—	(73)	73	—	—
Stock-based compensation	—	—	—	—	9,470	—	9,470
Issuance of common stock from an At-The-Market equity offering, net of offering costs of $0.4 million	—	—	732,752	1	8,900	—	8,901
Net loss	—	—	—	—	—	(80,902)	(80,902)
Balance—December 31, 2020	—	$ —	11,128,484	$ 11	$ 944,537	$ (846,589)	$ 97,959

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

SIERRA ONCOLOGY, INC.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (80,902)	$ (88,275)	$ (53,335)
Adjustments to reconcile net loss to net cash used in operating activities:			
Changes in fair value of warrant liabilities	16,240	20,926	—
Securities issuance obligation	1,485	10,485	—
Stock-based compensation	9,470	5,695	6,796
Depreciation and amortization	238	83	111
Asset impairment	106	—	—
Other	201	161	(68)
Warrant issuance costs	—	1,279	—
Term loan repayment fee	—	438	—
Changes in operating assets and liabilities:			
Prepaid expenses and other assets	(33)	336	(1,341)
Accrued, other and operating lease liabilities	(366)	(2,034)	2,770
Accounts payable	1,194	(277)	(48)
Net cash used in operating activities	(52,367)	(51,183)	(45,115)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchase of property and equipment	(12)	(39)	(118)
Net cash used in investing activities	(12)	(39)	(118)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of common stock from At-The-Market equity offering, net of offering costs	8,901	—	—
Proceeds from public offering, net of offering costs	—	97,731	—
Proceeds of term loan and repayment fee	—	(5,438)	—
Proceeds from exercise of common stock options	—	445	180
Proceeds from issuance of common stock upon follow-on offering, net of offering costs	—	—	45,996
Proceeds from issuance of term loan, net of issuance costs	—	—	4,955
Net cash provided by financing activities	8,901	92,738	51,131
Effect of foreign exchange rate changes on cash, cash equivalents and restricted cash	5	(34)	(88)
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	(43,473)	41,482	5,810
CASH, CASH EQUIVALENTS AND RESTRICTED CASH — Beginning of period	147,828	106,346	100,536
CASH, CASH EQUIVALENTS AND RESTRICTED CASH — End of period	$ 104,355	$ 147,828	$ 106,346
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for (refund of) income taxes, net	$ 28	$ (69)	$ 15
Cash paid for interest	$ —	$ 336	$ 87
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING INFORMATION:			
Issuance of common stock and common stock warrant in connection with an amendment to the asset purchase agreement	$ 11,970	$ —	$ —
Reclassification of warrant liabilities to equity	$ 62,175	$ —	$ —
Unpaid deferred financing costs in accrued and other liabilities	$ 10	$ —	$ —
Right-of-use asset obtained in exchange for operating lease obligation	$ —	$ 771	$ —
Issuance costs of convertible voting preferred stock and warrants included in accrued and other liabilities	$ —	$ 268	$ —
Issuance of common stock warrant	$ —	$ —	$ 116

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

1. The Company and Basis of Presentation

Organization and Description of Business

Sierra Oncology, Inc. (together with its subsidiaries, collectively referred to as the "Company"), a Delaware corporation, is a late-stage biopharmaceutical company on a quest to deliver targeted therapies that treat rare forms of cancer. The Company's main focus is the development of momelotinib, an investigational agent for the treatment of myelofibrosis. Momelotinib is a selective and orally-bioavailable JAK1 (Janus kinase 1), JAK2 (Janus kinase 2) and ACVR1 (Activin A receptor type 1) inhibitor with a differentiated mechanism of action that enables it to potentially address all three key manifestations of myelofibrosis: anemia of inflammation, constitutional symptoms and enlarged spleen. Currently, momelotinib is in a global Phase 3 clinical trial for patients with myelofibrosis, called the MOMENTUM study, that if successful will be registration enabling. At its completion, approximately 1,000 myelofibrosis patients will have received momelotinib, and several of our clinical trial patients remain on treatment more than 10 years later.

The Company's portfolio also includes SRA737, a selective, orally bioavailable small molecule inhibitor of Checkpoint kinase 1 (Chk1), an emerging target for the treatment of cancer which has a key role in the DNA Damage Response (DDR).

The Company's primary activities since inception have been conducting research and development activities, conducting preclinical and clinical testing, recruiting personnel, performing business and financial planning, identifying and evaluating additional drug candidates for potential in-licensing or acquisition, and raising capital to support development activities.

The Company has not generated any product revenue related to its primary business purpose to date, nor has it generated any net income, and is subject to a number of risks and uncertainties, which include dependence on key individuals, the need to identify and successfully develop commercially viable products, the need to obtain regulatory approval for its products and commercialize them, and the need to obtain adequate additional financing to fund the development of momelotinib.

As of December 31, 2020, the Company had $104.1 million of cash and cash equivalents. The Company believes that its balance of cash and cash equivalents as of the date of the issuance of these consolidated financial statements is sufficient to fund its current operational plan for at least the next twelve months though it may pursue raising additional capital through equity financings or other arrangements.

Follow-On Offerings

On March 6, 2018, the Company completed an underwritten public offering of an aggregate of 546,250 shares of common stock, including the underwriters' exercise of their overallotment option, at a price to the public of $90.00 per share. The aggregate net proceeds received by the Company from the offering were $46.0 million, net of underwriting discounts and commissions and offering expenses of $3.2 million.

On November 13, 2019, the Company completed an underwritten public offering of an aggregate of (i) 103,000 shares of Series A convertible voting preferred stock (Series A Preferred Stock), (ii) Series A warrants to purchase up to an aggregate of 7,802,241 shares of common stock at an exercise price equal to $13.20, and (iii) Series B warrants to purchase up to an aggregate of 2,574,727 shares of common stock at an exercise price equal to $13.20. Each share of Series A Preferred Stock and the accompanying Series A and Series B warrants were issued at a combined purchase price to the public of $1,000. The aggregate net proceeds received by the Company from the offering were $97.7 million, net of underwriting discounts and commissions and offering expenses of $5.3 million. On January 29, 2020, all shares of Series A Preferred Stock converted into 7,803,273 shares of common stock.

At-The-Market Common Stock Offerings

In August 2020, the Company entered into an open market sales agreement, pursuant to which it can issue and sell an aggregate of up to $20.0 million of its common stock from time to time in At-The-Market (ATM) offerings. During the year ended December 31, 2020, the Company sold 732,752 shares under the ATM program for net proceeds of $8.9 million, net of commissions and offering expenses.

In February 2021, the Company filed a prospectus supplement pursuant to which it can issue and sell an aggregate of up to $30.0 million of its common stock from time to time in ATM offerings.

Reverse Stock Split

On January 21, 2020, the Company's shareholders approved an amendment to the Company's certificate of incorporation to effect a reverse split of the Company's common stock (Reverse Stock Split). On January 21, 2020, the Company's board of directors approved the specific ratio for the Reverse Stock Split, which became effective on January 22, 2020, at 1-for-40. The authorized shares and par value of the common and preferred stock were not adjusted as a result of the Reverse Stock Split. All issued and outstanding common stock, warrants for common stock, options for common stock and per share amounts contained in the consolidated financial statements have been retroactively adjusted to reflect this Reverse Stock Split for all periods presented.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). The accompanying consolidated financial statements include the accounts of Sierra Oncology, Inc. and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of consolidated financial statements and the reported amounts of expense during the reporting period. Significant estimates and assumptions made in the accompanying consolidated financial statements include, but are not limited to the fair values of stock options and warrants issued, the convertible voting preferred stock and securities issuance obligation, the probability of achieving performance-based milestones of stock options, accruals such as research and development costs, and recoverability of the Company's net deferred tax assets, and related valuation allowance. 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.

Foreign Currency

The functional currency of the Company's foreign subsidiaries is the U.S. Dollar. Transactions denominated in currencies other than the functional currency are recorded at prevailing exchange rates during the period. At the end of each reporting period, monetary assets and liabilities are remeasured to the functional currency using exchange rates in effect at the balance sheet date. Non-monetary assets and liabilities are recorded at historical exchange rates. Gains and losses related to remeasurement are recorded in other income (expense), net in the consolidated statements of operations. The net foreign exchange transaction gains (losses) included in other income (expense), net in the accompanying consolidated statements of operations were insignificant for the years ended December 31, 2020, 2019 and 2018.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less from the date of purchase to be cash equivalents. Cash and cash equivalents consist primarily of funds invested in readily available checking and savings accounts and highly liquid investments in money market funds.

Restricted Cash

Restricted cash, which consists of funds invested in a money market fund, represents collateral for a corporate credit card facility and is included in other assets in the accompanying consolidated balance sheets.

Concentrations of Credit Risk

Financial instruments that subject the Company to significant concentrations of credit risk consist of cash, cash equivalents and restricted cash. All of the Company's cash, cash equivalents and restricted cash are held at financial institutions in the United States and Canada that management believes to be of high credit quality. Deposits held in the United States and Canada with these financial institutions exceed federally insured limits.

The primary focus of the Company's investment strategy is to preserve capital and meet liquidity requirements. The Company's investment policy addresses the level of credit exposure by limiting the concentration in any one corporate issuer and establishing a minimum allowable credit rating.

Fair Value of Financial Instruments

The Company's cash and cash equivalents, restricted cash, other current assets, accounts payable and accrued liabilities approximate their fair values at December 31, 2020 and 2019, due to their short duration. The warrant liabilities and securities issuance obligation contained unobservable inputs that reflected the Company's own assumptions in which there was little, if any, market activity at the measurement date, thus the Company's warrant liabilities and securities issuance obligation were measured at their fair values on a recurring basis using unobservable inputs until such time the warrants were no longer considered derivative instruments and the securities issuance obligation was settled.

The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The Company determines the fair value of its financial instruments based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2—Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities 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 related assets or liabilities; and

Level 3—Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

Property and Equipment, Net

Property and equipment, net are stated at cost, less accumulated depreciation. Depreciation on property and equipment, excluding leasehold improvements, is computed using the straight-line method over the estimated useful lives of the respective assets, generally three to five years. Leasehold improvements are amortized on a straight-line basis over the shorter of the estimated useful lives of the assets or the remaining lease term. Depreciation begins at the time the asset is placed in service. Maintenance and repairs are charged to operations as incurred. Upon sale or retirement of assets, the cost and related accumulated depreciation are removed from the consolidated balance sheet and the resulting gain or loss is reflected in the consolidated statement of operations.

Other Assets

Other assets consist primarily of restricted cash pledged as collateral for a corporate credit card facility and deferred income tax assets in foreign jurisdictions.

Operating Lease Right-of-Use Asset and Lease Liability

The Company recognizes an operating lease with terms greater than one year as right-of-use (ROU) asset and lease liability on its consolidated balance sheet using the portfolio approach. Lease liability and ROU asset are recorded based on the present value of future lease payments over the contractual term of the operating lease. The Company utilized its incremental borrowing rate from information available as at the date of initial adoption in determining the present value of the future lease payments. The lease liability and ROU asset are amortized over the term of the lease.

Warrant Liabilities

The Company accounted for its warrants issued in connection with its November 2019 financing based upon the characteristics and provisions of the instruments. Warrants classified as derivative liabilities were recorded on the Company's consolidated balance sheets at their fair value on the date of issuance and remeasured to fair value on each subsequent reporting period, with the changes in fair value recognized as a component of other income (expense), net in the accompanying consolidated statements of operations. The Company revalued the warrant liabilities until they ceased to be derivative instruments, at which time they were reclassified to additional paid-in capital at their fair value. The Company estimated the fair value of these liabilities using the Black-Scholes option-pricing model and the fair value of the underlying stock, as well as assumptions for expected volatility, expected term and risk-free interest rate. An estimated non-marketable discount was also applied if applicable. Offering expenses arising from the issuance of warrants are expensed as incurred.

Securities Issuance Obligation

The Company recognized its securities issuance obligation pursuant to the amendment to the Asset Purchase Agreement with Gilead Sciences, Inc. (Gilead) at their fair values on the date such obligations arose. At the end of each reporting period, changes in estimated fair values during the period were recognized as research and development costs in the accompanying consolidated statements of operations. The Company adjusted the fair values of the obligations until the securities issuance obligation was settled, at which time the liabilities were reclassified to common stock and additional paid-in capital at their fair values. The Company determined the fair values of these obligations based upon the individual characteristics and provisions of the securities to be issued. The Company estimated the fair value of its obligation to issue common stock using the fair value of the underlying stock and a non-marketable discount. The Company estimated the fair value of its obligation to issue warrant using the Black-Scholes option-pricing model and the fair value of the underlying stock, as well as assumptions for expected volatility, expected term and risk-free interest rate. An estimated non-marketable discount was also applied if applicable.

Research and Development Costs

Research and development costs are expensed as incurred. The Company accounts for non-refundable advance payments for goods and services that will be used in future research and development activities as expenses when the goods have been received or when the service has been performed rather than when the payment is made. Depending on the timing of payments to service providers of research and development costs, the Company recognizes prepaid expenses or accrued expenses related to these costs. These prepaid or accrued expenses are based on management's estimates of the work performed under service agreements and milestones achieved. In the event that a clinical trial is terminated early, the Company records an accrual for the estimated remaining costs to complete the trial in the period of termination.

Upfront payments made in connection with license and asset purchase agreements are expensed as research and developments costs, as the assets acquired do not have alternative future use. Contingent milestone payment obligations due to third parties under license and asset purchase agreements are expensed when the milestones are considered probable of occurring. To the extent an obligation is to be settled by future issuance of securities, the fair value of these instruments is recorded in research and development expense until the securities are issued.

Research and development costs include fees incurred in connection with license and asset purchase agreements and their related amendments, compensation and other related costs for employees engaged in research and development, costs associated with research and preclinical studies, clinical trials, regulatory activities, manufacturing activities to support clinical activities, fees paid to external service providers that conduct certain research and development, clinical, and manufacturing activities on behalf of the Company and an allocation of overhead expenses.

Stock-Based Compensation

The Company accounts for stock-based payments at fair value, which is measured using the Black-Scholes option-pricing model. For stock-based awards that vest subject to the satisfaction of a service requirement, the fair value measurement date for stock-based compensation awards is the date of grant and the expense is recognized on a straight-line basis over the vesting period, which is generally the service period. For stock-based awards that vest subject to the satisfaction of a service requirement and a performance component, the fair value measurement date is the date of grant and the expense is recognized over the requisite service period as achievement of the performance objective becomes probable. The Company accounts for forfeitures as they occur.

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Management makes an assessment of the likelihood that the resulting deferred tax assets will be realized. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized. Due to the Company's historical operating performance and the recorded cumulative net losses in prior fiscal periods, the net U.S. deferred tax assets have been offset by a full valuation allowance.

The Company recognizes uncertain income tax positions at the largest amount that is more likely than not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. Changes in recognition or measurement are reflected in the period in which judgment occurs. The Company recognizes interest and penalties related to the underpayment of income taxes as a component of provision for (benefit from) income taxes, net.

Segment Information

Operating segments are components of an enterprise for which separate financial information is available and is evaluated regularly by the Company's chief operating decision maker in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker is its Chief Executive Officer.

The Company's Chief Executive Officer views the Company's operations and manages its business in one operating segment, which is the business of researching, developing and commercializing therapies for the treatment of patients with hematology and oncology needs. Accordingly, the Company has a single reporting segment.

3. Net Loss Per Share

Basic net loss per share is calculated by dividing net loss by the weighted-average number of common stock outstanding during the period without consideration for common stock equivalents. In 2019, preferred stock with characteristics of common stock was also included in the determination of the weighted average. Diluted net loss per share is computed by dividing net loss by the weighted-average number of common stock equivalents outstanding for the period determined using the treasury-stock method. For purposes of this calculation, stock options and warrants for common stock are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

The following shares of common stock equivalents were excluded from the calculation of diluted net loss per share for the periods presented because including them would have been antidilutive:

	As of December 31,		
	2020	2019	2018
Series A warrants for common stock	7,802,241	7,802,241	—
Series B warrants for common stock	2,574,727	2,574,727	—
Options to purchase common stock	4,146,928	326,023	262,539
Warrants for common stock	727,122	1,839	1,839
Total potential dilutive shares	15,251,018	10,704,830	264,378

Also excluded from the calculation of diluted net loss per share are 450,000 shares of common stock issued by the Company in January 2021, under its ATM program for proceeds of $7.1 million, net of commissions.

4. Fair Value Measurements

The Company measures and reports its cash equivalents, restricted cash, warrant liabilities and securities issuance obligation at fair value. The following table sets forth the fair value of the Company's financial assets and liabilities measured on a recurring basis by level within the fair value hierarchy:

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Financial Assets				
Money market funds	$ 101,919	$ —	$ —	$ 101,919
Restricted money market funds	300	—	—	300
Total financial assets	$ 102,219	$ —	$ —	$ 102,219

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Financial Assets				
Money market funds	$ 146,240	$ —	$ —	$ 146,240
Restricted money market funds	300	—	—	300
Total financial assets	$ 146,540	$ —	$ —	$ 146,540
Financial Liabilities				
Warrant liabilities	$ —	$ —	$ 45,935	$ 45,935
Securities issuance obligation	—	—	10,485	$ 10,485
Total financial liabilities	$ —	$ —	$ 56,420	$ 56,420

Money market funds and restricted money market funds are measured at fair value on a recurring basis using quoted prices and are classified as a Level 1 input.

The Company's warrant liabilities and securities issuance obligation contained unobservable inputs that reflected the Company's own assumptions in which there was little, if any, market activity at the measurement date. Accordingly, the Company's warrant liabilities and securities issuance obligation were measured at fair value on a recurring basis using unobservable inputs at each reporting period. The warrant liabilities and securities issuance obligation were classified as Level 3 inputs. These liabilities were shown as current liabilities on the balance sheet until such time the warrants were no longer considered derivative instruments and the securities issuance obligation was settled.

The fair values of the Series A and Series B warrants were estimated using the Black-Scholes option-pricing model. The expected terms represented the periods that the warrants are expected to be outstanding. The risk-free interest rates were based on the U.S. Constant Maturity treasury curve commensurate with the time to expiry. The expected dividend was zero as the Company has not paid nor does it anticipate paying any dividends on its common stock in the foreseeable future. The expected volatilities were estimated by backsolving to volatility implied in the transaction price. Discount for lack of marketability was dependent on the restriction period and the estimated volatility during the period.

The fair value of the warrant issuance obligation was estimated using the Black-Scholes option-pricing model. The expected term represented the period that the underlying warrant is expected to be outstanding from the time the issuance obligation arose. The risk-free interest rate was based on the U.S. Constant Maturity treasury curve commensurate with the time to expiry. The expected dividend was zero as the Company has not paid nor does it anticipate paying any dividends on its common stock in the foreseeable future. The expected volatility was estimated by backsolving to volatility implied in the transaction price. The fair value of the common stock issuance obligation was estimated based on the fair value of the underlying common stock. Discount for lack of marketability was dependent on the restriction period and the estimated volatility during the period.

The assumptions used in calculating the estimated fair values at the end of the reporting period represent the Company's best estimate. However, inherent uncertainties are involved. If factors or assumptions change, the estimated fair values could be materially different.

At November 13, 2019, upon the issuance of Series A and Series B warrants and when the securities issuance obligation arose, the Company estimated the fair values of the financial liabilities using the following assumptions:

	Series A Warrant	Series B Warrant	Warrant Issuance Obligation	Common Stock Issuance Obligation
Expected term (in years)	5.2	2.3	5.2	N/A
Expected volatility	43%	88%	43%	N/A
Risk-free interest rate	1.70%	1.64%	1.70%	N/A
Expected dividend yield	— %	— %	— %	N/A
Discount for lack of marketability	30%	30%	32%	32%

At December 31, 2019, the Company remeasured these liabilities to their fair values using the following assumptions:

	Series A Warrant	Series B Warrant	Warrant Issuance Obligation	Common Stock Issuance Obligation
Expected term (in years)	5.1	2.2	5.1	N/A
Expected volatility	43%	88%	43%	N/A
Risk-free interest rate	1.69%	1.59%	1.70%	N/A
Expected dividend yield	— %	— %	— %	N/A
Discount for lack of marketability	25%	25%	25%	25%

At January 22, 2020, Series A and Series B warrants were no longer considered to be derivative instruments. The Company remeasured the fair value of the warrant liabilities at the time of reclassification to equity using the following assumptions:

	Series A Warrant	Series B Warrant
Expected term (in years)	5.0	2.1
Expected volatility	43%	88%
Risk-free interest rate	1.57%	1.53%
Expected dividend yield	—%	—%

At January 31, 2020, the securities issuance obligation was settled by the issuance of common stock and a common stock warrant. The Company remeasured the fair value of its common stock issuance obligation based on the value of the common stock at the time of issuance. The warrant issuance obligation was remeasured using the following assumptions:

	Warrant Issuance Obligation
Expected term (in years)	5.0
Expected volatility	43%
Risk-free interest rate	1.57%
Expected dividend yield	— %

The following table provides a summary of changes in the estimated fair values of the Company's Level 3 financial liabilities, which were measured at fair value on a recurring basis using unobservable inputs:

	Series A Warrant Liability	Series B Warrant Liability	Warrant Issuance Obligation	Common Stock Issuance Obligation	Total
			(in thousands)		
Balance, December 31, 2018	$ —	$ —	$ —	$ —	$ —
Issuance of warrants	17,133	7,876	—	—	25,009
Securities issuance obligation	—	—	1,543	4,903	6,446
Changes in fair value	15,483	5,443	1,493	2,546	24,965
Balance, December 31, 2019	32,616	13,319	3,036	7,449	56,420
Changes in fair value	11,597	4,643	152	1,333	17,725
Settlement of financial liabilities by securities issuance	—	—	(3,188)	(8,782)	(11,970)
Reclassification to equity	(44,213)	(17,962)	—	—	(62,175)
Balance, December 31, 2020	$ —	$ —	$ —	$ —	$ —

Fluctuations in fair values of the financial liabilities were attributable to changes in the fair value of the underlying stock and non-marketable discount.

There were no transfers between Levels 1, 2 or 3 during the years ended December 31, 2020 and 2019.

5. Balance Sheet Components

Cash and Cash Equivalents

Cash and cash equivalents consist of the following:

	December 31, 2020	December 31, 2019
	(in thousands)	
Cash	$ 2,136	$ 1,288
Cash equivalents:		
Money market accounts	101,919	146,240
Total cash and cash equivalents	$ 104,055	$ 147,528

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported in the consolidated balance sheets to the amounts shown in the consolidated statements of cash flows.

	December 31, 2020	December 31, 2019
	(in thousands)	
Cash and cash equivalents	$ 104,055	$ 147,528
Restricted cash included in other assets	300	300
Total cash, cash equivalents and restricted cash shown in the condensed consolidated statement of cash flows	$ 104,355	$ 147,828

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following:

	December 31, 2020	December 31, 2019
	(in thousands)	
Prepaid insurance	$ 991	$ 918
Prepaid research and development project costs	321	853
Other receivables	311	190
Other	792	408
Total prepaid expenses and other current assets	$ 2,415	$ 2,369

Property and Equipment, net

Property and equipment, net consists of the following:

	December 31, 2020	December 31, 2019
	(in thousands)	
Software	$ 361	$ 352
Leasehold improvements	—	112
Computer equipment	—	89
Furniture and fixtures	—	3
Property and equipment, gross	361	556
Less: accumulated depreciation	(309)	(443)
Total property and equipment, net	$ 52	$ 113

Depreciation related to the Company's property and equipment for each of the years ended December 31, 2020, 2019 and 2018 was $0.1 million.

Accrued and Other Liabilities

Accrued and other liabilities consist of the following:

	December 31, 2020	December 31, 2019
	(in thousands)	
Accrued employee related costs	$ 4,359	$ 3,420
Accrued research and development costs	1,715	2,668
Accrued professional fees	774	817
Operating lease liability	207	187
Other	93	78
Total accrued and other liabilities	$ 7,148	$ 7,170

6. Leases

The Company entered into an operating lease agreement to lease the office space in Vancouver, Canada commencing March 1, 2018. The lease expires on February 28, 2023. In December 2020, the Company entered into an agreement to sublet the entire office premises to a third party until February 27, 2023. Pursuant to the sublease agreement, the subtenant will pay base rent of $0.2 million per annum and all operating costs to the Company. The Company recorded an impairment charge of $0.1 million during the year ended December 31, 2020.

The components of lease expense, which are recorded in general and administrative expense, and related cash flows for the year ended December 31, 2020 and 2019 were as follows:

	Year ended December 31,	
	2020	2019
	(in thousands)	
Operating lease cost	$ 195	$ 203
Short-term lease cost	42	117
	237	320
Operating cash flows used for operating leases	$ 212	$ 198

The total rent expense was $0.5 million for the year ended December 31, 2018.

As of December 31, 2020, the weighted average remaining lease term and discount rate for the operating lease are 2.2 years and 6.5%, respectively.

As of December 31, 2020, maturities of lease liability due under the lease agreement are as follows:

Years Ending December 31:	Operating Leases
	(in thousands)
2021	226
2022	180
Total lease payments	406
Less imputed interest	(24)
Total	$ 382

In addition to base rent, this lease requires payment of operating costs. These costs are not included in the table above.

In December 2020, the Company entered into a 48-month operating lease agreement to lease office space in San Mateo, California. The lease has not commenced as of December 31, 2020. The Company's obligation under this office lease is $0.1 million for 2021, $0.2 million for each of 2022, 2023 and 2024, and $0.1 million for 2025.

7. Term Loan

In August 2018, the Company entered into a Loan and Security Agreement (Loan Agreement) with Silicon Valley Bank (SVB). Contemporaneously with executing the Loan Agreement, the Company drew down the first $5.0 million tranche. In December 2019, the Company repaid the $5.0 million term loan and paid the prepayment and final payment fees of $0.1 million and $0.3 million, respectively. In connection with the Loan Agreement, the Company issued a warrant to SVB to purchase 1,839 of the Company's common stock at a price per share of $74.80. The warrant was immediately exercisable, will expire on August 21, 2028, contains a cashless exercise provision and is classified as equity.

No interest expense was recognized for the year ended December 31, 2020. The Company recognized interest expense related to the Loan Agreement of $0.9 million for the year ended December 31, 2019, including the final payment fee, the prepayment fee and the unamortized portion of the debt issuance costs. Interest expense for the year ended December 31, 2018 was $0.2 million.

8. Commitments and Contingencies

Asset Purchase Agreement

In August 2018, the Company entered into an Asset Purchase Agreement with Gilead whereby the Company acquired worldwide rights to the pharmaceutical product momelotinib, an investigational orally-bioavailable JAK1, JAK2 and ACVT1 inhibitor together with all related intellectual property rights and certain other related assets. Pursuant to the agreement, the Company made a one-time upfront payment of $3.0 million in August 2018. The related expense was included in research and development for the year ended December 31, 2018 in the accompanying consolidated statement of operations. In October 2019, the Company entered into an amendment to the Asset Purchase Agreement in which the Company agreed to issue, subject to certain conditions, shares of common stock and a warrant to purchase common stock to Gilead in consideration for meaningfully reduced royalty rates and elimination of a near term milestone payment in the Asset Purchase Agreement. Pursuant to the amended agreement, milestone payments of up to an aggregate of $190.0 million may become payable to Gilead upon the achievement of certain regulatory and commercial milestone events and the Company is required to pay Gilead low double-digit to high-teens percent tiered combined royalties based upon net sales.

In connection with obligations under the amendment, the Company recognized a $10.5 million non-cash research and development expense for the year ended December 31, 2019 based on the fair value of the securities to be issued. On January 31, 2020, the Company fulfilled its obligation to issue securities by entering into a securities purchase agreement with Gilead, pursuant to which the Company issued to Gilead 725,283 shares of the Company's common stock and a warrant to purchase 725,283 shares of common stock at a price per share of $13.20. The warrant is immediately exercisable, will expire on January 31, 2025 and contains a cash and/or cashless exercise provision. Upon remeasurement of the securities issuance obligation immediately prior to the issuance, an additional $1.5 million of non-cash research and development expense, representing changes in fair value of the securities since December 31, 2019, was recognized in the consolidated statement of operations for the year ended December 31, 2020. See Note 4, Fair Value Measurement for further discussions in valuation techniques.

License Agreements

In September 2016, the Company entered into an exclusive license agreement with CRT Pioneer Fund LP (CPF) for worldwide rights, know-how and materials to develop SRA737, a small molecule inhibitor targeting Chk1, a promising therapeutic target to treat cancer. Pursuant to the agreement, the Company made a one-time upfront payment of $7.0 million to CPF in October 2016 and paid $2.0 million to CPF in January 2017 for the successful transfer of two ongoing Phase 1 clinical trials. Pursuant to the original license agreement, additional milestone payments of up to an aggregate of $319.5 million may have become payable to CPF upon the achievement of certain milestones. In November 2020, the Company entered into an amendment to the license agreement with CPF, which amended the terms and reduced the amounts of certain future milestones. Pursuant to the amended agreement, future milestone payments of up to an aggregate of $290.0 million may become payable to CPF upon the achievement of certain developmental, regulatory and commercial milestones, including a milestone payment of $2.0 million upon the dosing of the first patient of the first trial of SRA737 following the effective date of the amendment. These milestones will be accrued once they are considered probable of occurring. In addition, the Company is required to pay CPF, on a product-by-product and country-by-country basis, tiered high single-digit to low double-digit royalties on the net sales of any product successfully developed.

In May 2016, the Company entered into an exclusive license agreement (Carna License Agreement) with Carna Biosciences, Inc. (Carna) for worldwide rights to develop and commercialize SRA141, a small molecule kinase inhibitor targeting Cdc7. In exchange for this exclusive right, the Company paid Carna an upfront payment of $0.9 million in June 2016. In June 2020, the Company entered into a collaboration agreement (Carna Collaboration Agreement) with Carna effectively terminating the Carna License Agreement. Pursuant to the Carna Collaboration Agreement, Carna paid an upfront fee of $0.3 million, which was recognized as collaboration revenue during the year ended December 31, 2020 by the Company, for the exclusive worldwide rights for SRA141 and other transition services. In addition, the Company may be entitled to single-digit royalties on product sales, on a product-by-product basis, and low to mid-teen profit share on royalty and non-royalty income.

Legal

From time to time, the Company may become subject to other legal proceedings, claims and litigation arising in the ordinary course of business. In addition, the Company may receive letters alleging infringement of patent or other intellectual property rights. The Company is not currently a party to any other material legal proceedings, nor is it aware of any pending or threatened litigation that, in the Company’s opinion, would have a material adverse effect on the business, operating results, cash flows or financial condition should such litigation be resolved unfavorably.

COVID-19

The full extent of the impact of the COVID-19 pandemic on financial markets, economies worldwide and our business is highly uncertain. Research and development expenses and general and administrative expenses may vary significantly if there is an increased impact from COVID-19 on the costs and timing associated with the conduct of clinical trials and other related business activities. The Company is carefully monitoring the pandemic and the potential length and depth of the resulting economic impact on its financial condition and results of operations. As of December 31, 2020, the Company was not aware of any contingencies and no related estimates were recorded on its financial statements as a result of COVID-19.

9. Common Stock

The Company is required to reserve and keep available out of its authorized but unissued shares of common stock a number of shares sufficient to effect the conversion of all outstanding preferred stock, options granted and available for grant under the incentive plans, shares reserved for issuance under the employee stock purchase plan and issued warrant.

	December 31, 2020	December 31, 2019
Shares reserved under Series A warrant	7,802,241	7,802,241
Shares reserved under Series B warrant	2,574,727	2,574,727
Shares reserved for future option grants under equity plans	1,117,796	51,514
Outstanding stock options under equity incentive plans	4,146,928	326,023
Outstanding warrants	727,122	1,839
Shares reserved under the 2015 employee stock purchase plan	17,500	17,500
Shares reserved for conversion of Series A Preferred Stock	—	7,803,273
Total common stock reserved for issuance	16,386,314	18,577,117

10. Preferred Stock

As of December 31, 2020 and 2019, the Company had 10,000,000 shares of preferred stock authorized with a par value of $0.001. There were no shares of preferred stock issued and outstanding as of December 31, 2020 and 103,000 shares of Series A Preferred Stock outstanding as of December 31, 2019.

Series A Convertible Voting Preferred Stock

On November 13, 2019, the Company completed an underwritten public offering whereby it issued 103,000 shares of Series A Preferred Stock together with Series A warrants and Series B warrants for a combined purchase price of $1,000. The aggregate proceeds received by the Company was $97.7 million, net of underwriting discounts and commissions and offering expenses. Each share of Series A Preferred Stock was convertible into shares of the Company's common stock equal to the stated value of the Series A Preferred Stock of $1,000 divided by the voting conversion price of $13.20. On January 29, 2020, all shares of Series A Preferred Stock converted into 7,803,273 shares of the Company's common stock.

11. Warrant Liabilities

In connection with the Company's November 2019 public offering of the Series A Preferred Stock, the Company issued Series A warrants to purchase up to 7,802,241 shares of common stock at an exercise price equal to $13.20, and Series B warrants to purchase up to 2,574,727 shares of common stock at an exercise price equal to $13.20. Both Series A and Series B warrants are exercisable following stockholder approval in January 2020 of an increase in authorized common stock sufficient to allow for the exercise of the warrants, subject to certain beneficial ownership limitations. The Series A warrants will expire five years from the date they first became exercisable or on January 22, 2025 and contain a cash and/or cashless exercise provision. The Series B warrants will expire on the 75th day anniversary following the announcement of top-line data from the Company's MOMENTUM Phase 3 clinical trial of momelotinib and may only be exercised by paying the exercise price in cash, which would amount to approximately $34.0 million in proceeds to the Company if fully exercised.

The Company revalued the warrant liabilities using the Black-Scholes option pricing model until they ceased to be derivative instruments, following stockholder approval of an increase in authorized common stock sufficient to allow for the exercise of the warrants, at which time they were reclassified to equity. The fair values of the Series A and Series B warrants at the time of issuance in November 2019, at December 31, 2019 and at the time they ceased to be derivative instruments in January 2020 were estimated to be $25.0 million, $45.9 million and $62.1 million, respectively. The Company recorded a $16.2 million and $20.9 million non-cash expense relating to the change in fair value of warrant liabilities in other income (expense), net in the accompanying consolidated statement of operations for the periods ended December 31, 2020 and 2019, respectively. (see Note 4).

12. Stock-Based Compensation

In the accompanying consolidated statement of operations, the Company recognized stock-based compensation expense for its employees and non-employees as follows:

	Year ended December 31,		
	2020	2019	2018
	(in thousands)		
Research and development	$ 4,316	$ 3,873	$ 4,499
General and administrative	5,154	1,822	2,297
Total stock-based compensation	$ 9,470	$ 5,695	$ 6,796

Determination of Fair Value

The estimated grant-date fair value of all the Company's stock-based awards was calculated using the Black-Scholes option pricing model, based on the following assumptions:

	Year Ended December 31,		
	2020	2019	2018
Expected term (in years)	5.3 – 7.0	5.3 – 6.9	5.3 – 7.0
Expected volatility	87 – 90%	89 – 94%	88 – 91%
Risk-free interest rate	0.3 – 1.2%	1.6 – 2.6%	2.6 – 3.1%
Expected dividend rate	—%	—%	—%

The fair value of each stock option grant was determined by the Company on the date of grant using the methods and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment and estimation by management.

Expected Term—The expected term represents the period that stock-based awards are expected to be outstanding. As the Company's historical share option exercise is limited due to a lack of sufficient data points, and does not provide a reasonable basis upon which to estimate an expected term, the expected term is derived by using the midpoint between the weighted-average vesting term and the contractual expiration period of the stock-based award.

Expected Volatility—The expected volatility is derived from a weighted volatility using both the Company's trading history for its common stock and the historical stock volatilities of peer public companies within its industry that are considered to be comparable to the Company's business over a period equivalent to the expected term of the stock-based awards.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the date of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the stock-based awards' expected term.

Expected Dividend Rate—The expected dividend is zero as the Company has not paid nor anticipate paying any dividends on its common stock in the foreseeable future.

Forfeiture Rate—The Company accounts for forfeitures when they occur.

Equity Incentive Plans

2018 Equity Inducement Plan

In September 2018, the Company's Compensation Committee approved the 2018 Equity Inducement Plan (2018 Plan). The number of shares available for awards under the 2018 Plan was set to 37,500. On June 30, 2020, the Company's Board of Directors approved an amendment to the 2018 Plan to increase the authorized number of shares available for issuance by 500,000 shares. As of December 31, 2020, 537,500 shares were reserved for issuance under the 2018 Plan. On February 3, 2021, the Company's Compensation Committee approved an amendment to the 2018 Plan to increase the authorized number of shares available for issuance by 500,000. The exercise price of each stock-based award issued under the 2018 Plan is required to be no less than the fair value of the Company's common stock. The vesting and exercise provisions of options or restricted awards granted are determined individually with each grant. Stock options have a 10-year life and expire if not exercised within that period or if not exercised within three months of cessation of employment with the Company or such longer period of time as specified in the option agreement.

2015 Plan

The 2015 Equity Incentive Plan (2015 Plan) became effective on July 14, 2015. On January 21, 2020, the Company's stockholders approved the following amendments to the 2015 Plan: (i) increase to the authorized number of shares available for issuance by 4,312,500 shares and proportionately increase the share limit related to incentive stock options, (ii) provide limits on the total value of compensation that may be granted to any non-employee director in each calendar year, and (iii) eliminate the annual individual grant limit to reflect changes to the tax law in 2017 tax legislation.

As of December 31, 2020, 4,678,597 shares were reserved for issuance under the 2015 Plan. The number of shares reserved for issuance under the 2015 Plan will increase automatically on January 1 of each calendar year 2016 through 2025 by the number of shares equal to 4% of the total outstanding shares of the Company's common stock as of the immediately preceding December 31. The Company's Board of Directors or Compensation Committee may reduce the amount of the increase in any particular year. The exercise price of each stock-based award issued under the 2015 Plan is required to be no less than the fair value of the Company's capital stock. The vesting and exercise provisions of options or restricted awards granted are determined individually with each grant. Stock options have a 10-year life and expire if not exercised within that period or if not exercised within three months of cessation of employment with the Company or such longer period of time as specified in the option agreement, unless modified.

2008 Plan

The Company granted options under the 2008 Stock Plan (2008 Plan) until July 2015 when it was terminated as to future awards, although it continues to govern the terms of options that remain outstanding under the 2008 Plan. The 2008 Plan provided for the granting of Incentive Stock Options (ISO), nonqualified stock options and stock purchase rights. In connection with the Board of Director's approval of the 2015 Plan, all remaining shares available for future award under the 2008 Plan were transferred to the 2015 Plan, and the 2008 Plan was terminated. A summary of activity under the 2008 Plan, 2015 Plan and 2018 Plan and related information is as follows:

		Options Outstanding			
	Shares Available for Grant	Number of Shares Outstanding	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value of Outstanding Options (in thousands)
Outstanding — December 31, 2019	51,514	326,023	$ 102.56	7.45	$ 11
Awards authorized	4,887,187				
Options granted	(4,074,939)	4,074,939	12.88		
Options forfeited/cancelled	254,034	(254,034)	20.73		
Outstanding — December 31, 2020	1,117,796	4,146,928	$ 19.45	8.84	$ 12,227
Exercisable — December 31, 2020		466,879	$ 65.48	3.90	$ 555
Vested and expected to vest — December 31, 2020		3,594,690	$ 20.57	8.71	$ 10,084

The weighted-average grant date fair values of options granted during the years ended December 31, 2020, 2019 and 2018 was $8.81, $50.40 and $70.00 per share. There were no options exercised for the year ended December 31, 2020. The aggregate intrinsic value of options exercised was $0.1 million and $0.2 million for the years ended December 31, 2019 and 2018. The total grant date fair value of options vested for the years ended December 31, 2020, 2019 and 2018 was $5.2 million, $6.0 million and $5.9 million.

In May 2020, the Company entered into a separation agreement with Dr. Glover, the Company's former President and Chief Executive Officer, in connection with his resignation. Pursuant to the separation agreement, Dr. Glover's unvested options that would have vested during the one-year period from the date of separation accelerated and vested immediately. The vesting date of all remaining unvested options accelerated by one year, and vested in accordance with the accelerated vesting schedule through December 31, 2020. All unvested options were cancelled on December 31, 2020. Furthermore, Dr. Glover received an extension of the expiration date of his vested stock options to 75 days following the Company's announcement of the top-line data results from its MOMENTUM clinical trial. Compensation costs relating to the vesting acceleration and the modifications to option terms was $2.2 million for the year ended December 31, 2020.

In August 2020, the Company granted executives and employees 1,107,250 stock options with performance-based conditions. Vesting is achieved based upon the satisfaction of pre-determined milestones. As of December 31, 2020, all of the performance-based options remain unvested. For the year ended December 31, 2020, the Company has recognized approximately $0.9 million in stock-based compensation expense relating to certain performance-based criteria that are considered probable of occurring.

As of December 31, 2020, total unrecognized stock-based compensation related to unvested stock options was $23.1 million, which the Company expects to recognize over a remaining weighted-average period of 3.1 years. In addition, as of December 31, 2020, total unrecognized stock-based compensation related to unvested stock options with performance-based conditions was $8.9 million.

2015 Employee Stock Purchase Plan

The Company adopted the 2015 Employee Stock Purchase Plan (ESPP) and initially reserved 17,500 shares of common stock as of its effective date of July 15, 2015. The aggregate number of shares issued over the term of the 2015 Employee Stock Purchase Plan will not exceed 85,000 shares of common stock. The ESPP will not become effective until such time as the Compensation Committee determines in the future, and as of December 31, 2020, the initial offering periods had not commenced. As of December 31, 2020, no shares of common stock have been issued to employees participating in the ESPP and 17,500 shares were available for issuance under the ESPP.

13. Income Taxes

The geographical breakdown of loss before provision for income taxes is as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
United States	$ (81,670)	$ (89,459)	$ (54,395)
International	$ 910	1,024	758
Loss before provision for (benefit from) income taxes, net	$ (80,760)	$ (88,435)	$ (53,637)

The components of the provision for (benefit from) income taxes are as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Current tax provision (benefit):			
Federal	$ —	$ —	$ —
State	—	—	—
Foreign	59	85	(180)
Total current tax provision (benefit)	$ 59	$ 85	$ (180)
Deferred tax provision (benefit):			
Foreign	83	(245)	(122)
Total deferred tax provision (benefit)	$ 83	$ (245)	$ (122)
Total provision for (benefit from) income taxes	$ 142	$ (160)	$ (302)

The reconciliation between income taxes computed at the federal statutory income tax rate and the provision for (benefit from) income taxes is as follows:

	Year Ended December 31,		
	2020	2019	2018
Federal statutory rate	21.0%	21.0%	21.0%
Effect of:			
Change in valuation allowance	(23.6)	12.4	(22.2)
Federal tax credit	5.8	1.5	2.4
Warrant issuance and remeasurement	(4.2)	(5.3)	—
Effect of ownership change on deferred tax assets	1.3	(29.0)	—
State income tax benefit, net of federal benefit	0.2	0.2	0.3
Other permanent items	(0.7)	(0.6)	(1.0)
Total provision for (benefit from) income taxes%	(0.2)%	0.2%	0.5%

The components of the deferred tax assets are as follows:

	December 31,	
	2020	2019
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 14,011	$ 2,649
Stock based compensation	6,459	4,663
59 (e) expenditures and amortization	6,222	5,902
Federal R&D and orphan drug credits	5,107	486
License fee	3,224	2,538
Other	1,024	967
Gross deferred tax assets	36,047	17,205
Valuation allowance	(35,513)	(16,441)
Total deferred tax assets	534	764
Deferred tax liabilities:		
Lease Asset	114	244
Other	73	90
Total deferred tax liabilities	187	334
Total net deferred tax assets	$ 347	$ 430

Recognition of deferred tax assets is appropriate when realization of these assets is more likely than not. Based upon the weight of available evidence, which includes historical operating performance and the recorded cumulative net losses in prior fiscal periods, the Company recorded a full valuation allowance of $35.2 million and $16.4 million against the net U.S. deferred tax assets as of December 31, 2020 and 2019. The U.S. net valuation allowance increased by $18.8 million for the year ended December 31, 2020. The U.S. net valuation allowance decreased by $10.9 million for the year ended December 31, 2019.

Management assesses the available positive and negative evidence to estimate if sufficient future taxable income will be generated to use the existing U.S. deferred tax assets. Based on the weight of all evidence, including a history of operating losses and the Company's ability to generate future taxable income to realize the assets, management has determined that it is more likely than not that the U.S. deferred tax assets will not be realized.

Utilization of the Company's net operating loss and U.S. research and development credit carryforwards to offset taxable income are subject to an annual limitation, pursuant to Internal Revenue Code (IRC) Sections 382 and 383. As a result of ownership changes that have occurred, the most recent which occurred during 2019, certain of the Company's tax attributes existing as of the date of the ownership change are not be available for future use. The loss of these attributes did not have any impact on the financial statements since the net U.S. deferred tax assets are offset by a full valuation allowance.

As of December 31, 2020, the Company had gross U.S. federal tax net operating loss carryforwards of $54.8 million, that are eligible for an indefinite carryforward, and gross state operating loss carryforwards of $52.4 million expiring in years ranging from 2022 to 2040. The Company also has U.S. net tax credit carryforwards of $4.6 million which begin to expire in 2039 and net tax credit carryforwards in a foreign jurisdiction of $0.5 million which begin to expire in 2038.

Uncertain Tax Positions

The activity related to the gross amount of unrecognized tax benefits is as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Beginning balance	$ 314	$ 264	$ 43
Increases based on tax positions related to prior years	—	—	109
Decreases based on tax positions related to prior years	(54)	(103)	—
Decreases due to ownership change	(207)	—	—
Increases based on tax positions in current year	568	153	112
Settlement	—	—	—
Lapse of statute of limitations	—	—	—
Ending balance	$ 621	$ 314	$ 264

If recognized, gross unrecognized tax benefits would not have a material impact on the Company's effective tax rate due to the Company's full valuation allowance position on the U.S. deferred tax assets. From time to time, the Company is subject to review by tax authorities. It is not possible to estimate the impact of changes, if any, to previously recorded uncertain tax positions. However, the Company does not expect the changes, if any, to be materially different from what is recorded and will adjust its estimate and liability as necessary.

The Company recognizes interest and penalties related to unrecognized tax benefits in the provision for income taxes in the accompanying consolidated statement of operations. Accrued interest and penalties, if applicable, are included in accrued liabilities in the consolidated balance sheet. For the years ended December 31, 2020 and 2019, the Company did not recognize any accrued interest and penalties.

The Company is subject to taxation in the United States, various states, Canada and Australia. Tax years 2017 through 2019 remain open to examination by the United States, various state jurisdictions and Canada. The tax year ended December 31, 2019 remains open to examination in Australia. The Company is not under examination in any tax jurisdiction for any year.

14. Selected Quarterly Financial Data (Unaudited)

The following tables present certain selected unaudited consolidated quarterly financial information for each of the eight quarters ended December 31, 2020. This consolidated quarterly information has been prepared on the same basis as the consolidated financial statements and includes all adjustments necessary to state fairly the information for the periods presented. The selected consolidated quarterly financial results from operations for the years ended December 31, 2020 and 2019 are set forth therein.

	Fiscal 2020 Quarter Ended			
	March 31, 2020 (2)	June 30, 2020	September 30, 2020	December 31, 2020
	(in thousands, except per share amounts)			
Collaboration revenue	$ —	$ —	$ 100	$ 200
Operating expenses	$ 16,135	$ 16,449	$ 14,544	$ 18,113
Net loss (1)	$ (31,912)	$ (16,462)	$ (14,505)	$ (18,023)
Basic and diluted net loss per share	$ (3.14)	$ (1.58)	$ (1.39)	$ (1.63)

	Fiscal 2019 Quarter Ended			
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019 (2)
	(in thousands, except per share amounts)			
Operating expenses	$ 13,502	$ 15,207	$ 13,264	$ 25,019
Net loss (1)	$ (13,032)	$ (14,878)	$ (12,903)	$ (47,462)
Basic and diluted net loss per share	$ (7.00)	$ (7.97)	$ (6.91)	$ (7.88)

(1) Net loss from continuing operations and net loss attributable to holders of common stock and preferred stock with characteristics of common stock are the same as net loss for all periods presented.

(2) Net loss for the quarters ended March 31, 2020 and December 31, 2019 included a $16.2 million and $20.9 million non-cash charge, respectively, relating to changes in fair value of warrant liabilities (see Note 11) and a $1.5 million and $10.5 million non-cash charge, respectively, relating to the Company's obligation to issue securities pursuant to an amendment to the Asset Purchase Agreement with Gilead (see Note 8).

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

As of December 31, 2020, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial Officer, to allow timely decisions regarding required disclosures. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2020, the design and operation of our disclosure controls and procedures were effective at a reasonable assurance level.

Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of 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.

As of December 31, 2020, management assessed the effectiveness of our internal control over financial reporting based on the framework established in "Internal Control—Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013 Framework). Based on this evaluation, management has determined that our internal control over financial reporting was effective as of December 31, 2020.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 11. Executive Compensation.

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

Item 14. Principal Accounting Fees and Services.

The information required by this item is incorporated herein by reference to our Proxy Statement with respect to our 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the end of the fiscal year covered by this Annual Report on Form 10-K.

PART IV

Item 15. Exhibits, Consolidated Financial Statement Schedules.

(a) The following documents are filed as part of this report:

1. Consolidated Financial Statements

See Index to Consolidated Financial Statements at Item 8 herein.

2. Consolidated Financial Statement Schedules

No consolidated financial statement schedules are provided because the information called for is not required or is shown either in the consolidated financial statements or notes thereto.

3. Exhibits

		Incorporated by reference				
Exhibit Number	**Description of Document**	**Form**	**File No.**	**Exhibit**	**Filing Date**	**Filed Herewith**
2.1+†	Asset Purchase Agreement dated August 20, 2018 by and between the Registrant and YM Biosciences Australia Pty Ltd. and Gilead Sciences, Inc.	10-Q	001-37490	2.1	November 8, 2018	
2.2++	Amendment to Asset Purchase Agreement dated October 28, 2019, by and between the Registrant and YM Biosciences Australia Pty Ltd. and Gilead Sciences, Inc.	10-K	001-37490	2.2	March 3, 2020	
3.1	Restated Certificate of Incorporation.	S-1	333-204921	3.2	June 12, 2015	
3.2	Certificate of Amendment to the Restated Certificate of Incorporation.	8-K	001-37490	3.1	January 22, 2020	
3.3	Amended and Restated Bylaws.	8-K	001-37490	3.1	April 16, 2020	
3.4	Certificate of Designation of Preferences, Rights and Limitations, with respect to the Series A Convertible Voting Preferred Stock.	8-K	001-37490	3.1	November 13, 2019	
4.1	Form of Common Stock Certificate.	S-1	333-204921	4.1	July 6, 2015	
4.2	Third Amended and Restated Investor Rights Agreement, dated April 17, 2014, by and among the Registrant and certain of its stockholders, as amended.	S-1	333-204921	4.2	June 12, 2015	

Exhibit Number	Description of Document	Incorporated by reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
4.3	Warrant dated August 21, 2018 issued to Silicon Valley Bank	10-Q	001-37490	4.1	November 8, 2018	
4.4	Form of Series A Preferred Stock Certificate	8-K	001-37490	4.1	November 13, 2019	
4.5	Description of Securities	10-K	001-37490	4.5	March 3, 2020	
4.6	Form of Series A Convertible Voting Preferred Stock Certificate	8-K	001-37490	3.1	November 13, 2019	
4.7	Form of Series A Warrant	8-K	001-37490	4.1	November 7, 2019	
4.8	Form of Series B Warrant	8-K	001-37490	4.2	November 7, 2019	
4.9	Securities Purchase Agreement by and between the Company and Gilead Sciences, Inc.	8-K	001-37490	10.1	February 6, 2020	
4.10	Form of Warrant to Gilead Sciences, Inc.	8-K	001-37490	10.2	February 6, 2020	
10.1*	Form of Indemnification Agreement.	S-1	333-204921	10.1	June 12, 2015	
10.2*	2008 Stock Plan, as amended, and forms of award agreements thereunder.	S-1	333-204921	10.2	June 12, 2015	
10.3*	2015 Equity Incentive Plan, as amended, and forms of award agreements thereunder.					X
10.4*	2015 Employee Stock Purchase Plan.	S-1	333-204921	10.4	July 6, 2015	
10.5*	2018 Equity Inducement Plan, as amended, and forms of award agreements thereunder.					X
10.6*	Form of Executive Officer Employment Agreement.	S-1	333-204921	10.5	July 6, 2015	
10.7	Form of Amendment to Executive Officer Employment Agreement (other than Chief Executive Officer)	10-Q	001-37490	10.1	May 9, 2017	
10.8*	Employment Agreement between the Registrant and Stephen G. Dilly	10-Q	001-37490	10.1	August 6, 2020	
10.9*	Separation Agreement dated May 28, 2020 between the Registrant and Nick Glover.	10-Q	001-37490	10.2	August 6, 2020	
10.10*	Employment Agreement between the Registrant and Nick Glover.	S-1	333-204921	10.7	July 6, 2015	

Exhibit Number	Description of Document	Incorporated by reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.11+	License Agreement dated September 27, 2016 by and between the Registrant and CRT Pioneer Fund LP.	10-Q	001-37490	10.1	November 10, 2016	
10.12+	Amendment No. 1 to the License Agreement dated November 10, 2020 by and between the Registrant and CRT Pioneer Fund LP.					X
10.13	Office Lease, dated June 12, 2017, by and between Sierra Oncology Canada ULC and The Cadillac Fairview Corporation Limited, as the duly authorized agent of Ontrea Inc. and Van885 West Georgia GP Ltd., the general partner of Van885 West Georgia LP.	10-Q	001-37490	10.1	August 10, 2017	
10.14	Office Sublease, dated December 1, 2020, by and between Sierra Oncology Canada ULC and Scougall Management (1987) Limited and consented to on December 18, 2020 by Van885 West Georgia GP Ltd. and Ontrea Inc., the general partners of Van885 West Georgia LP.					X
10.15	Office Lease, dated December 10, 2020 and effective December 14, 2020, by and between Sierra Oncology, Inc. and KW Fund VI-San Mateo, LLC.					X
21.1	Subsidiaries of the Registrant.					X
23.1	Consent of independent registered public accounting firm.					X
24.1	Power of Attorney. Reference is made to the signature page hereto.					X
31.1	Certification of Principal Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Principal Financial Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X

Exhibit Number	Description of Document	Incorporated by reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
32.1**	Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
32.2**	Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101.INS	XBRL Instance Document.					X
101.SCH	XBRL Schema Linkbase Document.					X
101.CAL	XBRL Calculation Linkbase Document.					X
101.DEF	XBRL Definition Linkbase Document.					X
101.EXT	XBRL Extension label Linkbase Document.					X
101.PRE	XBRL Presentation Linkbase Document.					X

* Executive compensation plan or agreement.

** This certification is deemed not filed for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

\+ Confidential treatment has been granted for portions of this exhibit under Rule 24b-2 promulgated under the Exchange Act. The Registrant has omitted and filed separately with the SEC the confidential portions of this exhibit.

++ Registrant has omitted portions of the exhibit as permitted under Item 601(b)(10) of Regulation S-K.

† Schedules and similar attachments to the agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company will furnish supplementally a copy of any omitted schedule or similar attachment to the SEC upon request.

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.

Date: March 11, 2021

SIERRA ONCOLOGY, INC.

By: /s/ Stephen G. Dilly
Stephen G. Dilly
President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Stephen Dilly and Sukhi Jagpal, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this annual report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, 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, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue thereof.

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/ Stephen G. Dilly Stephen G. Dilly	President, Chief Executive Officer and Director (Principal Executive Officer)	March 11, 2021
/s/ Sukhi Jagpal Sukhi Jagpal	Chief Financial Officer (Principal Accounting and Financial Officer)	March 11, 2021
/s/ Robert Pelzer Robert Pelzer	Chairman of the Board	March 11, 2021
/s/ Gaurav Aggarwal Gaurav Aggarwal	Director	March 11, 2021
/s/ Andrew Allen Andrew Allen	Director	March 11, 2021
/s/ Mona Ashiya Mona Ashiya	Director	March 11, 2021
/s/ Craig Collard Craig Collard	Director	March 11, 2021
/s/ Jeffrey H. Cooper Jeffrey H. Cooper	Director	March 11, 2021
/s/ Josh Richardson Josh Richardson	Director	March 11, 2021
/s/ Andrew Sinclair Andrew Sinclair	Director	March 11, 2021

SIERRA ONCOLOGY, INC.

2015 EQUITY INCENTIVE PLAN

As amended on January 21, 2020

1. PURPOSE. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, and any Parents and Subsidiaries that exist now or in the future, by offering them an opportunity to participate in the Company's future performance through the grant of Awards. Capitalized terms not defined elsewhere in the text are defined in Section 28.

2. SHARES SUBJECT TO THE PLAN.

2.1. Number of Shares Available. Subject to Sections 2.6 and 21 and any other applicable provisions hereof, the total number of Shares reserved and available for grant and issuance pursuant to this Plan as of the Amendment Effective Date (as defined below) is four million three hundred twelve thousand five hundred (4,312,500) Shares, plus (a) any reserved shares not issued or subject to outstanding grants under the Plan as of immediately prior to the Amendment Effective Date, (b) shares that are subject to stock options or other awards granted under the Company's 2008 Stock Plan (the "***Prior Plan***") on the Amendment Effective Date that cease to be subject to such stock options or other awards by forfeiture or otherwise after the Amendment Effective Date, (c) shares issued under the Prior Plan before or after the Amendment Effective Date pursuant to the exercise of stock options that are, after the Amendment Effective Date, forfeited, (d) shares issued under the Prior Plan that are repurchased by the Company at the original issue price and (e) shares that are subject to stock options or other awards under the Prior Plan that are used to pay the exercise price of an option or withheld to satisfy the tax withholding obligations related to any award.

2.2. Lapsed, Returned Awards. Shares subject to Awards, and Shares issued under the Plan under any Award, will again be available for grant and issuance in connection with subsequent Awards under this Plan to the extent such Shares: (a) are subject to issuance upon exercise of an Option or SAR granted under this Plan but which cease to be subject to the Option or SAR for any reason other than exercise of the Option or SAR; (b) are subject to Awards granted under this Plan that are forfeited or are repurchased by the Company at the original issue price; (c) are subject to Awards granted under this Plan that otherwise terminate without such Shares being issued; or (d) are surrendered pursuant to an Exchange Program. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Shares used to pay the exercise price of an Award or withheld to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan. For the avoidance of doubt, Shares that otherwise become available for grant and issuance because of the provisions of this Section 2.2 shall not include Shares subject to Awards that initially became available because of the substitution clause in Section 21.2 hereof.

2.3. Minimum Share Reserve. At all times the Company shall reserve and keep available a sufficient number of Shares as shall be required to satisfy the requirements of all outstanding Awards granted under this Plan.

2.4. Automatic Share Reserve Increase. The number of Shares available for grant and issuance under the Plan shall be increased on January 1, of each of the calendar years 2016 through 2025, by the lesser of (a) four (4%) of the number of Shares issued and outstanding on each December 31 immediately prior to the date of increase or (b) such number of Shares determined by the Board.

2.5. Limitations. No more than twelve million five hundred thousand (12,500,000) Shares shall be issued pursuant to the exercise of ISOs.

2.6. Adjustment of Shares. If the number of outstanding Shares is changed by a stock dividend, extraordinary dividends or distributions (whether in cash, shares or other property, other than a regular cash dividend) recapitalization, stock split, reverse stock split, subdivision, combination, reclassification, spin-off or similar change in the capital structure of the Company, without consideration, then (a) the number of Shares reserved for issuance and future grant under the Plan set forth in Section 2.1, including shares reserved under sub-clauses (a)-(e) of Section 2.1, (b) the Exercise Prices of and number of Shares subject to outstanding Options and SARs, (c) the number of Shares subject to other outstanding Awards, and (d) the maximum number of shares that may be issued as ISOs set forth in Section 2.5 shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

3. ELIGIBILITY. ISOs may be granted only to Employees. All other Awards may be granted to Employees, Consultants, Directors and Non-Employee Directors; provided such Consultants, Directors and Non-Employee Directors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction.

4. ADMINISTRATION.

4.1. Committee Composition; Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan, except, however, the Board shall establish the terms for the grant of an Award to Non-Employee Directors. The Committee will have the authority to:

(a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;

(b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;

(c) select persons to receive Awards;

(d) determine the form and terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may vest and be exercised (which may be based on performance criteria) or settled, any vesting acceleration or waiver of forfeiture restrictions, the method to satisfy tax withholding obligations or any other tax liability legally due and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Committee will determine;

(e) determine the number of Shares or other consideration subject to Awards;

(f) determine the Fair Market Value in good faith and interpret the applicable provisions of this Plan and the definition of Fair Market Value in connection with circumstances that impact the Fair Market Value, if necessary;

(g) determine whether Awards will be granted singly, in combination with, in tandem with, in replacement of, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent or Subsidiary of the Company;

(h) grant waivers of Plan or Award conditions;

(i) determine the vesting, exercisability and payment of Awards;

(j) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;

(k) determine whether an Award has been earned;

(l) determine the terms and conditions of any, and to institute any Exchange Program;

(m) reduce or waive any criteria with respect to Performance Factors;

(n) adjust Performance Factors to take into account changes in law and accounting or tax rules as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships;

(o) adopt terms and conditions, rules and/or procedures (including the adoption of any subplan under this Plan) relating to the operation and administration of the Plan to accommodate requirements of local law and procedures outside of the United States;

(p) make all other determinations necessary or advisable for the administration of this Plan; and

(q) delegate any of the foregoing to a subcommittee consisting of one or more executive officers pursuant to a specific delegation as permitted by applicable law, including Section 157(c) of the Delaware General Corporation Law.

4.2. Committee Interpretation and Discretion. Any determination made by the Committee with respect to any Award shall be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of the Plan or Award, at any later time, and such determination shall be final and binding on the Company and all persons having an interest in any Award under the Plan. Any dispute regarding the interpretation of the Plan or any Award Agreement shall be submitted by the Participant or Company to the Committee for review. The resolution of such a dispute by the Committee shall be final and binding on the Company and the Participant. The Committee may delegate to one or more executive

officers the authority to review and resolve disputes with respect to Awards held by Participants who are not Insiders, and such resolution shall be final and binding on the Company and the Participant.

4.3. Section 162(m) of the Code and Section 16 of the Exchange Act. When necessary or desirable for an Award to qualify as "performance-based compensation" under Section 162(m) of the Code the Committee shall include at least two persons who are "outside directors" (as defined under Section 162(m) of the Code) and at least two (or a majority if more than two then serve on the Committee) such "outside directors" shall approve the grant of such Award and timely determine (as applicable) the Performance Period and any Performance Factors upon which vesting or settlement of any portion of such Award is to be subject. When required by Section 162(m) of the Code, prior to settlement of any such Award at least two (or a majority if more than two then serve on the Committee) such "outside directors" then serving on the Committee shall determine and certify in writing the extent to which such Performance Factors have been timely achieved and the extent to which the Shares subject to such Award have thereby been earned. Awards granted to Participants who are subject to Section 16 of the Exchange Act must be approved by two or more "non-employee directors" (as defined in the regulations promulgated under Section 16 of the Exchange Act). With respect to Participants whose compensation is subject to Section 162(m) of the Code, and provided that such adjustments are consistent with the regulations promulgated under Section 162(m) of the Code, the Committee may adjust the performance goals to account for changes in law and accounting and to make such adjustments as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships, including without limitation (a) restructurings, discontinued operations, extraordinary items, and other unusual or non-recurring charges, (b) an event either not directly related to the operations of the Company or not within the reasonable control of the Company's management, or (c) a change in accounting standards required by generally accepted accounting principles.

4.4. Documentation. The Award Agreement for a given Award, the Plan and any other documents may be delivered to, and accepted by, a Participant or any other person in any manner (including electronic distribution or posting) that meets applicable legal requirements.

4.5. Foreign Award Recipients. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws and practices in other countries in which the Company and its Subsidiaries operate or have employees or other individuals eligible for Awards, the Committee, in its sole discretion, shall have the power and authority to: (a) determine which Subsidiaries and Affiliates shall be covered by the Plan; (b) determine which individuals outside the United States are eligible to participate in the Plan, which may include individuals who provide services to the Company, Subsidiary or Affiliate under an agreement with a foreign nation or agency; (c) modify the terms and conditions of any Award granted to individuals outside the United States or foreign nationals to comply with applicable foreign laws, policies, customs and practices; (d) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Committee determines such actions to be necessary or advisable (and such subplans and/or modifications shall be attached to this Plan as appendices); provided, however, that no such subplans and/or modifications shall increase the share limitations contained in Section 2.1 hereof; and (e) take any action, before or after an Award is made, that the Committee determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals. Notwithstanding the foregoing, the Committee may not take any actions hereunder, and no Awards shall be granted, that would violate the Exchange Act or any other applicable United States securities law, the Code, or any other applicable United States governing statute or law.

5. OPTIONS. An Option is the right but not the obligation to purchase a Share, subject to certain conditions, if applicable. The Committee may grant Options to eligible Employees, Consultants and Directors and will determine whether such Options will be Incentive Stock Options within the meaning of the Code ("***ISOs***") or Nonqualified Stock Options ("***NSOs***"), the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may vest and be exercised, and all other terms and conditions of the Option, subject to the following terms of this section.

5.1. Option Grant. Each Option granted under this Plan will identify the Option as an ISO or an NSO. An Option may be, but need not be, awarded upon satisfaction of such Performance Factors during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the Option is being earned upon the satisfaction of Performance Factors, then the Committee will: (a) determine the nature, length and starting date of any Performance Period for each Option; and (b) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to Options that are subject to different performance goals and other criteria.

5.2. Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, or a specified future date. The Award Agreement and a copy of this Plan will be delivered to the Participant within a reasonable time after the granting of the Option.

5.3. Exercise Period. Options may be vested and exercisable within the times or upon the conditions as set forth in the Award Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted; and provided further that no ISO granted to a person who, at the time the ISO is granted, directly or by attribution owns more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent or Subsidiary of the Company ("***Ten Percent Stockholder***") will be exercisable after the expiration of five (5) years from the date the ISO is granted. The Committee also may provide for Options to become exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4. Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: (a) the Exercise Price of an Option will be not less than one hundred percent (100%) of the Fair Market Value of the Shares on the date of grant and (b) the Exercise Price of any ISO granted to a Ten Percent Stockholder will not be less than one hundred ten percent (110%) of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 11 and the Award Agreement and in accordance with any procedures established by the Company.

5.5. Method of Exercise. Any Option granted hereunder will be vested and exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Committee and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share. An Option will be deemed exercised when the Company receives: (a) notice of exercise (in such form as the Committee may specify from time to time) from the person entitled to exercise the Option (and/or via electronic execution through the authorized third-party administrator), and (b) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Committee and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 2.6 of the Plan. Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

5.6. Termination of Service. If the Participant's Service terminates for any reason except for Cause or the Participant's death or Disability, then the Participant may exercise such Participant's Options (only to the extent that such Options are exercisable by the Participant on the date Participant's Service terminates) during the period ending no later than three (3) months after the date Participant's Service terminates (or such shorter or longer time period as may be determined by the Committee, with any exercise beyond three (3) months after the date Participant's Service terminates deemed to be the exercise of an NSO), but in any event no later than the expiration date of the Options.

(a) Death. If the Participant's Service terminates because of the Participant's death (or the Participant dies within three (3) months after Participant's Service terminates other than for Cause or because of the Participant's Disability), then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the date Participant's Service terminates and must be exercised by the Participant's legal representative, or authorized assignee, no later than twelve (12) months after the date Participant's Service terminates (or such shorter time period or longer time period as may be determined by the Committee), but in any event no later than the expiration date of the Options.

(b) Disability. If the Participant's Service terminates because of the Participant's Disability, then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the date Participant's Service terminates and must be exercised by the Participant (or the Participant's legal representative or authorized assignee) no later than twelve (12) months after the date Participant's Service terminates (or such shorter or longer time period as may be determined by the Committee, with any exercise beyond (a) three (3) months after the date Participant's Service terminates when the termination of Service is for a Disability that is not a "permanent and total disability" as defined in Section 22(e)(3) of the Code, or (b) twelve (12) months after the date Participant's Service terminates when the termination of Service is for a Disability that is a "permanent and total disability" as defined in Section 22(e)(3) of the Code, deemed to be exercise of an NSO), but in any event no later than the expiration date of the Options.

(c) Cause. If the Participant is terminated for Cause, then Participant's Options shall expire on such Participant's date of termination of Service, or at such later time and on such conditions as are determined by the Committee, but in any no

event later than the expiration date of the Options. Unless otherwise provided in the Award Agreement, Cause shall have the meaning set forth in the Plan.

5.7. Limitations on Exercise. The Committee may specify a minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent any Participant from exercising the Option for the full number of Shares for which it is then exercisable.

5.8. Limitations on ISOs. With respect to Awards granted as ISOs, to the extent that the aggregate Fair Market Value of the Shares with respect to which such ISOs are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such Options will be treated as NSOs. For purposes of this Section 5.8, ISOs will be taken into account in the order in which they were granted. The Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted. In the event that the Code or the regulations promulgated thereunder are amended after the Effective Date to provide for a different limit on the Fair Market Value of Shares permitted to be subject to ISOs, such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

5.9. Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of a Participant, impair any of such Participant's rights under any Option previously granted. Any outstanding ISO that is modified, extended, renewed or otherwise altered will be treated in accordance with Section 424(h) of the Code. Subject to Section 18 of this Plan, by written notice to affected Participants, the Committee may reduce the Exercise Price of outstanding Options without the consent of such Participants; provided, however, that the Exercise Price may not be reduced below the Fair Market Value on the date the action is taken to reduce the Exercise Price.

5.10. No Disqualification. Notwithstanding any other provision in this Plan, no term of this Plan relating to ISOs will be interpreted, amended or altered, nor will any discretion or authority granted under this Plan be exercised, so as to disqualify this Plan under Section 422 of the Code or, without the consent of the Participant affected, to disqualify any ISO under Section 422 of the Code.

6. RESTRICTED STOCK AWARDS. A Restricted Stock Award is an offer by the Company to sell to an eligible Employee, Consultant, or Director Shares that are subject to restrictions ("***Restricted Stock***"). The Committee will determine to whom an offer will be made, the number of Shares the Participant may purchase, the Purchase Price, the restrictions under which the Shares will be subject and all other terms and conditions of the Restricted Stock Award, subject to the Plan.

6.1. Restricted Stock Purchase Agreement. All purchases under a Restricted Stock Award will be evidenced by an Award Agreement. Except as may otherwise be provided in an Award Agreement, a Participant accepts a Restricted Stock Award by signing and delivering to the Company an Award Agreement with full payment of the Purchase Price, within thirty (30) days from the date the Award Agreement was delivered to the Participant. If the Participant does not accept such Award within thirty (30) days, then the offer of such Restricted Stock Award will terminate, unless the Committee determines otherwise.

6.2. Purchase Price. The Purchase Price for a Restricted Stock Award will be determined by the Committee and may be less than Fair Market Value on the date the Restricted Stock Award is granted. Payment of the Purchase Price must be made in accordance with Section 11 of the Plan, and the Award Agreement and in accordance with any procedures established by the Company.

6.3. Terms of Restricted Stock Awards. Restricted Stock Awards will be subject to such restrictions as the Committee may impose or are required by law. These restrictions may be based on completion of a specified number of years of service with the Company or upon completion of Performance Factors, if any, during any Performance Period as set out in advance in the Participant's Award Agreement. Prior to the grant of a Restricted Stock Award, the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Restricted Stock Award; (b) select from among the Performance Factors to be used to measure performance goals, if any; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Restricted Stock Awards that are subject to different Performance Periods and having different performance goals and other criteria.

6.4. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee) and any Shares of Restricted Stock that are unvested as of such date shall be forfeited on such date for no consideration.

7. STOCK BONUS AWARDS. A Stock Bonus Award is an award to an eligible Employee, Consultant, or Director of Shares for Services to be rendered or for past Services already rendered to the Company or any Parent or Subsidiary. All Stock Bonus Awards shall be made pursuant to an Award Agreement. No payment from the Participant will be required for Shares awarded pursuant to a Stock Bonus Award.

7.1. Terms of Stock Bonus Awards. The Committee will determine the number of Shares to be awarded to the Participant under a Stock Bonus Award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with the Company or upon satisfaction of performance goals based on Performance Factors during any Performance Period as set out in advance in the Participant's Stock Bonus Agreement. Prior to the grant of any Stock Bonus Award the Committee shall, as applicable: (a) determine the nature, length and starting date of any Performance Period for the Stock Bonus Award; (b) select from among the Performance Factors to be used to measure performance goals; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Stock Bonus Awards that are subject to different Performance Periods and different performance goals and other criteria.

7.2. Form of Payment to Participant. Payment may be made in the form of cash, whole Shares, or a combination thereof, based on the Fair Market Value of the Shares earned under a Stock Bonus Award on the date of payment, as determined in the sole discretion of the Committee.

7.3. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee) and any unvested portion of the Stock Bonus Award will be forfeited for no consideration on such date.

8. STOCK APPRECIATION RIGHTS. A Stock Appreciation Right ("***SAR***") is an award to an eligible Employee, Consultant, or Director that may be settled in cash, or Shares (which may consist of Restricted Stock), having a value equal to (a) the difference between the Fair Market Value on the date of exercise over the Exercise Price multiplied by (b) the number of Shares with respect to which the SAR is being settled (subject to any maximum number of Shares that may be issuable as specified in an Award Agreement). All SARs shall be made pursuant to an Award Agreement.

8.1. Terms of SARs. The Committee will determine the terms of each SAR including, without limitation: (a) the number of Shares subject to the SAR; (b) the Exercise Price and the time or times during which the SAR may be settled; (c) the consideration to be distributed on settlement of the SAR; and (d) the effect of the Participant's termination of Service on each SAR. The Exercise Price of the SAR will be determined by the Committee when the SAR is granted, and may not be less than Fair Market Value of the Shares on the date of grant. A SAR may be awarded upon satisfaction of Performance Factors, if any, during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the SAR is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each SAR; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to SARs that are subject to different Performance Factors and other criteria.

8.2. Exercise Period and Expiration Date. A SAR will be exercisable within the times or upon the occurrence of events determined by the Committee and as set forth in the Award Agreement governing such SAR. The SAR Agreement shall set forth the expiration date; provided that no SAR will be exercisable after the expiration of ten (10) years from the date the SAR is granted. The Committee may also provide for SARs to become exercisable at one time or from time to time, periodically or otherwise (including, without limitation, upon the attainment during a Performance Period of performance goals based on Performance Factors), in such number of Shares or percentage of the Shares subject to the SAR as the Committee determines. Except as may be set forth in the Participant's Award Agreement, vesting ceases on the date Participant's Service terminates (unless determined otherwise by the Committee). Notwithstanding the foregoing, the rules of Section 5.6 also will apply to SARs.

8.3. Form of Settlement. Upon exercise of a SAR, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying (a) the difference between the Fair Market Value of a Share on the date of exercise over the Exercise Price; times (b) the number of Shares with respect to which the SAR is exercised. At the discretion of the Committee, the payment from the Company for the SAR exercise may be in cash, in Shares of equivalent value, or in some combination thereof. The portion of a SAR being settled may be paid currently or on a deferred basis with such interest or dividend equivalent, if any, as the Committee determines, provided that the terms of the SAR and any deferral satisfy the requirements of Section 409A of the Code.

8.4. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee) and any SARs that remain unvested on such date shall be forfeited on such date for no consideration.

9. RESTRICTED STOCK UNITS. A Restricted Stock Unit ("***RSU***") is an award to an eligible Employee, Consultant, or Director covering a number of Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). All RSUs shall be made pursuant to an Award Agreement.

9.1. Terms of RSUs. The Committee will determine the terms of an RSU including, without limitation: (a) the number of Shares subject to the RSU; (b) the time or times during which the RSU may be settled; (c) the consideration to be distributed on settlement; and (d) the effect of the Participant's termination of Service on each RSU. An RSU may be awarded upon satisfaction of such performance goals based on Performance Factors during any Performance Period as are set out in advance in the Participant's Award Agreement. If the RSU is being earned upon satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for the RSU; (y) select from among the Performance Factors to be used to measure the performance, if any; and (z) determine the number of Shares deemed subject to the RSU. Performance Periods may overlap and participants may participate simultaneously with respect to RSUs that are subject to different Performance Periods and different performance goals and other criteria.

9.2. Form and Timing of Settlement. Payment of earned RSUs shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. The Committee, in its sole discretion, may settle earned RSUs in cash, Shares, or a combination of both. The Committee may also permit a Participant to defer payment under a RSU to a date or dates after the RSU is earned provided that the terms of the RSU and any deferral satisfy the requirements of Section 409A of the Code.

9.3. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee).

10. PERFORMANCE AWARDS. A "***Performance Award***" is an award to an eligible Employee, Consultant, or Director of a cash bonus or an award of Performance Shares denominated in Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). Grants of Performance Awards shall be made pursuant to an Award Agreement.

10.1. Terms of Performance Awards. The Committee will determine, and each Award Agreement shall set forth, the terms of each Performance Award including, without limitation: (a) the amount of any cash bonus, (b) the number of Shares deemed subject to an award of Performance Shares; (c) the Performance Factors and Performance Period that shall determine the time and extent to which each Performance Award will be settled or paid (d) the consideration to be distributed on settlement or payment, and (e) the effect of the Participant's termination of Service on each Performance Award. In establishing Performance Factors and the Performance Period the Committee will: (x) determine the nature, length and starting date of any Performance Period; (y) select from among the Performance Factors to be used; and (z) determine the number of Shares deemed subject to the award of Performance Shares or the cash value of any cash bonus subject to a Performance Award. Prior to settlement the Committee shall determine the extent to which Performance Awards have been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Performance Awards that are subject to different Performance Periods and different performance goals and other criteria. No Participant will be eligible to receive more than $5,000,000 in cash bonus Performance Awards in any annual Performance Period under this Plan and for any other Performance Period, such amount multiplied by a fraction, the numerator of which is the number of months in the Performance Period and the denominator of which is twelve (12).

10.2. Value, Earning and Timing of Performance Shares. Each Performance Share will have an initial value equal to the Fair Market Value of a Share on the date of grant. After the applicable Performance Period has ended, the holder of Performance Shares will be entitled to receive a payout of the number of Performance Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding Performance Factors or other vesting provisions have been achieved. The Committee, in its sole discretion, may pay earned Performance Shares in the form of cash, in Shares (which have an aggregate Fair Market Value equal to the value of the earned Performance Shares at the close of the applicable Performance Period) or in a combination thereof.

10.3. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on the date Participant's Service terminates (unless determined otherwise by the Committee) and any unvested Performance Awards shall be forfeited on such date for no consideration.

11. PAYMENT FOR SHARE PURCHASES. Payment from a Participant for Shares purchased pursuant to this Plan may be made in cash or by check or, where expressly approved for the Participant by the Committee and where permitted by law (and to the extent not otherwise set forth in the applicable Award Agreement):

(a) by cancellation of indebtedness of the Company to the Participant;

(b) by surrender of shares of the Company held by the Participant that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Award will be exercised or settled;

(c) by waiver of compensation due or accrued to the Participant for services rendered or to be rendered to the Company or a Parent or Subsidiary of the Company;

(d) by consideration received by the Company pursuant to a broker-assisted or other form of cashless exercise program implemented by the Company in connection with the Plan;

(e) by any combination of the foregoing; or

(f) by any other method of payment as is permitted by applicable law.

12. GRANTS TO NON-EMPLOYEE DIRECTORS. Non-Employee Directors are eligible to receive any type of Award offered under this Plan except ISOs. No Non-Employee Director may receive Awards under the Plan that, when combined with cash compensation received for service as a Non-Employee Director, exceed eight hundred thousand dollars ($800,000) in value (as described below) in any calendar year. The value of Awards for purposes of complying with this maximum will be determined as follows: (a) for Options and SARs, grant date fair value will be calculated using the Company's regular valuation methodology for determining the grant date fair value of Options for reporting purposes and (b) for all other Awards other than Options and SARs, grant date fair value will be determined by either (i) calculating the product of the Fair Market Value per Share on the date of grant and the aggregate number of Shares subject to the Award, or (ii) calculating the product using an average of the Fair Market Value over a number of trading days and the aggregate number of Shares subject to the Award as determined by the Committee. Awards granted to an individual while he or she was serving in the capacity as an Employee or while he or she was a Consultant but not a Non-Employee Director will not count for purposes of the limitations set forth in this Section 12. Awards pursuant to this Section 12 may be automatically made pursuant to policy adopted by the Board, or made from time to time as determined in the discretion of the Board.

12.1. Eligibility. Awards pursuant to this Section 12 shall be granted only to Non-Employee Directors. A Non-Employee Director who is elected or re-elected as a member of the Board will be eligible to receive an Award under this Section 12.

12.2. Vesting, Exercisability and Settlement. Except as set forth in Section 21, Awards shall vest, become exercisable and be settled as determined by the Board. With respect to Options and SARs, the exercise price granted to Non-Employee Directors shall not be less than the Fair Market Value of the Shares at the time that such Option or SAR is granted.

12.3. Election to receive Awards in Lieu of Cash. A Non-Employee Director may, if permitted by the Committee in its sole discretion, elect to receive his or her annual retainer payments and/or meeting fees from the Company in the form of cash or Awards or a combination thereof, as determined by the Committee. Such Awards shall be issued under the Plan. An election under this Section 12.3 shall be filed with the Company on the form prescribed by the Company.

13. WITHHOLDING TAXES.

13.1. Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan or the applicable tax event occurs, the Company may require the Participant to remit to the Company, or to the Parent or Subsidiary employing the Participant, an amount sufficient to satisfy applicable U.S. federal, state, local and international withholding tax requirements or any other tax or social insurance liability legally due from the Participant prior to the delivery of Shares pursuant to exercise or settlement of any Award. Whenever payments in satisfaction of Awards granted under this Plan are to be made in cash, such payment will be net of an amount sufficient to satisfy applicable U.S. federal, state, local and international withholding tax or social insurance requirements or any other tax liability legally due from the Participant. The Fair Market Value of the Shares will be determined as of the date that the taxes are required to be withheld and such Shares will be valued based on the value of the actual trade or, if there is none, the Fair Market Value of the Shares as of the previous trading day.

13.2. Stock Withholding. The Committee, or its delegate(s), as permitted by applicable law, in its sole discretion and pursuant to such procedures as it may specify from time to time and to limitations of local law, may require or permit a Participant to satisfy such tax withholding obligation or any other tax liability legally due from the Participant, in whole or in

part by (without limitation) (a) paying cash, (b) electing to have the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to the minimum statutory amount required to be withheld, (c) delivering to the Company already-owned Shares having a Fair Market Value equal to the minimum amount required to be withheld or (d) withholding from the proceeds of the sale of otherwise deliverable Shares acquired pursuant to an Award either through a voluntary sale or through a mandatory sale arranged by the Company.

14. TRANSFERABILITY.

14.1. Transfer Generally. Unless determined otherwise by the Committee or pursuant to Section 14.2, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. If the Committee makes an Award transferable, including, without limitation, by instrument to an inter vivos or testamentary trust in which the Awards are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift or by domestic relations order to a Permitted Transferee, such Award will contain such additional terms and conditions as the Committee deems appropriate. All Awards shall be exercisable: (a) during the Participant's lifetime only by (i) the Participant, or (ii) the Participant's guardian or legal representative; (b) after the Participant's death, by the legal representative of the Participant's heirs or legatees; and (c) in the case of all awards except ISOs, by a Permitted Transferee.

14.2. Award Transfer Program. Notwithstanding any contrary provision of the Plan, the Committee shall have all discretion and authority to determine and implement the terms and conditions of any Award Transfer Program instituted pursuant to this Section 14.2 and shall have the authority to amend the terms of any Award participating, or otherwise eligible to participate in, any such Award Transfer Program, including (but not limited to) the authority to (a) amend (including to extend) the expiration date, post-termination exercise period and/or forfeiture conditions of any such Award, (b) amend or remove any provisions of the Award relating to the Award holder's continued service to the Company or its Parent or any Subsidiary, (c) amend the permissible payment methods with respect to the exercise or purchase of any such Award, (d) amend the adjustments to be implemented in the event of changes in the capitalization and other similar events with respect to such Award, and (e) make such other changes to the terms of such Award as the Committee deems necessary or appropriate in its sole discretion.

15. PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES.

15.1. Voting and Dividends. No Participant will have any of the rights of a stockholder with respect to any Shares until the Shares are issued to the Participant, except for any Dividend Equivalent Rights permitted by an applicable Award Agreement. Any Dividend Equivalent Rights shall be subject to the same vesting or performance conditions as the underlying Award. In addition, the Committee may provide that any Dividend Equivalent Rights permitted by an applicable Award Agreement shall be deemed to have been reinvested in additional Shares or otherwise reinvested. After Shares are issued to the Participant, the Participant will be a stockholder and have all the rights of a stockholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Restricted Stock, then any new, additional or different securities the Participant may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Restricted Stock; provided, further, that the Participant will have no right to retain such stock dividends or stock distributions with respect to Shares that are repurchased at the Participant's Purchase Price or Exercise Price, as the case may be, pursuant to Section 15.2.

15.2. Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) a right to repurchase (a "***Right of Repurchase***") a portion of any or all Unvested Shares held by a Participant following such Participant's termination of Service at any time within ninety (90) days (or such longer or shorter time determined by the Committee) after the later of the date Participant's Service terminates and the date the Participant purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Participant's Purchase Price or Exercise Price, as the case may be.

16. CERTIFICATES. All Shares or other securities (whether or not certificated) delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable U.S. federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted and any non-U.S. exchange controls or securities law restrictions to which the Shares are subject.

17. ESCROW; PLEDGE OF SHARES. To enforce any restrictions on a Participant's Shares, the Committee may require the Participant to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to

hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Participant who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of the Participant's obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event, the Company will have full recourse against the Participant under the promissory note notwithstanding any pledge of the Participant's Shares or other collateral. In connection with any pledge of the Shares, the Participant will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

18. REPRICING; EXCHANGE AND BUYOUT OF AWARDS. Without prior stockholder approval the Committee may (a) reprice Options or SARs (and where such repricing is a reduction in the Exercise Price of outstanding Options or SARs, the consent of the affected Participants is not required provided written notice is provided to them, notwithstanding any adverse tax consequences to them arising from the repricing), and (b) with the consent of the respective Participants (unless not required pursuant to Section 5.9 of the Plan), pay cash or issue new Awards in exchange for the surrender and cancellation of any, or all, outstanding Awards.

19. SECURITIES LAW AND OTHER REGULATORY COMPLIANCE. An Award will not be effective unless such Award is in compliance with all applicable U.S. and foreign federal and state securities and exchange control laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal or foreign law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any foreign or state securities laws, exchange control laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

20. NO OBLIGATION TO EMPLOY. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Participant any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent, Subsidiary or Affiliate or limit in any way the right of the Company or any Parent, Subsidiary or Affiliate to terminate Participant's employment or other relationship at any time.

21. CORPORATE TRANSACTIONS.

21.1. Assumption or Replacement of Awards by Successor. In the event of a Corporate Transaction any or all outstanding Awards may be assumed or replaced by the successor corporation, which assumption or replacement shall be binding on all Participants. In the alternative, the successor corporation may substitute equivalent Awards or provide substantially similar consideration to Participants as was provided to stockholders (after taking into account the existing provisions of the Awards). The successor corporation may also issue, in place of outstanding Shares of the Company held by the Participant, substantially similar shares, cash or other property subject to repurchase restrictions no less favorable to the Participant. In the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, then notwithstanding any other provision in this Plan to the contrary, such Awards shall have their vesting accelerate as to all shares subject to such Award (and any applicable rights of repurchase shall fully lapse) immediately prior to the Corporate Transaction. In addition, in the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, the Committee will (i) notify the Participant in writing or electronically that such Award will, if applicable, be exercisable for a period of time determined by the Committee in its sole discretion, and such Award will terminate upon the earlier of the expiration of such period or immediately prior to the Corporate Transaction or (ii) provide that each Award shall be cancelled immediately upon the occurrence of the Corporate Transaction in exchange for a payment in cash or securities in an amount equal to (A) the excess of the consideration paid per Share in the Corporate Transaction over the exercise price or purchase price (if any) per Share subject to the Award multiplied by (B) the number of Shares subject to the Award. Awards need not be treated similarly in a Corporate Transaction.

21.2. Assumption of Awards by the Company. The Company, from time to time, also may substitute or assume outstanding awards granted by another company, whether in connection with an acquisition of such other company or otherwise, by either; (a) granting an Award under this Plan in substitution of such other company's award; or (b) assuming

such award as if it had been granted under this Plan if the terms of such assumed award could be applied to an Award granted under this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed award would have been eligible to be granted an Award under this Plan if the other company had applied the rules of this Plan to such grant. In the event the Company assumes an award granted by another company, the terms and conditions of such award will remain unchanged (except that the Purchase Price or the Exercise Price, as the case may be, and the number and nature of Shares issuable upon exercise or settlement of any such Award will be adjusted appropriately pursuant to Section 424(a) of the Code). In the event the Company elects to grant a new Option in substitution of rather than assumption of an existing option, such new Option may be granted with a similarly adjusted Exercise Price. Substitute Awards shall not reduce the number of Shares authorized for grant under the Plan or authorized for grant to a Participant in a calendar year.

21.3. Non-Employee Directors' Awards. Notwithstanding any provision to the contrary herein, in the event of a Corporate Transaction, the vesting of all Awards granted to Non-Employee Directors shall accelerate immediately prior to the consummation of such Corporate Transaction and such Awards shall become exercisable (as applicable) in full prior to the consummation of such event at such times and on such conditions as the Committee determines.

22. ADOPTION AND STOCKHOLDER APPROVAL. This Plan shall be submitted for the approval of the Company's stockholders, consistent with applicable laws, within twelve (12) months before or after the date this Plan is adopted by the Board.

23. TERM OF PLAN/GOVERNING LAW. Unless earlier terminated as provided herein, this Plan will become effective on the Effective Date and will terminate ten (10) years from the date this Plan is adopted by the Board. This Plan and all Awards granted hereunder shall be governed by and construed in accordance with the laws of the State of Delaware (excluding its conflict of law rules).

24. AMENDMENT OR TERMINATION OF PLAN. The Board may at any time terminate or amend this Plan in any respect, including, without limitation, amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board will not, without the approval of the stockholders of the Company, amend this Plan in any manner that requires such stockholder approval; provided further, that a Participant's Award shall be governed by the version of this Plan then in effect at the time such Award was granted.

25. NONEXCLUSIVITY OF THE PLAN. Neither the adoption of this Plan by the Board, the submission of this Plan to the stockholders of the Company for approval, nor any provision of this Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock awards and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

26. INSIDER TRADING POLICY. Each Participant who receives an Award shall comply with any policy adopted by the Company from time to time covering transactions in the Company's securities by Employees, officers and/or directors of the Company.

27. ALL AWARDS SUBJECT TO COMPANY CLAWBACK OR RECOUPMENT POLICY. All Awards, subject to applicable law, shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of Participant's employment or other service with the Company that is applicable to executive officers, employees, directors or other service providers of the Company, and in addition to any other remedies available under such policy and applicable law, may require the cancellation of outstanding Awards and the recoupment of any gains realized with respect to Awards.

28. DEFINITIONS. As used in this Plan, and except as elsewhere defined herein, the following terms will have the following meanings:

28.1. "***Affiliate***" means (i) any entity that, directly or indirectly, is controlled by, controls or is under common control with, the Company and (ii) any entity in which the Company has a significant equity interest, in either case as determined by the Committee, whether now or hereafter existing.

28.2. *"Amendment Effective Date"* means the date on which the amendments to the Plan are approved by the Board and the Company stockholders.

28.3 *"Award*" means any award under the Plan, including any Option, Restricted Stock, Stock Bonus Award, Stock Appreciation Right, Restricted Stock Unit, Performance Award or award of Performance Shares.

28.4. "***Award Agreement***" means, with respect to each Award, the written or electronic agreement between the Company and the Participant setting forth the terms and conditions of the Award, and country-specific appendix thereto for grants to non-U.S. Participants, which shall be in substantially a form (which need not be the same for each Participant) that the Committee (or in the case of Award agreements that are not used for Insiders, the Committee's delegate(s)) has from time to time approved, and will comply with and be subject to the terms and conditions of this Plan.

28.5. "***Award Transfer Program***" means any program instituted by the Committee which would permit Participants the opportunity to transfer any outstanding Awards to a financial institution or other person or entity approved by the Committee.

28.6. "***Board***" means the Board of Directors of the Company.

28.7. "***Cause***" means (a) Participant's conviction (including a guilty plea or plea of *nolo contendere*) of any felony or any other crime involving fraud, dishonesty or moral turpitude; (b) Participant's commission or attempted commission of or participation in a fraud or act of dishonesty or misrepresentation against the Company that results (or could reasonably be expected to result) in material harm or injury to the business or reputation of the Company; (c) Participant's material violation of any contract or agreement between Participant and the Company, or of any Company policy, or of any statutory duty Participant owes to the Company; or (d) Participant's conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or could reasonably be expected to have resulted in) material harm to the business or reputation of the Company. The determination as to whether a Participant is being terminated for Cause shall be made in good faith by the Company and shall be final and binding on the Participant. The foregoing definition does not in any way limit the Company's ability to terminate a Participant's employment or consulting relationship at any time as provided in Section 20 above, and the term "Company" will be interpreted to include any Subsidiary or Parent, as appropriate. Notwithstanding the foregoing, the foregoing definition of "Cause" may, in part or in whole, be modified or replaced in each individual employment agreement or Award Agreement with any Participant, provided that such document supersedes the definition provided in this Section 28.6.

28.8. "***Code***" means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

28.9. "***Committee***" means the Compensation Committee of the Board or those persons to whom administration of the Plan, or part of the Plan, has been delegated as permitted by law.

28.10. "***Common Stock***" means the common stock of the Company.

28.11. "***Company***" means Sierra Oncology, Inc., or any successor corporation.

28.12. "***Consultant***" means any natural person, including an advisor or independent contractor, engaged by the Company or a Parent, Subsidiary or Affiliate to render services to such entity.

28.13. "***Corporate Transaction***" means the occurrence of any of the following events: (a) any "Person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the total voting power represented by the Company's then-outstanding voting securities; provided, however, that for purposes of this subclause (a) the acquisition of additional securities by any one Person who is considered to own more than fifty percent (50%) of the total voting power of the securities of the Company will not be considered a Corporate Transaction; (b) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; (c) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation; (d) any other transaction which qualifies as a "corporate transaction" under Section 424(a) of the Code wherein the stockholders of the Company give up all of their equity interest in the Company (except for the acquisition, sale or transfer of all or substantially all of the outstanding shares of the Company) or (e) a change in the effective control of the Company that occurs on the date that a majority of members of the Board are replaced during any twelve (12) month period by members of the Board whose appointment or election is not endorsed by as majority of the members of the Board prior to the date of such appointment or election. For purpose of this subclause (e), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Corporate Transaction. For purposes of this definition, Persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of

stock, or similar business transaction with the Company. Notwithstanding the foregoing, to the extent that any amount constituting deferred compensation (as defined in Section 409A of the Code) would become payable under this Plan by reason of a Corporate Transaction, such amount shall become payable only if the event constituting a Corporate Transaction would also qualify as a change in ownership or effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company, each as defined within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and IRS guidance that has been promulgated or may be promulgated thereunder from time to time.

28.14. "***Director***" means a member of the Board.

28.15. "***Disability***" means in the case of incentive stock options, total and permanent disability as defined in Section 22(e)(3) of the Code and in the case of other Awards, that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

28.16. "***Dividend Equivalent Right"*** means the right of a Participant, granted at the discretion of the Committee or as otherwise provided by the Plan or an Award Agreement, to receive a credit for the account of such Participant in an amount equal to the cash, stock or other property dividends in amounts equal equivalent to cash, stock or other property dividends for each Share represented by an Award held by such Participant.

28.17. "***Effective Date***" means the day immediately prior to the date of the underwritten initial public offering of the Company's Common Stock pursuant to a registration statement that is declared effective by the SEC.

28.18. "***Employee***" means any person, including Officers and Directors, providing services as an employee to the Company or any Parent, Subsidiary or Affiliate. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

28.19. "***Exchange Act***" means the United States Securities Exchange Act of 1934, as amended.

28.20. "***Exchange Program***" means a program pursuant to which (a) outstanding Awards are surrendered, cancelled or exchanged for cash, the same type of Award or a different Award (or combination thereof) or (b) the exercise price of an outstanding Award is increased or reduced.

28.21. "***Exercise Price***" means, with respect to an Option, the price at which a holder may purchase the Shares issuable upon exercise of an Option and with respect to a SAR, the price at which the SAR is granted to the holder thereof.

28.22. "***Fair Market Value***" means, as of any date, the value of a share of the Company's Common Stock determined as follows:

(a) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in *The Wall Street* Journal or such other source as the Committee deems reliable;

(b) if such Common Stock is publicly traded but is neither listed nor admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal* or such other source as the Committee deems reliable;

(c) in the case of an Option or SAR grant made on the Effective Date, the price per share at which shares of the Company's Common Stock are initially offered for sale to the public by the Company's underwriters in the initial public offering of the Company's Common Stock pursuant to a registration statement filed with the SEC under the Securities Act; or

(d) if none of the foregoing is applicable, by the Board or the Committee in good faith.

28.23. "***Insider***" means an officer or director of the Company or any other person whose transactions in the Company's Common Stock are subject to Section 16 of the Exchange Act.

28.24. "***IRS***" means the United States Internal Revenue Service.

28.25. "***Non-Employee Director***" means a Director who is not an Employee of the Company or any Parent or Subsidiary.

28.26. "***Option***" means an award of an option to purchase Shares pursuant to Section 5.

28.27. "***Parent***" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

28.28. "***Participant***" means a person who holds an Award under this Plan.

28.29. "***Performance Award***" means cash or stock granted pursuant to Section 10 of the Plan.

28.30. ***"Performance Factors"*** means any of the factors selected by the Committee and specified in an Award Agreement, from among the following objective measures, either individually, alternatively or in any combination, applied to the Company as a whole or any business unit or Subsidiary, either individually, alternatively, or in any combination, on a GAAP or non-GAAP basis, and measured, to the extent applicable on an absolute basis or relative to a pre-established target, to determine whether the performance goals established by the Committee with respect to applicable Awards have been satisfied:

(a) Profit Before Tax;

(b) Billings;

(c) Revenue;

(d) Net revenue;

(e) Earnings (which may include earnings before interest and taxes, earnings before taxes, and net earnings);

(f) Operating income;

(g) Operating margin;

(h) Operating profit;

(i) Controllable operating profit, or net operating profit;

(j) Net Profit;

(k) Gross margin;

(l) Operating expenses or operating expenses as a percentage of revenue;

(m) Net income;

(n) Earnings per share;

(o) Total stockholder return;

(p) Market share;

(q) Return on assets or net assets;

(r) The Company's stock price;

(s) Growth in stockholder value relative to a pre-determined index;

(t) Return on equity;

(u) Return on invested capital;

(v) Cash Flow (including free cash flow or operating cash flows)

(w) Cash conversion cycle;

(x) Economic value added;

(y) Individual confidential business objectives;

(z) Contract awards or backlog;

(aa) Overhead or other expense reduction;

(bb) Credit rating;

(cc) Strategic plan development and implementation;

(dd) Succession plan development and implementation;

(ee) Improvement in workforce diversity;

(ff) Customer indicators;

(gg) New product invention or innovation;

(hh) Attainment of research and development milestones;

(ii) Improvements in productivity;

(jj) Bookings; and

(kk) Attainment of objective operating goals and employee metrics.

The Committee may, in recognition of unusual or non-recurring items such as acquisition-related activities or changes in applicable accounting rules, provide for one or more equitable adjustments (based on objective standards) to the Performance Factors to preserve the Committee's original intent regarding the Performance Factors at the time of the initial award grant. It is within the sole discretion of the Committee to make or not make any such equitable adjustments.

28.31. "***Performance Period***" means the period of service determined by the Committee, not to exceed five (5) years, during which years of service or performance is to be measured for the Award.

28.32. "***Performance Share***" means an Award granted pursuant to Section 10 of the Plan.

28.33. "***Permitted Transferee***" means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships) of the Employee, any person sharing the Employee's household (other than a tenant or employee), a trust in which these persons (or the Employee) have more than 50% of the beneficial interest, a foundation in which these persons (or the Employee) control the management of assets, and any other entity in which these persons (or the Employee) own more than 50% of the voting interests.

28.34. "***Plan***" means this Sierra Oncology, Inc. 2015 Equity Incentive Plan (formerly called the ProNai Therapeutics, Inc. 2015 Equity Incentive Plan).

28.35. "***Purchase Price***" means the price to be paid for Shares acquired under the Plan, other than Shares acquired upon exercise of an Option or SAR.

28.36. "***Restricted Stock Award***" means an award of Shares pursuant to Section 6 of the Plan, or issued pursuant to the early exercise of an Option.

28.37. "***Restricted Stock Unit***" means an Award granted pursuant to Section 9 of the Plan.

28.38. "***SEC***" means the United States Securities and Exchange Commission.

28.39. "***Securities Act***" means the United States Securities Act of 1933, as amended.

28.40. "***Service***" shall mean service as an Employee, Consultant, Director or Non-Employee Director, to the Company or a Parent, Subsidiary or Affiliate, subject to such further limitations as may be set forth in the Plan or the applicable Award Agreement. An Employee will not be deemed to have ceased to provide Service in the case of (a) sick leave, (b) military leave, or (c) any other leave of absence approved by the Company; provided, that such leave is for a period of not more than 90 days (x) unless reemployment upon the expiration of such leave is guaranteed by contract or statute, or (y) unless provided otherwise pursuant to formal policy adopted from time to time by the Company and issued and promulgated to employees in writing. In the case of any Employee on an approved leave of absence or a reduction in hours worked (for illustrative purposes only, a change in schedule from that of full-time to part-time), the Committee may make such provisions regarding suspension of or modification of vesting of the Award while on leave from the employ of the Company or a Parent, Subsidiary or Affiliate or during such change in working hours as it may deem appropriate, except that in no event may an Award be exercised after the expiration of the term set forth in the applicable Award Agreement. In the event of military leave, if required by applicable laws, vesting shall continue for the longest period that vesting continues under any other statutory or Company approved leave of absence and, upon a Participant's returning from military leave (under conditions that would entitle him or her to protection upon such return under the Uniform Services Employment and Reemployment Rights Act), he or she shall be given vesting credit with respect to Awards to the same extent as would have applied had the Participant continued to provide services to the Company throughout the leave on the same terms as he or she was providing services immediately prior to such leave. Except as set forth in this Section 28.39, an employee shall have terminated employment as of the date he or she ceases provide services (regardless of whether the termination is in breach of local employment laws or is later found to be invalid) and employment shall not be extended by any notice period or garden leave mandated by local law, *provided however*, that a change in status from an employee to a consultant or advisor shall not terminate the service provider's Service, unless determined by the Committee, in its discretion. The Committee will have sole discretion to determine whether a Participant has ceased to provide Services and the effective date on which the Participant ceased to provide Services.

28.41. "***Shares***" means shares of Common Stock and the common stock of any successor entity.

28.42. "***Stock Appreciation Right***" means an Award granted pursuant to Section 8 of the Plan.

28.43. "***Stock Bonus***" means an Award granted pursuant to Section 7 of the Plan.

28.44. "***Subsidiary***" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

28.45. "***Treasury Regulations***" means regulations promulgated by the United States Treasury Department.

28.46. "***Unvested Shares***" means Shares that have not yet vested or are subject to a right of repurchase in favor of the Company (or any successor thereto).

SIERRA ONCOLOGY, INC.

(the **"Company")**

2015 EQUITY INCENTIVE PLAN

(the **"Plan")**

ADDENDUM FOR CANADIAN PARTICIPANTS

A. The Company has adopted the Plan, to be effective on the Effective Date.

B. The Company desires to modify certain terms of the Plan in their application for Directors, Non-Employee Directors and Employees (as those terms are defined in the Plan) who are resident in Canada for purposes of the *Income Tax Act* (Canada) or otherwise subject to Canadian personal income tax (the "**Canadian Participants**").

C. Under the Income Tax Act (Canada), Directors, Non-Employee Directors and Employees who are Canadian Participants are treated as officers and employees for purposes of that Act.

NOW THEREFORE, the Company does hereby amend certain terms and conditions of the Plan as they apply to the Canadian Participants, as follows.

1. **Defined Terms**. In this Addendum, all defined terms shall have the respective meanings set forth in the Plan, unless otherwise defined herein.

2. **Effective Date**. The effective date of this Addendum is the Effective Date.

3. **Options.**

(a) Options granted to Canadian Participants will be NSOs.

(b) Notwithstanding section 5.2 of the Plan, the grant date of an Option awarded to a Canadian Participant shall be, in all cases, the date the Option is actually granted to the Canadian Participant, as evidenced by the Award Agreement.

(c) Notwithstanding section 5.1 of the Plan, satisfaction of Performance Factors, if any, will be treated as a condition subsequent to the grant to a Canadian Participant of an Option giving rise to a risk of forfeiture of the Option and not a condition precedent to the grant of the Option.

(d) For purposes of section 5.9 of the Plan, Options granted to a Canadian Participant will not be modified or altered, or new options granted in substitution therefor, if such modification, alteration or substitution has a material adverse affect on such Canadian Participant's tax treatment of such Options, except with such Canadian Participant's consent.

4. **Stock Bonus Awards**.

Section 7.2 of the Plan shall be modified as it applies to Canadian Participants such that the Company is required to issue Shares in payment of a Stock Bonus Award to a Canadian Participant and the Company cannot choose, at its option, to make such payment in cash or a combination of cash and Shares, and section 7.2 shall read as follows:

"7.2. Form of Payment to Canadian Participant. Payment of a Stock Bonus Award to a Canadian Participant shall be settled solely by the issuance of Shares."

5. Stock Appreciation Rights.

(a) Section 8.2 of the Plan shall be modified as it applies to Canadian Participants such that the Committee will provide that a SAR (or a portion thereof) becomes exercisable on the date of vesting of the SAR (or portion thereof), which date will be the date of exercise of the SAR (or portion thereof) for purposes of section 8.3 of the Plan. The relevant SAR (or portion thereof) will be deemed to be exercised on that date and the Canadian Participant will be immediately entitled to receive payment from the Company under section 8.3 of the Plan.

(b) Section 8.3 of the Plan shall be modified as it applies to Canadian Participants such that each SAR (or portion thereof) that vests and is deemed to be exercised pursuant to section 8.2 of the Plan (as modified by section 4(a) of this Addendum) shall be settled and paid out to the Canadian Participant as soon as practicable after the date of such vesting, and the terms of the SAR shall not, in any circumstances, provide for a deferral of such payment.

6. Restricted Stock Units.

Section 9.2 of the Plan shall be modified as it applies to Canadian Participants such that the Company agrees to issue only Shares in payment of RSUs to a Canadian Participant and the Company cannot choose, at its option, to make such payment in cash or a combination of cash and Shares, and section 9.2 shall read as follows:

"9.2. Form and Timing of Settlement to Canadian Participants. Payment of earned RSUs of a Canadian Participant shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. Such earned RSUs shall be settled solely by the issuance of Shares. The Committee may permit a Canadian Participant to defer settlement and the issuance of Shares in payment of an earned RSU to a date that is acceptable to the Committee, provided that the terms of the Award Agreement, the RSUs and any deferral meet the conditions of section 7 of the *Income Tax Act* (Canada)."

7. Performance Awards.

(a) Section 10.1 of the Plan shall be modified as it applies to Canadian Participants and shall read as follows:

"10.1 Terms of Performance Awards. The Committee will determine, and each Award Agreement shall set for the terms of each Performance Award, including, without limitation, the consideration to be distributed on settlement or payment; the Performance Factors and the Performance Period that shall determine the time and extent to which each Performance Award will be settled or paid; and the effect of the Canadian Participant's termination of Service on each Performance Award. In establishing Performance Factors and the Performance Period the Committee will: (x) determine the nature, length and starting date of any Performance Period; (y) select from among the Performance Factors to be used; and (z) determine the number of Shares deemed subject to the award of Performance Shares or the cash value of any cash bonus subject to a Performance Award.

10.1.1 If the Performance Award is in the form of a cash bonus, the Committee shall determine, and the Award Agreement shall provide, that the Performance Award must be paid out to the Canadian Participant within three (3) years after the end of the first year in which the services were performed and in respect of which that Performance Award is granted.

10.1.2 If the Performance Award is in the form of Performance Shares, the Committee shall determine, and the Award Agreement shall set forth, the number of Shares deemed subject to such award of Performance Shares.

10.1.3 Prior to settlement of any Performance Award the Committee shall determine the extent to which such Performance Award has been earned. Subject to section 10.1.1, Performance Periods may overlap and Participants may participate simultaneously with respect to Performance Awards that are, subject to different Performance Periods and different performance goals and other criteria. No Participant will be eligible to receive more than $5,000,000 in cash bonus Performance Awards in any annual Performance Period under this Plan, and for any other Performance Period, such amount multiplied by a fraction, the number of which is the number of months in the Performance period and the denominator of which is twelve (12)."

(b) Section 10.2 of the Plan shall be modified as it applies to Canadian Participants in respect of Performance Shares such that the Company agrees to issue only Shares in payment of awards of Performance Shares to a Canadian Participant and neither the Committee nor the Company may choose, at its option, to make such payment in cash or a combination of cash and Shares.

8. Payment for Share Purchases.

Section 11(b) of the Plan shall be modified as at applies to Canadian Participants with respect to the consideration that may be paid by Canadian Participants for Shares purchased pursuant to the Plan. In no circumstances shall a Canadian Participant be permitted to make, and the Committee shall not approve, a payment by the Canadian Participant by the surrender of any Shares that were acquired at any time by the Canadian Participant on the exercise of any Option.

9. Withholding Taxes.

(a) Section 13.1 of the Plan shall be modified as it applies to Canadian Participants and shall read as follows:

"13.1 Withholding for Canadian Participants. The Company or any Affiliate may take such reasonable steps for the deduction and withholding of any taxes and other required source deductions which the Company or Affiliate, as the case may be, is required by law or regulation of any governmental authority whatsoever to remit in connection with the exercise or settlement of any Award granted to a Canadian Participant. Without limiting the generality of the foregoing, whenever a settlement or payment is made by the issuance of Shares to a Canadian Participant in satisfaction of Awards granted under this Plan, the Company or Affiliate, as the case may be, may, at its discretion (i) deduct and withhold those amounts it is required to remit from any cash remuneration or other amount payable to the Canadian Participant, whether or not such amount payable is related to the Plan, or the exercise or settlement of any Awards; (ii) permit the Canadian Participant to make a cash payment to the Company or Affiliate, as the case may be, equal to the amount required to be remitted; or (iii) sell, on behalf of the Canadian Participant, that number of Shares to be issued on the exercise or settlement such that the amount of the proceeds of such sale will be sufficient to satisfy any taxes or other source deductions required to be remitted for the account of the Canadian Participant. If the Company or Affiliate, as the case may be,

considers that the foregoing steps undertaken in connection with this section 13.1 result in inadequate withholding or a late remittance of taxes or other source deductions, then the delivery of Shares to be issued on the exercise or settlement of Awards may be made conditional upon the Canadian Participant (or other person) reimbursing or compensating the Company or Affiliate or making arrangements satisfactory to the Company or Affiliate for the payment in a timely manner of all taxes and other source deductions required to be remitted."

(b) Section 13.2 of the Plan shall not apply to Canadian Participants. For greater certainty, the Committee shall not approve funding by a Canadian Participant of withholding taxes or other source deductions by the withholding of Shares the Canadian Participant is otherwise entitled to receive or the surrender by the Canadian Participant of any Shares that were acquired at any time by the Canadian Participant on the exercise of any Option.

NOTICE OF STOCK OPTION GRANT

SIERRA ONCOLOGY, INC. 2015 EQUITY INCENTIVE PLAN

Unless otherwise defined herein, the terms defined in the Sierra Oncology, Inc. (the "***Company***") 2015 Equity Incentive Plan (the "***Plan***") shall have the same meanings in this Notice of Stock Option Grant (the "***Notice of Grant***") and the attached Stock Option Agreement (the "***Option Agreement***"). You have been granted an Option to purchase shares of Common Stock of the Company under the Plan subject to the terms and conditions of the Plan, this Notice of Grant and the attached Option Agreement.

Name: _____

Address: _____

Date of Grant: _____

Vesting Commencement Date: _____

_____	**Exercise Price per Share**:	_____
_____	**Total Number of Shares**:	_____
_____	**Type of Option**:	_____

_Non-Qualified Stock Option

____Incentive Stock Option

Expiration Date: _____, 20__; This Option expires earlier if your Service terminates earlier, as described in the Stock Option Agreement.

Vesting Schedule:

Additional Terms: If this box is checked, the additional terms and conditions set forth on Attachment 1 hereto (as executed by the Company) are applicable and are incorporated herein by reference. No document need be attached as Attachment 1 if the box is not checked.

You understand that your employment or consulting relationship with the Company is for an unspecified duration, can be terminated at any time (i.e., is "at-will"), and that nothing in this Notice, the Option Agreement or the Plan changes the at-will nature of that relationship. By accepting this Option, you and the Company agree that this Option is granted under and governed by the terms and conditions of the Plan, the Notice of Grant and the Option Agreement. By accepting this Option, you consent to electronic delivery as set forth in the Option Agreement.

PARTICIPANT:		**SIERRA ONCOLOGY, INC.**	
		By:	_____
Signature:	_____	Name:	_____
Print Name:	_____	Its:	_____

STOCK OPTION AGREEMENT

SIERRA ONCOLOGY, INC. 2015 EQUITY INCENTIVE PLAN

You have been granted an Option by Sierra Oncology, Inc. (the "***Company***") under the 2015 Equity Incentive Plan (the "***Plan***") to purchase Shares (the "***Option***"), subject to the terms, restrictions and conditions of the Plan, the Notice of Stock Option Grant (the "***Notice of Grant***") and this Stock Option Agreement (the "***Agreement***").

1. Grant of Option. You have been granted an Option for the number of Shares set forth in the Notice of Grant at the exercise price per Share set forth in the Notice of Grant (the "***Exercise Price***"). In the event of a conflict between the terms and conditions of the Plan and the terms and conditions of this Agreement, the terms and conditions of the Plan shall prevail. If designated in the Notice of Grant as an Incentive Stock Option ("***ISO***"), this Option is intended to qualify as an Incentive Stock Option under Section 422 of the Code. However, if this Option is intended to be an ISO, to the extent that it exceeds the $100,000 rule of Code Section 422(d) it shall be treated as a Nonqualified Stock Option ("***NSO***").

2. Termination Period.

(a) General Rule. If your Service terminates for any reason except death or Disability, and other than for Cause, then this Option will expire at the close of business at Company headquarters on the date three (3) months after your termination of Service (subject to the expiration detailed in Section 6). If your Service is terminated for Cause, this Option will expire upon the date of such termination. The Company determines when your Service terminates for all purposes under this Agreement. You acknowledge and agree that the Vesting Schedule may change prospectively in the event that your service status changes between full and part-time status in accordance with Company policies relating to work schedules and vesting of awards. You acknowledge that the vesting of the Shares pursuant to this Notice is earned only by continuing Service and that any unvested portion of your Option will expire on the termination of your employment for any reason.

(b) Death; Disability. If you die before your Service terminates (or you die within three (3) months of your termination of Service other than for Cause), then this Option will expire at the close of business at Company headquarters on the date twelve (12) months after the date of your death (subject to the expiration detailed in Section 6). If your Service terminates because of your Disability, then this Option will expire at the close of business at Company headquarters on the date twelve (12) months after your termination date (subject to the expiration detailed in Section 6).

(c) Black-Out Period. Notwithstanding the foregoing, if any post-termination exercise period set forth above terminates on a date that falls within a Blackout Period (as defined below) or within ten (10) business days following the expiration of a Blackout Period, such expiration date shall be automatically extended without any further act or formality to that date which is ten (10) business days after the end of such Blackout Period, with such tenth (10_{th}) business day to be considered the expiration date of such Option for all purposes under the Plan, subject to earlier expiration detailed in Section 6. For purposes of this Agreement, "***Blackout Period***" means the period during which designated directors, officers and employees of the Company cannot trade Shares pursuant to the Company's policy respecting restrictions on director', officers' and employee trading which is in effect at the time.

(d) No Notice. You are responsible for keeping track of these exercise periods following your termination of Service for any reason. The Company will not provide further notice of such periods. In no event shall this Option be exercised later than the Expiration Date set forth in the Notice of Grant.2

3. Exercise of Option.

(a) Right to Exercise. This Option is exercisable during its term in accordance with the Vesting Schedule set forth in the Notice of Grant and the applicable provisions of the Plan and this Agreement. In the event of your death, Disability, or other cessation of Service, the exercisability of the Option is governed by the applicable provisions of the Plan, the Notice of Grant and this Agreement. This Option may not be exercised for a fraction of a Share.

(b) Method of Exercise. This Option is exercisable by delivery of an exercise notice in a form specified by the Company (the "***Exercise Notice***"), which shall state the election to exercise the Option, the number of Shares in respect of which the Option is being exercised (the "***Exercised Shares***"), and such other representations and agreements as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice shall be delivered in person, by mail, via electronic mail or facsimile or by other authorized method to the Secretary of the Company or other person designated by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares. This Option shall be deemed to be exercised upon receipt by the Company of a fully executed Exercise Notice accompanied by the aggregate Exercise Price and any applicable tax withholding due upon exercise of the Option.

(c) Exercise by Another. If another person wants to exercise this Option after it has been transferred to him or her in compliance with this Agreement and the Plan, that person must prove to the Company's satisfaction that he or she is

entitled to exercise this Option. That person must also complete the proper Exercise Notice form (as described above) and pay the Exercise Price (as described below) and any applicable tax withholding due upon exercise of the Option (as described below).

4. **Method of Payment**. Payment of the aggregate Exercise Price shall be by personal check, wire transfer, cashier's check, or, with the Company's consent; any of the following, or a combination thereof:

(a) certificates for shares of Company stock that you own, along with any forms needed to effect a transfer of those shares to the Company; the Fair Market Value of the shares, determined as of the effective date of the Option exercise, will be applied to the Option Exercise Price. Instead of surrendering shares of Company stock, you may attest to the ownership of those shares on a form provided by the Company and have the same number of shares subtracted from the Option shares issued to you. However, you may not surrender, or attest to the ownership of, shares of Company stock in payment of the Exercise Price of your Option if your action would cause the Company to recognize compensation expense (or additional compensation expense) with respect to this Option for financial reporting purposes;

(b) cashless exercise through irrevocable directions to a securities broker approved by the Company to sell all or part of the Shares covered by this Option and to deliver to the Company from the sale proceeds an amount sufficient to pay the Option Exercise Price and any withholding taxes. The balance of the sale proceeds, if any, will be delivered to you. The directions must be given by signing a special notice of exercise form provided by the Company; or

(c) other method authorized by the Company.

5. **Non-Transferability of Option**. In general, except as provided below, only you may exercise this Option prior to your death. You may not transfer or assign this Option, except as provided below. For instance, you may not sell this Option or use it as security for a loan. If you attempt to do any of these things, this Option will immediately become invalid. You may, however, dispose of this Option in your will or in a beneficiary designation. However, if this Option is designated as a NSO in the Notice of Grant, then the Committee (as defined in the Plan) may, in its sole discretion, allow you to transfer this Option as a gift to one or more family members. For purposes of this Agreement, "family member" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in- law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law (including adoptive relationships), any individual sharing your household (other than a tenant or employee), a trust in which one or more of these individuals have more than 50% of the beneficial interest, a foundation in which you or one or more of these persons control the management of assets, and any entity in which you or one or more of these persons own more than 50% of the voting interest. In addition, if this Option is designated as a NSO in the Notice of Grant, then the Committee may, in its sole discretion, allow you to transfer this Option to your spouse or former spouse pursuant to a domestic relations order in settlement of marital property rights. The Committee will allow you to transfer this Option only if both you and the transferee(s) execute the forms prescribed by the Committee, which include the consent of the transferee(s) to be bound by this Agreement. This Option may not be transferred in any manner other than by will or by the laws of descent or distribution or court order and may be exercised during the lifetime of you only by you, your guardian, or legal representative, as permitted in the Plan. The terms of the Plan and this Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of you.

6. **Term of Option**. This Option shall in any event expire on the expiration date set forth in the Notice of Grant, which date is ten (10) years after the grant date (five (5) years after the grant date if this Option is designated as an ISO in the Notice of Grant and Section 5.3 of the Plan applies).

7. **Tax Consequences**. You should consult a tax adviser for tax consequences relating to this Option in the jurisdiction in which you are subject to tax. YOU SHOULD CONSULT A TAX ADVISER BEFORE EXERCISING THIS OPTION OR DISPOSING OF THE SHARES.

(a) Exercising the Option. You will not be allowed to exercise this Option unless you make arrangements acceptable to the Company to pay any withholding taxes that may be due as a result of the Option exercise.

(b) Notice of Disqualifying Disposition of ISO Shares. If you sell or otherwise dispose of any of the Shares acquired pursuant to an ISO on or before the later of (i) two (2) years after the grant date, or (ii) one year after the exercise date, you shall immediately notify the Company in writing of such disposition. You agree that you may be subject to income tax withholding by the Company on the compensation income recognized from such early disposition of ISO Shares by payment in cash or out of the current compensation paid to you.

8. **Withholding Taxes and Stock Withholding**. Regardless of any action the Company or your actual employer (the "***Employer***") takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-

related withholding ("***Tax-Related Items***"), you acknowledge that the ultimate liability for all Tax-Related Items legally due by you is and remains your responsibility and that the Company and/or the Employer (1) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Option grant, including the grant, vesting or exercise of the Option, the subsequent sale of Shares acquired pursuant to such exercise and the receipt of any dividends; and (2) do not commit to structure the terms of the grant or any aspect of the Option to reduce or eliminate your liability for Tax-Related Items. You acknowledge that if you are subject to Tax-Related Items in more than one jurisdiction, the Company and/or the Employer may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to exercise of the Option, you shall pay or make adequate arrangements satisfactory to the Company and/or the Employer to satisfy all withholding and payment on account obligations of the Company and/or the Employer. In this regard, you authorize the Company and/or the Employer to withhold all applicable Tax-Related Items legally payable by you from your wages or other cash compensation paid to you by the Company and/or the Employer. With the Company's consent, these arrangements may also include, if permissible under local law, (a) withholding Shares that otherwise would be issued to you when you exercise this Option, provided that the Company only withholds the amount of Shares necessary to satisfy the minimum statutory withholding amount, (b) having the Company withhold taxes from the proceeds of the sale of the Shares, either through a voluntary sale or through a mandatory sale arranged by the Company (on your behalf and you hereby authorize such sales by this authorization), (c) your payment of a cash amount, or (d) any other arrangement approved by the Company; all under such rules as may be established by the Committee and in compliance with the any insider trading or 10b-51 trading policies of the Company, if applicable; provided however, that if you are a Section 16 officer of the Company under the Exchange Act, then the Committee (as constituted in accordance with Rule 16b-3 under the Exchange Act) shall establish the method of withholding from alternatives (a)-(d) above, and the Committee shall establish the method prior to the Tax-Related Items withholding event. The Fair Market Value of these Shares, determined as of the effective date of the Option exercise, will be applied as a credit against the withholding taxes. You shall pay to the Company or the Employer any amount of Tax-Related Items that the Company or the Employer may be required to withhold as a result of your participation in the Plan or your purchase of Shares that cannot be satisfied by the means previously described. Finally, you acknowledge that the Company has no obligation to deliver Shares to you until you have satisfied the obligations in connection with the Tax-Related Items as described in this Section.

9. **Acknowledgement**. The Company and you agree that the Option is granted under and governed by the Notice of Grant, this Agreement and the provisions of the Plan (incorporated herein by reference). You: (i) acknowledge receipt of a copy of the Plan prospectus, (ii) represent that you have carefully read and are familiar with their provisions, and (iii) hereby accept the Option subject to all of the terms and conditions set forth herein and those set forth in the Plan and the Notice of Grant. You hereby agree to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions relating to the Plan, the Notice of Grant and the Agreement.

10. **Consent to Electronic Delivery of All Plan Documents and Disclosures**. By your acceptance of this Option, you consent to the electronic delivery of the Notice of Grant, this Agreement, account statements, Plan prospectuses required by the Securities and Exchange Commission, U.S. financial reports of the Company, and all other documents that the Company is required to deliver to its security holders (including, without limitation, annual reports and proxy statements) or other communications or information related to the Option. Electronic delivery may include the delivery of a link to a Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other delivery determined at the Company's discretion. You acknowledge that you may receive from the Company a paper copy of any documents delivered electronically at no cost if you contact the Company by telephone, through a postal service or electronic mail at. You further acknowledge that you will be provided with a paper copy of any documents delivered electronically if electronic delivery fails; similarly, you understand that you must provide on request to the Company or any designated third party a paper copy of any documents delivered electronically if electronic delivery fails. Also, you understand that your consent may be revoked or changed, including any change in the electronic mail address to which documents are delivered (if you have provided an electronic mail address), at any time by notifying the Company of such revised or revoked consent by telephone, postal service or electronic mail at. Finally, you understand that you are not required to consent toelectronic delivery.

11. **Compliance with Laws and Regulations**. The exercise of this Option will be subject to and conditioned upon compliance by the Company and you with all applicable state, federal and foreign laws and regulations and with all applicable requirements of any stock exchange or automated quotation system on which the Company's Common Stock may be listed or quoted at the time of such issuance or transfer. The Shares issued pursuant to this Agreement shall be endorsed with appropriate legends, if any, determined by the Company.

12. **Governing Law; Severability**. If one or more provisions of this Agreement are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a

mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of this Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of this Agreement shall be enforceable in accordance with its terms. This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to principles of conflicts of law. For purposes of litigating any dispute that may arise directly or indirectly from the Plan, the Notice and this Agreement, the parties hereby submit and consent to litigation in the exclusive jurisdiction of the State of Delaware.

13. **No Rights as Employee, Director or Consultant**. Nothing in this Agreement shall affect in any manner whatsoever the right or power of the Company, or a Parent, Subsidiary or Affiliate of the Company, to terminate your Service, for any reason, with or without Cause.

14. **Adjustment**. In the event of a stock split, a stock dividend or a similar change in Company stock, the number of Shares covered by this Option and the Exercise Price per Share may be adjusted pursuant to the Plan.

15. **Lock-Up Agreement**. In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing any underwritten offering of the Company's securities, you hereby agree not to sell, make any short sale of, loan, grant any Option for the purchase of, or otherwise dispose of any securities of the Company however and whenever acquired (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed one hundred eighty (180) days) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the public offering; provided however that, if during the last seventeen (17) days of the restricted period the Company issues an earnings release or material news or a material event relating to the Company occurs, or prior to the expiration of the restricted period the Company announces that it will release earnings results during the sixteen (16)-day period beginning on the last day of the restricted period, then, upon the request of the managing underwriter, to the extent required by any FINRA rules, the restrictions imposed by this Section shall continue to apply until the end of the third trading day following the expiration of the fifteen (15)-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event. In no event will the restricted period extend beyond two hundred sixteen (216) days after the effective date of the registration statement.

16. **Award Subject to Company Clawback or Recoupment**. To the extent permitted by applicable law, the Option shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of your employment or other Service that is applicable to you. In addition to any other remedies available under such policy, applicable law may require the cancellation of your Option (whether vested or unvested) and the recoupment of any gains realized with respect to your Option.

17. **Entire Agreement; Enforcement of Rights.** This Agreement, the Plan and the Notice constitute the entire agreement and understanding of the parties relating to the subject matter herein and supersede all prior discussions between them. Any prior agreements, commitments or negotiations concerning this Option are superseded. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, shall be effective unless in writing and signed by the parties to this Agreement. The failure by either party to enforce any rights under this Agreement shall not be construed as a waiver of any rights of such party.

BY ACCEPTING THIS OPTION, YOU AGREE TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.

EXHIBIT 10.5

SIERRA ONCOLOGY, INC.

2018 EQUITY INDUCEMENT PLAN

ADOPTED BY THE COMPENSATION COMMITTEE
OF THE BOARD OF DIRECTORS: SEPTEMBER 2018
FIRST AMENDMENT BY THE BOARD OF DIRECTORS: JUNE 2020
SECOND AMENDMENT BY THE COMPENSATION COMMITTEE
OF THE BOARD OF DIRECTORS: FEBRUARY 2021

1. **PURPOSE**. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, and any Parents and Subsidiaries that exist now or in the future, by offering them an opportunity to participate in the Company's future performance through the grant of Awards. Capitalized terms not defined elsewhere in the text are defined in Section 21.

2. **SHARES SUBJECT TO THE PLAN**.

2.1 Number of Shares Available. Subject to Section 2.4 and any other applicable provisions hereof, the total number of Shares reserved and available for grant and issuance pursuant to this Plan is 1,037,500.

2.2 Lapsed, Returned Awards. Shares subject to Awards, and Shares issued under the Plan under any Award, will again be available for grant and issuance in connection with subsequent Awards under this Plan to the extent such Shares: (a) are subject to issuance upon exercise of an Option granted under this Plan but which cease to be subject to the Option for any reason other than exercise of the Option; (b) are subject to Awards granted under this Plan that are forfeited or are repurchased by the Company at the original issue price or (c) are subject to Awards granted under this Plan that otherwise terminate without such Shares being issued. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Shares used to pay the exercise price of an Award or withheld to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan.

2.3 Minimum Share Reserve. At all times the Company shall reserve and keep available a sufficient number of Shares as shall be required to satisfy the requirements of all outstanding Awards granted under this Plan.

2.4 Adjustment of Shares. If the number of outstanding Shares is changed by a stock dividend, extraordinary dividends or distributions (whether in cash, shares or other property, other than a regular cash dividend) recapitalization, stock split, reverse stock split, subdivision, combination, reclassification, spin- off or similar change in the capital structure of the Company, without consideration, then (a) the number of Shares reserved for issuance and future grant under the Plan set forth in Section 2.1, (b) the Exercise Prices of and number of Shares subject to outstanding Options and (c) the number of Shares subject to other outstanding Awards, shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

3. **ELIGIBILITY**. Awards may be granted only to a person who, at the time of granting of the Award by the Committee: (a) has been hired as an Employee by the Company or any Subsidiary and such Award is a material inducement to such person being hired; (b) has been rehired as an Employee following a bona

fide period of interruption of employment with the Company or any Subsidiary; or (c) has become an Employee of the Company or any Subsidiary in connection with a merger or acquisition.

4. ADMINISTRATION.

4.1 Committee Composition; Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan. Notwithstanding the foregoing, the grant of any Award will not be effective unless: (i) if the grant is made by the Board, then it must be approved by a majority of the Outside Directors on the Board; and (ii) if the grant is made by the Committee, then the Committee must be comprised solely of Outside Directors (except as otherwise permitted under applicable rules). The Committee will have the authority to:

(a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;

(b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;

(c) select persons to receive Awards;

(d) determine the form and terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may vest and be exercised (which may be based on performance criteria) or settled, any vesting acceleration or waiver of forfeiture restrictions, the method to satisfy tax withholding obligations or any other tax liability legally due and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Committee will determine;

(e) determine the number of Shares or other consideration subject to Awards;

(f) determine the Fair Market Value in good faith and interpret the applicable provisions of this Plan and the definition of Fair Market Value in connection with circumstances that impact the Fair Market Value, if necessary;

(g) determine whether Awards will be granted singly, in combination with, in tandem with, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent or Subsidiary of the Company;

(h) grant waivers of Plan or Award conditions;

(i) determine the vesting, exercisability and payment of Awards;

(j) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;

(k) determine whether an Award has been earned;

(l) reduce or waive any criteria with respect to Performance Factors;

(m) adjust Performance Factors to take into account changes in law and accounting or tax rules as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships;

(n) adopt terms and conditions, rules and/or procedures (including the adoption of any subplan under this Plan) relating to the operation and administration of the Plan to accommodate requirements of local law and procedures outside of the United States; and

(o) make all other determinations necessary or advisable for the administration of this Plan.

4.2 Committee Interpretation and Discretion. Any determination made by the Committee with respect to any Award shall be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of the Plan or Award, at any later time, and such determination shall be final and binding on the Company and all persons having an interest in any Award under the Plan. Any dispute regarding the interpretation of the Plan or any Award Agreement shall be submitted by the Employee or Company to the Committee for review. The resolution of such a dispute by the Committee shall be final and binding on the Company and the Employee. The Committee may delegate to one or more executive officers the authority to review and resolve disputes with respect to Awards held by Employees who are not Insiders, and such resolution shall be final and binding on the Company and the Employee.

4.3 Section 16 of the Exchange Act. Awards granted to Employees who are subject to Section 16 of the Exchange Act must be approved by two or more "non-employee directors" (as defined in the regulations promulgated under Section 16 of the Exchange Act).

4.4 Documentation. The Award Agreement for a given Award, the Plan and any other documents may be delivered to, and accepted by, an Employee or any other person in any manner (including electronic distribution or posting) that meets applicable legal requirements.

4.5 Foreign Award Recipients. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws and practices in other countries in which the Company and its Subsidiaries operate or have employees eligible for Awards, the Committee, in its sole discretion, shall have the power and authority to: (a) determine which Subsidiaries and Affiliates shall be covered by the Plan; (b) determine which Employees outside the United States are eligible to participate in the Plan; (c) modify the terms and conditions of any Award granted to individuals outside the United States or foreign nationals to comply with applicable foreign laws, policies, customs and practices; (d) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Committee determines such actions to be necessary or advisable (and such subplans and/or modifications shall be attached to this Plan as appendices); provided, however, that no such subplans and/or modifications shall increase the share limitations contained in the Plan; and (e) take any action, before or after an Award is made, that the Committee determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals. Notwithstanding the foregoing, the Committee may not take any actions hereunder, and no Awards shall be granted, that would violate the Exchange Act or any other applicable United States securities law, the Code, or any other applicable United States governing statute or law.

5. **OPTIONS**. An Option is the right but not the obligation to purchase a Share, subject to certain conditions, if applicable. The Committee may grant Options to eligible Employees and will determine the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may vest and be exercised, and all other terms and conditions of the Option, subject to the following terms of this section.

5.1 Option Grant. Each Option granted under this Plan will be a Nonqualified Stock Option ("***NSO***"). An Option may be, but need not be, awarded upon satisfaction of such Performance Factors during any Performance Period as are set out in advance in the Employee's individual Award Agreement. If the Option is being earned upon the satisfaction of Performance Factors, then the Committee will: (a) determine the nature, length and starting date of any Performance Period for each Option; and (b) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Employees may participate simultaneously with respect to Options that are subject to different performance goals and other criteria.

5.2 Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, or a specified future date. The Award Agreement and a copy of this Plan will be delivered to the Employee within a reasonable time after the granting of the Option.

5.3 Exercise Period. Options may be vested and exercisable within the times or upon the conditions as set forth in the Award Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted. The Committee also may provide for Options to become vested or exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4 Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: the Exercise Price of an Option will be not less than one hundred percent (100%) of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 7 and the Award Agreement and in accordance with any procedures established by the Company.

5.5 Method of Exercise. Any Option granted hereunder will be vested and exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Committee and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share. An Option will be deemed exercised when the Company receives: (a) notice of exercise (in such form as the Committee may specify from time to time) from the person entitled to exercise the Option (and/or via electronic execution through the authorized third party administrator), and (b) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Committee and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Employee. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 2.4 of the Plan. Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

5.6 Termination of Service. If the Employee's Service terminates for any reason except for Cause or the Employee's death or Disability, then the Employee may exercise such Employee's Options (only to the extent that such Options are exercisable by the Employee on the date Employee's Service terminates) during the period ending no later than three (3) months after the date Employee's Service terminates (or such shorter or longer time period as may be determined by the Committee), but in any event no later than the expiration date of the Options.

(a) Death. If the Employee's Service terminates because of the Employee's death (or the Employee dies within three (3) months after Employee's Service terminates other than for Cause or because of the Employee's Disability), then the Employee's Options may be exercised only to the extent that such Options would have been exercisable by the Employee on the date Employee's Service terminates and must be exercised by the Employee's legal representative, or authorized assignee, no later than twelve (12) months after the date Employee's Service terminates (or such shorter time period or longer time period as may be determined by the Committee), but in any event no later than the expiration date of the Options.

(b) Disability. If the Employee's Service terminates because of the Employee's Disability, then the Employee's Options may be exercised only to the extent that such Options would have been exercisable by the Employee on the date Employee's Service terminates and must be exercised by the Employee (or the Employee's legal representative or authorized assignee) no later than twelve (12) months after the date Employee's Service terminates (or such shorter or longer time period as may be determined by the Committee, but in any event no later than the expiration date of the Options.

(c) Cause. If the Employee is terminated for Cause, then Employee's Options shall expire on such Employee's date of termination of Service, or at such later time and on such conditions as are determined by the Committee, but in any event no later than the expiration date of the Options. Unless otherwise provided in the Award Agreement or other agreement between the Company and Employee, Cause shall have the meaning set forth in this Plan.

5.7 Limitations on Exercise. The Committee may specify a minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent any Employee from exercising the Option for the full number of Shares for which it is then exercisable.

5.8 Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of an Employee, impair any of such Employee's rights under any Option previously granted.

6. RESTRICTED STOCK UNITS. A Restricted Stock Unit ("***RSU***") is an award to an eligible Employee covering a number of Shares that may be settled in cash, or by issuance of those Shares. All RSUs shall be made pursuant to an Award Agreement.

6.1 Terms of RSUs. The Committee will determine the terms of an RSU including, without limitation: (a) the number of Shares subject to the RSU; (b) the time or times during which the RSU may be settled; (c) the consideration to be distributed on settlement; and (d) the effect of the Employee's termination of Service on each RSU. An RSU may be awarded upon satisfaction of such performance goals based on Performance Factors during any Performance Period as are set out in advance in the Employee's Award Agreement. If the RSU is being earned upon satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for the RSU; (y) select from among the Performance Factors to be used to measure the performance, if any; and (z) determine the number of Shares deemed subject to the RSU. Performance Periods may overlap and participants may participate simultaneously with respect to RSUs that are subject to different Performance Periods and different performance goals and other criteria.

6.2 Form and Timing of Settlement. Payment of earned RSUs shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. The Committee, in its sole discretion, may settle earned RSUs in cash, Shares, or a combination of both. The Committee may also permit a Employee to defer payment under an RSU to a date or dates after the RSU is

earned provided that the terms of the RSU and any deferral satisfy the requirements of Section 409A of the Code.

6.3 Termination of Service. Except as may be set forth in the Employee's Award Agreement, vesting ceases on such date Employee's Service terminates (unless determined otherwise by the Committee).

7. PAYMENT FOR SHARE PURCHASES. Payment from an Employee for Shares purchased pursuant to this Plan may be made in cash or by check or, where expressly approved for the Employee by the Committee and where permitted by law (and to the extent not otherwise set forth in the applicable Award Agreement):

(a) by cancellation of indebtedness of the Company to the Employee;

(b) by surrender of shares of the Company held by the Employee that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Award will be exercised or settled;

(c) by waiver of compensation due or accrued to the Employee for services rendered or to be rendered to the Company or a Parent or Subsidiary of the Company;

(d) by consideration received by the Company pursuant to a broker-assisted or other form of cashless exercise program implemented by the Company in connection with the Plan;

(e) by any combination of the foregoing; or

(f) by any other method of payment as is permitted by applicable law.

8. WITHHOLDING TAXES.

8.1 Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan or the applicable tax event occurs, the Company may require the Employee to remit to the Company, or to the Parent or Subsidiary employing the Employee, an amount sufficient to satisfy applicable U.S. federal, state, local and international withholding tax requirements or any other tax or social insurance liability legally due from the Employee prior to the delivery of Shares pursuant to exercise or settlement of any Award. Whenever payments in satisfaction of Awards granted under this Plan are to be made in cash, such payment will be net of an amount sufficient to satisfy applicable U.S. federal, state, local and international withholding tax or social insurance requirements or any other tax liability legally due from the Employee. The Fair Market Value of the Shares will be determined as of the date that the taxes are required to be withheld and such Shares will be valued based on the value of the actual trade or, if there is none, the Fair Market Value of the Shares as of the previous trading day.

8.2 Stock Withholding. The Committee, in its sole discretion and pursuant to such procedures as it may specify from time to time and to limitations of local law, may require or permit an Employee to satisfy such tax withholding obligation or any other tax liability legally due from the Employee, in whole or in part by (without limitation) (a) paying cash, (b) electing to have the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to up to the maximum statutory amount permitted to be withheld, (c) delivering to the Company already-owned Shares having a Fair Market Value equal to up to the maximum statutory amount permitted to be withheld or (d) withholding from the proceeds of the sale of otherwise deliverable Shares acquired pursuant to an Award either through a voluntary sale or through a mandatory sale arranged by the Company.

9. **TRANSFERABILITY**. Unless determined otherwise by the Committee, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. If the Committee makes an Award transferable, including, without limitation, by instrument to an inter vivos or testamentary trust in which the Awards are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift or by domestic relations order to a Permitted Transferee, such Award will contain such additional terms and conditions as the Committee deems appropriate. All Awards shall be exercisable: (a) during the Employee's lifetime only by (i) the Employee, or (ii) the Employee's guardian or legal representative; (b) after the Employee's death, by the legal representative of the Employee's heirs or legatees; and (c) by a Permitted Transferee

10. **PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES**.

10.1 Voting and Dividends. No Employee will have any of the rights of a stockholder with respect to any Shares until the Shares are issued to the Employee, except for any Dividend Equivalent Rights permitted by an applicable Award Agreement. Any Dividend Equivalent Rights shall be subject to the same vesting or performance conditions as the underlying Award. In addition, the Committee may provide that any Dividend Equivalent Rights permitted by an applicable Award Agreement shall be deemed to have been reinvested in additional Shares or otherwise reinvested. After Shares are issued to the Employee, the Employee will be a stockholder and have all the rights of a stockholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Unvested Shares, then any new, additional or different securities the Employee may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Unvested Shares; provided, further, that the Employee will have no right to retain such stock dividends or stock distributions with respect to Shares that are repurchased at the Employee's Exercise Price, pursuant to Section 10.2.

10.2 Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) a right to repurchase (a "***Right of Repurchase***") a portion of any or all Unvested Shares held by an Employee following such Employee's termination of Service at any time within ninety (90) days (or such longer or shorter time determined by the Committee) after the later of the date Employee's Service terminates and the date the Employee purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Employee's Exercise Price.

11. **CERTIFICATES**. All Shares or other securities (whether or not certificated) delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable U.S. federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted and any non-U.S. exchange controls or securities law restrictions to which the Shares are subject.

12. **ESCROW; PLEDGE OF SHARES**. To enforce any restrictions on an Employee's Shares, the Committee may require the Employee to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Employee who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of the Employee's obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event,

the Company will have full recourse against the Employee under the promissory note notwithstanding any pledge of the Employee's Shares or other collateral. In connection with any pledge of the Shares, the Employee will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

13. **SECURITIES LAW AND OTHER REGULATORY COMPLIANCE**. An Award will not be effective unless such Award is in compliance with all applicable U.S. and foreign federal and state securities and exchange control laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal or foreign law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any foreign or state securities laws, exchange control laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

14. **NO OBLIGATION TO EMPLOY**. The Employee's participation in the Plan is voluntary. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Employee any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent, Subsidiary or Affiliate or limit in any way the right of the Company or any Parent, Subsidiary or Affiliate to terminate Employee's employment or other relationship at any time.

15. **CORPORATE TRANSACTIONS**. In the event of a Corporate Transaction any or all outstanding Awards may be assumed or replaced by the successor corporation, which assumption or replacement shall be binding on all Employees. In the alternative, the successor corporation may substitute equivalent Awards or provide substantially similar consideration to Employees as was provided to stockholders (after taking into account the existing provisions of the Awards). The successor corporation may also issue, in place of outstanding Shares of the Company held by the Employee, substantially similar shares, cash or other property subject to repurchase restrictions no less favorable to the Employee. In the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, then notwithstanding any other provision in this Plan to the contrary, such Awards shall have their vesting accelerate as to all shares subject to such Award (and any applicable rights of repurchase shall fully lapse) immediately prior to the Corporate Transaction. In addition, in the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, the Committee will (i) notify the Employee in writing or electronically that such Award will, if applicable, be exercisable for a period of time determined by the Committee in its sole discretion, and such Award will terminate upon the earlier of the expiration of such period or immediately prior to the Corporate Transaction or (ii) provide that each Award shall be cancelled immediately upon the occurrence of the Corporate Transaction in exchange for a payment in cash or securities in an amount equal to (A) the excess of the consideration paid per Share in the Corporate Transaction over the exercise price or purchase price (if any) per Share subject to the Award multiplied by (B) the number of Shares subject to the Award. Awards need not be treated similarly in a Corporate Transaction

16. **TERM OF PLAN/GOVERNING LAW**. Unless earlier terminated as provided herein, this Plan will become effective on the Effective Date and will terminate on the later of ten (10) years from the date this Plan is adopted by the Committee or the date additional Shares are added to the Plan by the Committee.

This Plan and all Awards granted hereunder shall be governed by and construed in accordance with the laws of the State of Delaware (excluding its conflict of law rules).

17. **AMENDMENT OR TERMINATION OF PLAN**. The Board or Committee may at any time terminate or amend this Plan in any respect, including, without limitation, amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board or Committee will not, without the approval of the stockholders of the Company, amend this Plan in any manner that requires such stockholder approval; provided further, that an Employee's Award shall be governed by the version of this Plan then in effect at the time such Award was granted.

18. **NONEXCLUSIVITY OF THE PLAN**. Neither the adoption of this Plan by the Committee nor any provision of this Plan will be construed as creating any limitations on the power of the Board or the Committee to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock awards and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

19. **INSIDER TRADING POLICY**. Each Employee who receives an Award shall comply with any policy adopted by the Company from time to time covering transactions in the Company's securities by Employees, officers and/or directors of the Company.

20. **ALL AWARDS SUBJECT TO COMPANY CLAWBACK OR RECOUPMENT POLICY**. All Awards, subject to applicable law, shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of Employee's employment or other service with the Company that is applicable to executive officers, employees, directors or other service providers of the Company, and in addition to any other remedies available under such policy and applicable law, may require the cancellation of outstanding Awards and the recoupment of any gains realized with respect to Awards.

21. **DEFINITIONS**. As used in this Plan, and except as elsewhere defined herein, the following terms will have the following meanings:

21.1 "***Affiliate***" means (i) any entity that, directly or indirectly, is controlled by, controls or is under common control with, the Company and (ii) any entity in which the Company has a significant equity interest, in either case as determined by the Committee, whether now or hereafter existing.

21.2 "***Award***" means any award under this Plan, including any Option or Restricted Stock Unit.

21.3 "***Award Agreement***" means, with respect to each Award, the written or electronic agreement between the Company and the Employee setting forth the terms and conditions of the Award, and country-specific appendix thereto for grants to non-U.S. Employees, which shall be in substantially a form (which need not be the same for each Employee) that the Committee (or in the case of Award agreements that are not used for Insiders, the Committee's delegate(s)) has from time to time approved, and will comply with and be subject to the terms and conditions of this Plan.

21.4 "***Board***" means the Board of Directors of the Company.

21.5 "***Cause***" means (a) Employee's conviction (including a guilty plea or plea of *nolo contendere*) of any felony or any other crime involving fraud, dishonesty or moral turpitude; (b) Employee's commission or attempted commission of or participation in a fraud or act of dishonesty or misrepresentation against the Company that results (or could reasonably be expected to result) in material harm or injury to the business or reputation of the Company; (c) Employee's material violation of any contract or agreement

between Employee and the Company, or of any Company policy, or of any statutory duty Employee owes to the Company; or (d) Employee's conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or could reasonably be expected to have resulted in) material harm to the business or reputation of the Company. The determination as to whether an Employee is being terminated for Cause shall be made in good faith by the Company and shall be final and binding on the Employee. The foregoing definition does not in any way limit the Company's ability to terminate an Employee's employment or consulting relationship at any time as provided in Section 14 above, and the term "Company" will be interpreted to include any Subsidiary or Parent, as appropriate. Notwithstanding the foregoing, the foregoing definition of "Cause" may, in part or in whole, be modified or replaced in each individual employment agreement or Award Agreement with any Employee, provided that such document supersedes the definition provided in this Section 21.5.

21.6 "***Code***" means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

21.7 "***Committee***" means the Compensation Committee of the Board.

21.8 "***Common Stock***" means the common stock of the Company.

21.9 "***Company***" means Sierra Oncology, Inc., or any successor corporation.

21.10 "***Corporate Transaction***" means the occurrence of any of the following events: (a) any "Person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the total voting power represented by the Company's then- outstanding voting securities; provided, however, that for purposes of this subclause (a) the acquisition of additional securities by any one Person who is considered to own more than fifty percent (50%) of the total voting power of the securities of the Company will not be considered a Corporate Transaction; (b) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; (c) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation; (d) any other transaction which qualifies as a "corporate transaction" under Section 424(a) of the Code wherein the stockholders of the Company give up all of their equity interest in the Company (except for the acquisition, sale or transfer of all or substantially all of the outstanding shares of the Company) or (e) a change in the effective control of the Company that occurs on the date that a majority of members of the Board are replaced during any twelve (12) month period by members of the Board whose appointment or election is not endorsed by as majority of the members of the Board prior to the date of such appointment or election. For purpose of this subclause (e), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Corporate Transaction. For purposes of this definition, Persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company. Notwithstanding the foregoing, to the extent that any amount constituting deferred compensation (as defined in Section 409A of the Code) would become payable under this Plan by reason of a Corporate Transaction, such amount shall become payable only if the event constituting a Corporate Transaction would also qualify as a change in ownership or effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company, each as defined within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final

Treasury Regulations and IRS guidance that has been promulgated or may be promulgated thereunder from time to time.

21.11 "***Director***" means a member of the Board.

21.12 "***Disability***" means in the case of incentive stock options, total and permanent disability as defined in Section 22(e)(3) of the Code and in the case of other Awards, that the Employee is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

21.13 "***Dividend Equivalent Right"*** means the right of an Employee, granted at the discretion of the Committee or as otherwise provided by the Plan or an Award Agreement, to receive a credit for the account of such Employee in an amount equal to the cash, stock or other property dividends in amounts equal equivalent to cash, stock or other property dividends for each Share represented by an Award held by such Employee.

21.14 "***Effective Date***" means September 20, 2018.

21.15 "***Employee***" means any person, including Officers, providing services as an employee to the Company or any Parent, Subsidiary or Affiliate. Neither service as a director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

21.16 "***Exchange Act***" means the United States Securities Exchange Act of 1934, as amended.

21.17 "***Exercise Price***" means, with respect to an Option, the price at which a holder may purchase the Shares issuable upon exercise of an Option.

21.18 "***Fair Market Value***" means, as of any date, the value of a share of the Company's Common Stock determined as follows:

(a) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in *The Wall Street* Journal or such other source as the Board or the Committee deems reliable;

(b) if such Common Stock is publicly traded but is neither listed nor admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable; or

(c) if none of the foregoing is applicable, by the Board or the Committee in good faith.

21.19 "***Insider***" means an officer or director of the Company or any other person whose transactions in the Company's Common Stock are subject to Section 16 of the Exchange Act.

21.20 "***IRS***" means the United States Internal Revenue Service.

21.21 "***Option***" means an award of an option to purchase Shares pursuant to Section 5.

21.22 "***Outside Director***" means a Director who is not an Employee of the Company or any Parent or Subsidiary and who is an "independent" director under the rules of The Nasdaq Stock Market, as may be amended from time to time.

21.23 "***Parent***" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

21.24 ***"Performance Factors"*** means the factors selected by the Committee to determine whether performance goals established by the Committee applicable to Awards have been satisfied.

21.25 "***Performance Period***" means the period of service determined by the Committee during which years of service or performance is to be measured for the Award.

21.26 "***Permitted Transferee***" means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships) of the Employee, any person sharing the Employee's household (other than a tenant or employee), a trust in which these persons (or the Employee) have more than 50% of the beneficial interest, a foundation in which these persons (or the Employee) control the management of assets, and any other entity in which these persons (or the Employee) own more than 50% of the voting interests.

21.27 "***Plan***" means this Sierra Oncology, Inc. 2018 Equity Inducement Plan.

21.28 "***Restricted Stock Unit***" means an Award granted pursuant to Section 6 of the Plan.

21.29 "***SEC***" means the United States Securities and Exchange Commission.

21.30 "***Securities Act***" means the United States Securities Act of 1933, as amended.

21.31 "***Service***" shall mean service as an Employee to the Company or a Parent, Subsidiary or Affiliate, subject to such further limitations as may be set forth in the Plan or the applicable Award Agreement. An Employee will not be deemed to have ceased to provide Service in the case of (a) sick leave, (b) military leave, or (c) any other leave of absence approved by the Company; provided, that such leave is for a period of not more than 90 days (x) unless reemployment upon the expiration of such leave is guaranteed by contract or statute, or (y) unless provided otherwise pursuant to formal policy adopted from time to time by the Company and issued and promulgated to employees in writing. In the case of any Employee on an approved leave of absence or a reduction in hours worked (for illustrative purposes only, a change in schedule from that of full-time to part-time), the Committee may make such provisions regarding suspension of or modification of vesting of the Award while on leave from the employ of the Company or a Parent, Subsidiary or Affiliate or during such change in working hours as it may deem appropriate, except that in no event may an Award be exercised after the expiration of the term set forth in the applicable Award Agreement. In the event of military leave, if required by applicable laws, vesting shall continue for the longest period that vesting continues under any other statutory or Company approved leave of absence and, upon a Employee's returning from military leave (under conditions that would entitle him or her to protection upon such return under the Uniform Services Employment and Reemployment Rights Act), he or she shall be given vesting credit with respect to Awards to the same extent as would have applied had the Employee continued to provide services to the Company throughout the leave on the same terms as he or she was providing services immediately prior to such leave. Except as set forth in this Section 28.39, an employee shall have terminated employment as of the date he or she ceases provide services (regardless

of whether the termination is in breach of local employment laws or is later found to be invalid) and employment shall not be extended by any notice period or garden leave mandated by local law, *provided however*, that a change in status from an employee to a consultant or advisor shall not terminate the service provider's Service, unless determined by the Committee, in its discretion. The Committee will have sole discretion to determine whether a Employee has ceased to provide Services and the effective date on which the Employee ceased to provide Services.

21.32 "***Shares***" means shares of Common Stock and the common stock of any successor entity.

21.33 "***Subsidiary***" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

21.34 "***Treasury Regulations***" means regulations promulgated by the United States Treasury Department.

21.35 "***Unvested Shares***" means Shares that have not yet vested or are subject to a right of repurchase in favor of the Company (or any successor thereto).

SIERRA ONCOLOGY, INC.

(the "**Company**")

2018 EQUITY INDUCEMENT PLAN

(the "**Plan**")

ADDENDUM FOR CANADIAN PARTICIPANTS

A. The Company has adopted the Plan, to be effective on the Effective Date.

B. The Company desires to modify certain terms of the Plan in their application for Employees (as those terms are defined in the Plan) who are resident in Canada for purposes of the Income Tax Act (Canada) or otherwise subject to Canadian personal income tax (the "**Canadian Employees**").

NOW THEREFORE, the Company does hereby amend certain terms and conditions of the Plan as they apply to the Canadian Employees, as follows.

1. **Defined Terms**. In this Addendum, all defined terms shall have the respective meanings set forth in the Plan, unless otherwise defined herein.

2. **Effective Date**. The effective date of this Addendum is the Effective Date.

3. **Addendum.** The Company hereby amends certain terms and conditions of the Plan pursuant to which the Company may grant Options to any Canadian Eligible Person, if the participation by the Canadian Eligible Person in such distribution of securities is voluntary (as such term is interpreted pursuant to Section 2.23(2) of NI 45-106) and is otherwise permitted under NI 45-106.

4. **Options**.

(a) Notwithstanding section 5.2 of the Plan, the grant date of an Option awarded to a Canadian Employee shall be, in all cases, the date the Option is actually granted to the Canadian Employee, as evidenced by the Award Agreement.

(b) Notwithstanding section 5.1 of the Plan, satisfaction of Performance Factors, if any, will be treated as a condition subsequent to the grant to a Canadian Employee of an Option giving rise to a risk of forfeiture of the Option and not a condition precedent to the grant of the Option.

(c) For purposes of section 5.9 of the Plan, Options granted to a Canadian Employee will not be modified or altered, or new options granted in substitution therefor, if such modification, alteration or substitution has a material adverse affect on such Canadian Employee's tax treatment of such Options, except with such Canadian Employee's consent.

5. **Restricted Stock Units**.

Section 6.2 of the Plan shall be modified as it applies to Canadian Employees such that the Company agrees to issue only Shares in payment of RSUs to a Canadian Employee and the Company cannot choose, at its option, to make such payment in cash or a combination of cash and Shares, and section 6.2 shall read as follows:

"6.2. Form and Timing of Settlement to Canadian Employees. Payment of earned RSUs of a Canadian Employee shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. Such earned RSUs shall be settled solely by the issuance of Shares. The Committee may permit a Canadian Employee to defer settlement and the issuance of Shares in payment of an earned RSU to a date that is acceptable to the Committee, provided that, in the case of a Canadian Eligible Person that is an Employee, the terms of the Award Agreement, the RSUs and any deferral meet the conditions of section 7 of the *Income Tax Act* (Canada)."

6. Payment for Share Purchases.

Section 7(b) of the Plan shall be modified as at applies to Canadian Employees with respect to the consideration that may be paid by Canadian Employees for Shares purchased pursuant to the Plan. In no circumstances shall a Canadian Employee be permitted to make, and the Committee shall not approve, a payment by the Canadian Employee by the surrender of any Shares that were acquired at any time by the Canadian Employee on the exercise of any Option.

7. Withholding Taxes.

(a) Section 8.1 of the Plan shall be modified as it applies to Canadian Employees and shall read as follows:

"8.1 Withholding for Canadian Employees. The Company or any Affiliate shall deduct and withhold any taxes and other required source deductions which the Company or Affiliate, as the case may be, is required by law or regulation of any governmental authority whatsoever to deduct, withhold or remit in connection with the grant, exercise or settlement of any Award. Without limiting the generality of the foregoing, whenever a settlement or payment is made by the issuance of Shares to a Canadian Employee in satisfaction of Awards granted under this Plan, the Company or Affiliate, as the case may be, may, at its discretion (i) deduct and withhold those amounts it is required to remit from any cash remuneration or other amount payable to the Canadian Employee, whether or not such amount payable is related to the Plan, or the exercise or settlement of any Awards; (ii) permit the Canadian Employee to make a cash payment to the Company or Affiliate, as the case may be, equal to the amount required to be remitted; or (iii) sell, on behalf of the Canadian Employee, that number of Shares to be issued on the exercise or settlement such that the amount of the proceeds of such sale will be sufficient to satisfy any taxes or other source deductions required to be remitted for the account of the Canadian Employee. If the Company or Affiliate, as the case may be, considers that the foregoing steps undertaken in connection with this section 13.1 result in inadequate withholding or a late remittance of taxes or other source deductions, then the delivery of Shares to be issued on the exercise or settlement of Awards may be made conditional upon the Canadian Employee (or other person) reimbursing or compensating the Company or Affiliate or making arrangements satisfactory to the Company or Affiliate for the payment in a timely manner of all taxes and other source deductions required to be remitted."

(b) Section 8.2 of the Plan shall not apply to Canadian Employees. For greater certainty, the Committee shall not approve funding by a Canadian Employee of withholding taxes or other source deductions by the withholding of Shares the Canadian Employee is otherwise entitled to receive or the surrender by the Canadian Employee of any Shares that were acquired at any time by the Canadian Employee on the exercise of any Option.

NOTICE OF STOCK OPTION GRANT

SIERRA ONCOLOGY, INC. 2018 EQUITY INDUCEMENT PLAN

Unless otherwise defined herein, the terms defined in the Sierra Oncology, Inc. (the "***Company***") 2018 Equity Inducement Plan (the "***Plan***") shall have the same meanings in this Notice of Stock Option Grant (the "***Notice of Grant***") and the attached Stock Option Agreement (the "***Option Agreement***"). You have been granted an Option to purchase shares of Common Stock of the Company under the Plan subject to the terms and conditions of the Plan, this Notice of Grant and the attached Option Agreement.

Name: _____

Address: _____

Date of Grant: _____

Vesting Commencement Date: _____

Exercise Price per Share: _____

Total Number of Shares: _____

Type of Option: Non-Qualified Stock Option

Expiration Date: _____, 20__; This Option expires earlier if your Service terminates earlier, as described in the Stock Option Agreement.

Vesting Schedule:

Additional Terms: If this box is checked, the additional terms and conditions set forth on Attachment 1 hereto (as executed by the Company) are applicable and are incorporated herein by reference. No document need be attached as Attachment 1 if the box is not checked.

You understand that your employment relationship with the Company is for an unspecified duration, can be terminated at any time (i.e., is "at-will"), and that nothing in this Notice, the Option Agreement or the Plan changes the at-will nature of that relationship. By accepting this Option, you and the Company agree that this Option is granted under and governed by the terms and conditions of the Plan, the Notice of Grant and the Option Agreement. By accepting this Option, you consent to electronic delivery as set forth in the Option Agreement.

PARTICIPANT:

Signature _____

Print Name: _____

SIERRA ONCOLOGY, INC.

By:

Name: _____

Its: _____

STOCK OPTION AGREEMENT

SIERRA ONCOLOGY, INC.

2018 EQUITY INDUCEMENT PLAN

You have been granted an Option by Sierra Oncology, Inc. (the "***Company***") under the 2018 Equity Inducement Plan (the "***Plan***") to purchase Shares (the "***Option***"), subject to the terms, restrictions and conditions of the Plan, the Notice of Stock Option Grant (the "***Notice of Grant***") and this Stock Option Agreement (the "***Agreement***").

Grant of Option. You have been granted an Option for the number of Shares set forth in the Notice of Grant at the exercise price per Share set forth in the Notice of Grant (the "***Exercise Price***"). In the event of a conflict between the terms and conditions of the Plan and the terms and conditions of this Agreement, the terms and conditions of the Plan shall prevail. The Option is designated as a Nonqualified Stock Option ("***NSO***").

Termination Period.

General Rule. If your Service terminates for any reason except death or Disability, and other than for Cause, then this Option will expire at the close of business at Company headquarters on the date three (3) months after your termination of Service (subject to the expiration detailed in Section 6). If your Service is terminated for Cause, this Option will expire upon the date of such termination. The Company determines when your Service terminates for all purposes under this Agreement. You acknowledge and agree that the Vesting Schedule may change prospectively in the event that your service status changes between full and part-time status in accordance with Company policies relating to work schedules and vesting of awards. You acknowledge that the vesting of the Shares pursuant to this Notice is earned only by continuing Service and that any unvested portion of your Option will expire on the termination of your employment for any reason.

Death; Disability. If you die before your Service terminates (or you die within three (3) months of your termination of Service other than for Cause), then this Option will expire at the close of business at Company headquarters on the date twelve (12) months after the date of your death (subject to the expiration detailed in Section 6). If your Service terminates because of your Disability, then this Option will expire at the close of business at Company headquarters on the date twelve (12) months after your termination date (subject to the expiration detailed in Section 6).

Black-Out Period. Notwithstanding the foregoing, if any post-termination exercise period set forth above terminates on a date that falls within a Blackout Period (as defined below) or within ten (10) business days following the expiration of a Blackout Period, such expiration date shall be automatically extended without any further act or formality to that date which is ten (10) business days after the end of such Blackout Period, with such tenth (10th) business day to be considered the expiration date of such Option for all purposes under the Plan, subject to earlier expiration detailed in Section 6. For purposes of this Agreement, "***Blackout Period***" means the period during which designated directors, officers and employees of the Company cannot trade Shares pursuant to the Company's policy respecting restrictions on director', officers' and employee trading which is in effect at the time.

No Notice. You are responsible for keeping track of these exercise periods following your termination of Service for any reason. The Company will not provide further notice of such periods. In no event shall this Option be exercised later than the Expiration Date set forth in the Notice of Grant.

Exercise of Option.

Right to Exercise. This Option is exercisable during its term in accordance with the Vesting Schedule set forth in the Notice of Grant and the applicable provisions of the Plan and this Agreement. In the event of your death, Disability, or other cessation of Service, the exercisability of the Option is governed by the applicable provisions of the Plan, the Notice of Grant and this Agreement. This Option may not be exercised for a fraction of a Share.

Method of Exercise. This Option is exercisable by delivery of an exercise notice in a form specified by the Company (the "***Exercise Notice***"), which shall state the election to exercise the Option, the number of Shares in respect of which the Option is being exercised (the "***Exercised Shares***"), and such other representations and agreements as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice shall be delivered in person, by mail, via electronic mail or facsimile or by other authorized method to the Secretary of the Company or other person designated by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares. This Option shall be deemed to be exercised upon receipt by the Company of a fully executed Exercise Notice accompanied by the aggregate Exercise Price and any applicable tax withholding due upon exercise of the Option.

Exercise by Another. If another person wants to exercise this Option after it has been transferred to him or her in compliance with this Agreement and the Plan, that person must prove to the Company's satisfaction that he or she is entitled to exercise this Option. That person must also complete the proper Exercise Notice form (as described above) and pay the Exercise Price (as described below) and any applicable tax withholding due upon exercise of the Option (as described below).

Method of Payment. Payment of the aggregate Exercise Price shall be by personal check, wire transfer, cashier's check, or, with the Company's consent; any of the following, or a combination thereof:

certificates for shares of Company stock that you own, along with any forms needed to effect a transfer of those shares to the Company; the Fair Market Value of the shares, determined as of the effective date of the Option exercise, will be applied to the Option Exercise Price. Instead of surrendering shares of Company stock, you may attest to the ownership of those shares on a form provided by the Company and have the same number of shares subtracted from the Option shares issued to you. However, you may not surrender, or attest to the ownership of, shares of Company stock in payment of the Exercise Price of your Option if your action would cause the Company to recognize compensation expense (or additional compensation expense) with respect to this Option for financial reporting purposes;

cashless exercise through irrevocable directions to a securities broker approved by the Company to sell all or part of the Shares covered by this Option and to deliver to the Company from the sale proceeds an amount sufficient to pay the Option Exercise Price and any withholding taxes. The balance of the sale proceeds, if any, will be delivered to you. The directions must be given by signing a special notice of exercise form provided by the Company; or

other method authorized by the Company.

Non-Transferability of Option. In general, except as provided below, only you may exercise this Option prior to your death. You may not transfer or assign this Option, except as provided below. For instance, you may not sell this Option or use it as security for a loan. If you attempt to do any of these things, this Option will immediately become invalid. You may, however, dispose of this Option in your will or in a beneficiary designation. However, the Committee (as defined in the Plan) may, in its sole discretion, allow you to transfer this Option as a gift to one or more family members. For purposes of this

Agreement, "family member" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in- law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law (including adoptive relationships), any individual sharing your household (other than a tenant or employee), a trust in which one or more of these individuals have more than 50% of the beneficial interest, a foundation in which you or one or more of these persons control the management of assets, and any entity in which you or one or more of these persons own more than 50% of the voting interest. In addition, the Committee may, in its sole discretion, allow you to transfer this Option to your spouse or former spouse pursuant to a domestic relations order in settlement of marital property rights. The Committee will allow you to transfer this Option only if both you and the transferee(s) execute the forms prescribed by the Committee, which include the consent of the transferee(s) to be bound by this Agreement. This Option may not be transferred in any manner other than by will or by the laws of descent or distribution or court order and may be exercised during the lifetime of you only by you, your guardian, or legal representative, as permitted in the Plan. The terms of the Plan and this Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of you.

Term of Option. This Option shall in any event expire on the expiration date set forth in the Notice of Grant, which date is ten (10) years after the grant date.

Tax Consequences. You should consult a tax adviser for tax consequences relating to this Option in the jurisdiction in which you are subject to tax. YOU SHOULD CONSULT A TAX ADVISER BEFORE EXERCISING THIS OPTION OR DISPOSING OF THE SHARES. You will not be allowed to exercise this Option unless you make arrangements acceptable to the Company to pay any withholding taxes that may be due as a result of the Option exercise.

Withholding Taxes and Stock Withholding. Regardless of any action the Company or your actual employer (the "***Employer***") takes with respect to any or all income tax, social insurance, payroll tax, payment on account or other tax-related withholding ("***Tax-Related Items***"), you acknowledge that the ultimate liability for all Tax-Related Items legally due by you is and remains your responsibility and that the Company and/or the Employer (1) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Option grant, including the grant, vesting or exercise of the Option, the subsequent sale of Shares acquired pursuant to such exercise and the receipt of any dividends; and (2) do not commit to structure the terms of the grant or any aspect of the Option to reduce or eliminate your liability for Tax-Related Items. You acknowledge that if you are subject to Tax-Related Items in more than one jurisdiction, the Company and/or the Employer may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to exercise of the Option, you shall pay or make adequate arrangements satisfactory to the Company and/or the Employer to satisfy all withholding and payment on account obligations of the Company and/or the Employer. In this regard, you authorize the Company and/or the Employer to withhold all applicable Tax-Related Items legally payable by you from your wages or other cash compensation paid to you by the Company and/or the Employer. With the Company's consent, these arrangements may also include, if permissible under local law, (a) withholding Shares that otherwise would be issued to you when you exercise this Option, by considering applicable statutory or other withholding rates, including up to maximum rates, (b) having the Company withhold taxes from the proceeds of the sale of the Shares, either through a voluntary sale or through a mandatory sale arranged by the Company (on your behalf and you hereby authorize such sales by this authorization), (c) your payment of a cash amount, or (d) any other arrangement approved by the Company; all under such rules as may be established by the Committee and in compliance with the any insider trading or 10b-51 trading policies of the Company, if applicable; provided however, that if you are a Section 16 officer of the Company under the Exchange Act, then the Committee (as constituted in accordance with Rule 16b-3 under the Exchange Act) shall establish the method of withholding from alternatives (a)-(d) above, and the Committee shall establish the method prior

to the Tax-Related Items withholding event. The Fair Market Value of these Shares, determined as of the effective date of the Option exercise, will be applied as a credit against the withholding taxes. You shall pay to the Company or the Employer any amount of Tax-Related Items that the Company or the Employer may be required to withhold as a result of your participation in the Plan or your purchase of Shares that cannot be satisfied by the means previously described. Finally, you acknowledge that the Company has no obligation to deliver Shares to you until you have satisfied the obligations in connection with the Tax-Related Items as described in this Section.

Acknowledgement. The Company and you agree that the Option is granted under and governed by the Notice of Grant, this Agreement and the provisions of the Plan (incorporated herein by reference). You: (i) acknowledge receipt of a copy of the Plan prospectus, (ii) represent that you have carefully read and are familiar with their provisions, and (iii) hereby accept the Option subject to all of the terms and conditions set forth herein and those set forth in the Plan and the Notice of Grant. You hereby agree to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions relating to the Plan, the Notice of Grant and the Agreement.

Consent to Electronic Delivery of All Plan Documents and Disclosures. By your acceptance of this Option, you consent to the electronic delivery of the Notice of Grant, this Agreement, account statements, Plan prospectuses required by the Securities and Exchange Commission, U.S. financial reports of the Company, and all other documents that the Company is required to deliver to its security holders (including, without limitation, annual reports and proxy statements) or other communications or information related to the Option. Electronic delivery may include the delivery of a link to a Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other delivery determined at the Company's discretion. You acknowledge that you may receive from the Company a paper copy of any documents delivered electronically at no cost if you contact the Company by telephone, through a postal service or electronic mail at _____. You further acknowledge that you will be provided with a paper copy of any documents delivered electronically if electronic delivery fails; similarly, you understand that you must provide on request to the Company or any designated third party a paper copy of any documents delivered electronically if electronic delivery fails. Also, you understand that your consent may be revoked or changed, including any change in the electronic mail address to which documents are delivered (if you have provided an electronic mail address), at any time by notifying the Company of such revised or revoked consent by telephone, postal service or electronic mail at _____. Finally, you understand that you are not required to consent to electronic delivery.

Compliance with Laws and Regulations. The exercise of this Option will be subject to and conditioned upon compliance by the Company and you with all applicable state, federal and foreign laws and regulations and with all applicable requirements of any stock exchange or automated quotation system on which the Company's Common Stock may be listed or quoted at the time of such issuance or transfer. The Shares issued pursuant to this Agreement shall be endorsed with appropriate legends, if any, determined by the Company.

Governing Law; Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of this Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of this Agreement shall be enforceable in accordance with its terms. This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to principles of conflicts of law. For purposes of

litigating any dispute that may arise directly or indirectly from the Plan, the Notice and this Agreement, the parties hereby submit and consent to litigation in the exclusive jurisdiction of the State of Delaware.

No Rights as Employee. Nothing in this Agreement shall affect in any manner whatsoever the right or power of the Company, or a Parent, Subsidiary or Affiliate of the Company, to terminate your Service, for any reason, with or without Cause.

Adjustment. In the event of a stock split, a stock dividend or a similar change in Company stock, the number of Shares covered by this Option and the Exercise Price per Share may be adjusted pursuant to the Plan.

Award Subject to Company Clawback or Recoupment. To the extent permitted by applicable law, the Option shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of your employment or other Service that is applicable to you. In addition to any other remedies available under such policy, applicable law may require the cancellation of your Option (whether vested or unvested) and the recoupment of any gains realized with respect to your Option.

Entire Agreement; Enforcement of Rights. This Agreement, the Plan and the Notice constitute the entire agreement and understanding of the parties relating to the subject matter herein and supersede all prior discussions between them. Any prior agreements, commitments or negotiations concerning this Option are superseded. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, shall be effective unless in writing and signed by the parties to this Agreement. The failure by either party to enforce any rights under this Agreement shall not be construed as a waiver of any rights of such party.

BY ACCEPTING THIS OPTION, YOU AGREE TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.

CERTAIN IDENTIFIED INFORMATION HAS BEEN OMITTED FROM THIS EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE REGISTRANT IF PUBLICLY DISCLOSED. [*****] INDICATES THAT INFORMATION HAS BEEN OMITTED.

Amendment No.1 to the License Agreement

This Amendment of the License Agreement **("Amendment No. 1")** is made and entered on the last signature date below by and between CRT Pioneer Fund LP, a limited liability partnership established in England and Wales under number LP 14391 with registered office at 4 Claridge Court, Lower Kings Road, Berkhamsted, Hertfordshire, HP4 2AF **("CPF"),** acting by its general partner, CRT Pioneer GP Limited, a company registered in England and Wales with registered number 07933818 whose registered office is at 4 Claridge Court, Lower Kings Road, Berkhamsted, Hertfordshire, HP4 2AF (the **"General Partner")** and Sierra Oncology, Inc., a Delaware corporation with its head office located at 46701 Commerce Center Drive, Plymouth, MI 48170 **("Sierra").**

WHEREAS:

(A) CPF and Sierra (formerly ProNAi Therapeutics, Inc) entered into an agreement for the development and commercialization of the CHK1 Programme in the Territory (each as defined in the License Agreement) on 27 September 2016 (the **"License Agreement").**

(B) CPF and Sierra agree to amend the License Agreement in accordance with the provisions of this Amendment Agreement.

(C) Therefore, pursuant to clause 19 of the License Agreement, and in consideration of the covenants and obligations contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree to amend the terms of the License Agreement as set out in this Amendment Agreement.

NOW IT IS HEREBY AGREED as follows:

1. Capitalized terms not otherwise defined herein shall have the same meaning as set forth in the License Agreement.
2. All references in the Agreement to "ProNAi" shall be deleted and replaced with references to "Sierra".
3. Schedule 6 of the License Agreement shall be deleted in its entirety and shall be replaced with the new Schedule 6 set out in Annex A to this Amendment Agreement.
4. Except as expressly set forth herein, all of the terms and conditions of the License Agreement shall remain unchanged, unmodified and in full force and effect.

(Signature page follows]

[*****] Certain identified information denoted with an asterisk have been omitted from this exhibit because it is not material and would likely cause competitive harm to the Registrant if publicly disclosed.

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment to be executed by their duly authorised representatives.

CRT PIONEER FUND LP acting by CRT Pioneer GP Limited its General Partner

Signature: /s/ Ian Miscampbell

Name: Ian Miscampbell

Date: 11/9/2020

Sierra Oncology, Inc.

Signature: /s/ Christina Thomson

Name: Christina Thomson

Date: 11/9/2020

Signature: /s/ Stephen Dilly

Name: Stephen Dilly

Date: 11/10/2020

[*****] Certain identified information denoted with an asterisk have been omitted from this exhibit because it is not material and would likely cause competitive harm to the Registrant if publicly disclosed.

Annex A

SCHEDULE 6

PAYMENT

	Payment (USD)
Signature Fee	$7,000,000
Transfer of CTAs	$2,000,000
Royalties	Equal to: [*****]
[*****]	[*****]

In the event that a Milestone Payment becomes due for a Milestone Event under this Schedule 6, but one or more Milestone Payments tied to earlier stages in development of such Licensed Product were not paid, then such Milestone Payment attached to the earlier Milestone Event shall become due and payable contemporaneously with the payment for such later Milestone Event.

In the event that Sierra is [*****] then all [*****] milestones set out above for the relevant regulatory authority shall become due and payable.

[*****] Certain identified information denoted with an asterisk have been omitted from this exhibit because it is not material and would likely cause competitive harm to the Registrant if publicly disclosed.

EXHIBIT 10.14

SUBLANDLORD:

SIERRA ONCOLOGY CANADA ULC

SUBTENANT:

SCOUGALL MANAGEMENT (1987) LIMITED

BUILDING:

Suite 2150
885 WEST GEORGIA STREET VANCOUVER, BC

S U B L E A S E

S U B L E A S E

This Sublease (the "**Sublease**") date as of the 1st day of December 2020

BETWEEN

SIERRA ONCOLOGY CANADA ULC (The "**Sublandlord**"); and

SCOUGALL MANAGEMENT (1987) LIMITED (The "**Subtenant**")

Sublandlord subleases to Subtenant a portion of the building known municipally as 885 West Georgia Street, Vancouver BC (the "**Building**") on the terms and conditions below. Any capitalized terms that are not expressly defined shall have the meanings ascribed to them under the Head Lease.

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1. PREMISES

The subleased premises shall consist of eight thousand three hundred and forty seven (8,347) square feet of rentable area, being a portion of the 21st floor of the Building designated as Suite 2150, all as outlined in red on the floor plan attached as Schedule "A" (the "**Premises**").

2. TERM

The term of the Sublease (the "**Term**") shall be for approximately two (2) years and one (1) month commencing on the Commencement Date (as hereinafter defined) and expiring on February 27, 2023 (the "**Termination Date**").

3. PRIOR ENTRY

For the purposes hereof, the term "**Possession Date**" shall mean the date on which all of the following have occurred (I) the parties shall have received a duly executed copy of the Head Landlord's Consent (as hereinafter defined), (II) intentionally deleted, (III) Sublandlord shall have completed Sublandlord's Work (as hereinafter defined) in accordance with the provisions hereof and notified Subtenant of the same, and (IV) Sublandlord shall have delivered the Premises to Subtenant in the condition required in Section 8 below; it being agreed that the Possession Date shall not occur earlier than **December 1, 2020**. For the purposes hereof, the term "**Fixturing Period**" shall mean the period commencing on the Possession Date and expiring on the 3-month anniversary of the Possession Date (the date immediately following such expiration of the Fixturing Period, the "**Commencement Date**"). Sublandlord shall use commercially reasonable efforts to cause the Possession Date to occur on **December 1, 2020**. The Subtenant and the Subtenant's contractor shall have complete, vacant and exclusive access to, and use of, the Premises at all times during the Fixturing Period for the purpose of constructing the Subtenant's Leasehold Improvements and installation of the Subtenant's furniture, fixtures and equipment. There shall be no Base Rent (as hereinafter defined) and/or Additional Rent (as hereinafter defined) due and payable during the Fixturing Period. In the event the Subtenant completes its Leasehold Improvements and any other initial work required by Subtenant in all or part of the Premises prior to the Commencement Date, then the Subtenant shall be permitted from and after such date to occupy and carry on business from such portion or whole of the Premises provided that during both the Fixturing Period and during such period after completion of Subtenant's Leasehold Improvements but before the Commencement Date, all terms of the Sublease shall be in

full force and effect, save only that there shall be no Base Rent and Additional Rent payable in any event whatsoever prior to the Commencement Date.

4. BASE RENT

Beginning on the Commencement Date, the Subtenant shall pay to the Sublandlord base rent (the "**Base Rent**") in equal monthly installments in advance on the first day of each calendar month of the Term at the following rates:

Years 1 to Termination Date: Thirty Dollars ($30.00) per square foot; $250,410.00 per annum; $20,867.50 per month.

In the event the Commencement Date occurs on a day that is not the first day of a calendar month, the Base Rent for the partial month from the Commencement Date to the first day of the following calendar month shall be prorated.

All Base Rent, Additional Rent, the Deposit (as hereinafter defined), and any other sums due and payable under this Sublease shall be by electronic funds transfer using banking information (and other information reasonably required for Subtenant to accomplish payment) provided by Sublandlord to Subtenant as of the date hereof.

5. ADDITIONAL RENT

Subject to the applicable provisions hereof and of the lease dated June 12, 2017 (the "**Head Lease**") between VAN885 West Georgia LP, by its general partner, VAN885 West Georgia GP Ltd. and ONTREA Inc., both by their duly authorized agent, The Cadillac Fairview Corporation Limited (collectively, the "**Head Landlord**"), as landlord, and Sublandlord, as tenant, the Subtenant shall pay to the Sublandlord, as Additional Rent, all Business Tax and its Proportionate Share of Taxes and Operating Costs (including without limitation utilities) for the Building, which Additional Rent is estimated, for the calendar year of 2020, at $24.50 per square foot of Rentable Area per annum for the Premises (the "**Additional Rent**"). The Sublandlord shall provide the Subtenant with the Head Landlord's estimate of the amount of such Taxes and Operating Costs and utilities at the commencement of each calendar year as prescribed and outlined in Section 2.05 of the Head Lease and bill the Subtenant its Proportionate Share of such Taxes and Operating Costs incurred under the Head Lease in monthly instalments in advance on the first day of each calendar month, which amounts shall be subject to review and adjustment at year end in accordance the Head Landlord's Additional Rent adjustments as further outlined in the Head Lease. For avoidance of doubt, this Sublease is a completely net sublease to the Sublandlord, except as expressly set forth hereunder. Except to the extent caused by the acts or omissions of Sublandlord or any of its agents, contractors and employees, the Sublandlord shall not be responsible for any expenses or outlays of any nature arising from or relating to the Premises, or the use and occupancy thereof, or the contents thereof or the business carried on therein. The Subtenant shall pay all charges, impositions and outlays of every nature and kind relating to the Premises accruing from and after the Commencement Date, except as expressly set forth hereunder and except to the extent any such charges, impositions, and outlays are due to the acts or omissions of Sublandlord or any of its agents, contractors and employees.

6. OCCUPANCY DELAY

Notwithstanding anything herein to the contrary, should Sublandlord fail to cause the Possession Date to occur by December 15, 2020 through no fault of the Subtenant, then Subtenant shall be provided

with one (1) day(s) of free Base Rent for every day the Possession Date shall not have occurred beyond December 15, 2020; it being agreed that such Base Rent credit shall be applied following the Commencement Date such that Subtenant shall receive the benefit of the same. Notwithstanding anything herein to the contrary, in the event that the Possession Date shall not have occurred on or before February 1, 2021, then the Subtenant shall have the option, in its sole and absolute discretion, to terminate this Sublease.

7. USE

The Subtenant may use the Premises for all uses permitted under the Head Lease, including, without limitation, general office use. The Subtenant shall at all times use the Premises and otherwise be in compliance with (i) all applicable Federal, Provincial, and City of Vancouver laws and regulations enacted, adopted, and/or amended as of and after the Commencement Date; and (ii) all applicable by-laws, rules, and regulations applicable to the Building, Lands, and Premises including without limitation Section 1.05 of the Head Lease and the rules and regulations set forth in Exhibit D to the Head Lease. Notwithstanding anything in the Head Lease and in this Sublease to the contrary, the Subtenant shall not be required to perform any Alterations to the Building or Building systems to comply with any applicable laws unless (i) any such Alteration is required by reason of Alterations having been performed by, through or at the Subtenant's request, or (ii) such Alteration is required by reason of the specific manner of the use of the Premises by the Subtenant (as opposed to the mere use of the Premises for the uses permitted under this Section 7).

8. CONDITION OF PREMISES

Subject to the following grammatical paragraph, the Subtenant acknowledges that it has thoroughly inspected the Premises and agrees that, as of the Possession Date, Subtenant accepts the Premises in its "as is with all faults" but broom-clean and vacant condition and that Sublandlord has no obligation whatsoever to perform any leasehold or other tenant improvements to prepare the Premises for the Subtenant's occupancy, other than Sublandlord's Work described in this Sublease. Subtenant acknowledges that, except as otherwise expressly set forth herein, neither Sublandlord nor any agent of Sublandlord has made any representation as to the condition of the Subleased Premises or their suitability for the conduct of Subtenant's business, and Subtenant waives any implied warranty that the Premises are suitable for Subtenant's intended purpose. SUBLANDLORD AND SUBTENANT ACKNOWLEDGE AND AGREE THAT BY THEIR EXECUTION OF THIS SUBLEASE THE TERMS OF THIS SECTION HAVE BEEN SPECIFICALLY NEGOTIATED AND AGREED UPON.

The Sublandlord represents and warrants that, as of the date hereof, to the best of its actual knowledge (without any duty to investigate), (i) the Base Building services, including HVAC, electrical, plumbing, sprinklers, life safety systems and telecommunication systems are in good working order and repair and (ii) no asbestos or other Hazardous Substances exist in the Premises. The Sublandlord represents and warrants that it has not received any notice from a governmental authority or from Head Landlord that the Premises or the Building are in violation of any applicable laws. The phrase "to the best of its actual knowledge" as used in this Sublease means the actual knowledge only, and not any implied, imputed or constructive knowledge, of the Executive Committee of Sublandlord (who would be advised of any issues at the Premises related to Building system and safety), without any independent investigation having been made.

Throughout the Sublease Term and any extensions thereof, the Subtenant shall be permitted to modify existing Leasehold Improvements and/or install new Leasehold Improvements and perform

any other Alterations in the Premises, at its sole expense and in a good and workmanlike manner so long as such modifications or new Leasehold Improvements comply with Article V of the Head Lease, and so long as Subtenant obtains Sublandlord's (and, as applicable under the Head Lease, Head Landlord's) written approval of all plans and specifications with respect thereto; it being agreed, however, that (I) Sublandlord shall cooperate with Subtenant to obtain any required approvals under the Head Lease from Head Landlord, and (II) if Sublandlord's approval is required, Sublandlord's approval shall not be unreasonably withheld, conditioned or delayed. Other than Sublandlord's reasonable out of pocket costs to review plans and specifications of requested Leasehold Improvements or Alterations, there shall be no charges, administration fees or any other coordination fees charged by the Sublandlord for the supervision of any work performed by or on behalf of Subtenant in the Premises. During construction of any modification or new Leasehold Improvements, Subtenant or its general contractor shall procure and maintain in effect all insurance coverages required under the Head Lease.

9. SUBLANDLORD'S WORK

The Sublandlord agrees to comply with and diligently perform at its sole cost and expense the following work in a good and workerlike manner in compliance with all applicable laws, hereinafter collectively described as "**Sublandlord's Work**". The Sublandlord's Work shall include:

a. all existing data cabling to be left in good working order and available for the Subtenants use.

b. floors to be free of debris, in clean, broom swept condition;

c. the existing lighting and light fixtures are in good working order;

d. the existing blinds are in good working order; and

e. ensure that the Premises is in compliance with all requirements of applicable municipal by-laws, building codes and fire, health and other regulations and all relevant provincial and federal legislation and regulations.

10. TENANT'S CONSTRUCTION MANUAL AND AS BUILT CAD DRAWINGS

Within five (5) business days of the date of this Sublease set forth above, the Sublandlord shall use reasonable efforts to locate any existing as built CAD drawings for the Premises and shall provide Subtenant with the same.

11. RESTORATION/MAKE GOOD; SURRENDER; HOLDOVER

Notwithstanding anything to the contrary contained herein or in the Head Lease, upon the expiration or earlier termination of the Term, Subtenant shall have no obligation to remove Leasehold Improvements and Alterations (including, without limitation, walls, plumbing and lighting fixtures) that exist in or about the Premises as of the Possession Date (it being agreed that Sublandlord shall, at its sole cost and expense, be responsible for any required removal of the same pursuant to the Head Lease unless otherwise agreed to by the parties). Notwithstanding the foregoing, Subtenant shall be obligated to remove any Leasehold Improvements and Alterations from the Premises that were installed by Subtenant from and after the Possession Date, so long as the same are required to be removed under the Head Lease, unless Sublandlord, Subtenant, and Head Landlord expressly agree otherwise in writing. Subject to Section 19 hereof, except as otherwise expressly provided above and except as otherwise expressly agreed to among Sublandlord, Subtenant and Head Landlord

in writing, Subtenant shall, on the last day of the Term of this Sublease, or upon any earlier termination, remove all of the furniture, furnishings, Subtenant's personal property, Trade Fixtures, and equipment and surrender to Sublandlord the Premises and all improvements to the Premises broom clean in good order, condition and state of repair, reasonable wear and tear and damage by casualty excepted. Subtenant acknowledges and agrees that the Term expires on the day before the Head Lease term expires and that Subtenant has no right to hold over or occupy the Premises past the expiration of the Term. In the event of any unauthorized holding over, Subtenant shall indemnify and hold Sublandlord harmless from any and all damages arising from or related to such holdover.

12. SUBLANDLORD DEFAULT; SUBTENANT'S REMEDIES

In the event Sublandlord shall be in default of any of its covenants or obligations under the Sublease following notice thereof and a reasonable period of time to cure (not to exceed 30 days), unless such default is such that it cannot be cured within 30 days, in which case, the cure period shall be extended so long as Sublandlord commences cure within such 30-day period and pursues such cure diligently to completion. If Sublandlord fails to cure such default within the periods prescribed above, Subtenant shall have the right to perform the same on behalf of Sublandlord and any costs and expenses incurred by Subtenant in connection with such performance shall be reimbursed by Sublandlord to Subtenant within thirty (30) days following receipt of an invoice therefor. If Sublandlord fails to so reimburse Subtenant within such period, then Subtenant shall have the right to offset all such unreimbursed costs against the upcoming instalments of Base Rent and Additional Rent.

13. SUBTENANT DEFAULT; SUBLANDLORD'S REMEDIES. Any of the following occurrences shall constitute a default by Subtenant:

13.1 **Failure to Pay Money When Due**. If Subtenant fails to make any payment of Base Rent or any other payment required to be made by Subtenant hereunder, as and when due, and such default shall continue for a five (5) day period after written notice from Sublandlord of such failure.

13.2 **Other Breaches**. If Subtenant fails to observe or perform any other provision of this Sublease (other than failure to pay Base Rent), including compliance with any applicable rules and regulations, and such default is not rectified within a thirty (30) day period after written notice from Sublandlord (stating with reasonable particularity the nature of such default), unless such default is of a nature that it cannot be cured within such 30 day period, in which case, the cure period shall be extended so long as Subtenant commences cure of such default within such 30 day period and pursues to cure such default diligently to completion. The 30-day grace period shall not apply to Sublandlord's right to exercise remedies under Section 13.3(a) with respect to Subtenant's breach of its obligations to maintain the required insurance coverages in full compliance with this Sublease.

13.3 **Sublandlord's Remedies**. If Subtenant commits a default under this Sublease, continuing beyond applicable notice and cure periods as provided above, Sublandlord may do any one or more of the following:

a. Cure the default and charge the costs to Subtenant, in which case Subtenant shall pay such costs as additional rent promptly on demand, together with interest thereon at the rate of twelve percent (12%) per year or the highest rate permitted by law, whichever is less.

b. Terminate this Sublease.

c. Enter and take possession of the Premises and remove Subtenant and all other persons and any property from the Premises, with process of law.

d. Hold Subtenant liable for and collect rent and other indebtedness owed by Subtenant to Sublandlord or rent that would have accrued during the remainder of the Term had there been no default, less any sums Sublandlord receives by reletting the Subleased Premises.

e. Hold Subtenant liable for that part of the following sums paid by Sublandlord that are attributable to the remainder of the Term:

(i) Customary broker's fees incurred by Sublandlord in reletting part or all of the Premises;

(ii) The cost of removing and storing Subtenant's property;

(iii) The cost of repairs and alterations reasonably necessary to put the Premises in a condition reasonably acceptable to a new subtenant; and

(iv) Other necessary and reasonable expenses incurred by Sublandlord in enforcing its remedies.

14. HEAD LEASE

14.1 **Good Standing and Enforcement**. A copy of the Head Lease is attached to this Sublease as Schedule "B." Sublandlord represents and warrants to its actual knowledge that (a) the Head Lease is in good standing and has not been modified, (b) there are no agreements other than the Head Lease between Head Landlord and Sublandlord concerning the use of the Premises, and (c) Sublandlord has not received notice of any breach or default of the Head Lease by Sublandlord that has not been cured as of the date of this Sublease and no event has occurred which with notice or passage of time or both would constitute a default under the Head Lease. Sublandlord shall keep the Head Lease in full force and effect during the Term hereof and without default or amendment, and to remedy all breaches of the Head Lease. Sublandlord shall take all commercially reasonable steps to (I) assist Subtenant as Subtenant may from time-to-time request, in obtaining services and utilities from Head Landlord pursuant to the Head Lease, (II) enforce Sublandlord's rights against Head Landlord under the Head Lease for the benefit of Subtenant upon Subtenant's request therefor (and to promptly forward to Head Landlord any notices or requests for consent as Subtenant may reasonably request and to make such requests on behalf of Subtenant), and (III) enforce the performance of the terms, covenants and conditions of the Head Lease by Head Landlord throughout the Term (including, without limitation, exercising all of its rights and remedies available under the Head Lease). Sublandlord hereby represents and warrants to Subtenant that it has the right and authority to enter into this Sublease subject to Head Landlord's consent.

14.2 **Subordination**. Subject to the provisions of this Sublease, except as herein otherwise expressly provided, this Sublease is subject and subordinate to the Head Lease, to all ground and underlying leases, to all mortgages and deeds of trust which may now or hereafter affect the Building, and to any and all renewals, modifications, consolidations, replacements and extensions thereof. Sublandlord agrees not to effect any modification or amendment of the Head Lease without the written consent of Subtenant (which consent may be given or withheld in Subtenant's sole and absolute discretion). As of the date hereof, to the best of Sublandlord's actual knowledge, Seller represents and warrants that it is not aware of any such ground or underlying leases which affect the Building.

Subtenant agrees, upon request of Sublandlord, at any time or times, to execute and deliver to Sublandlord any and all instruments (in form and substance reasonably acceptable to Subtenant) as shall be required by Head Landlord to effect a subordination of this Sublease to the lien of any mortgage, deed of trust, or comparable security instrument in accordance with and subject to the terms of the Head Lease.

14.3 **Adherence to Terms of Head Lease**. Subject to the provisions of this Sublease, except as herein otherwise expressly provided and except as may be inconsistent with the provisions of this Sublease (it being agreed that in the case of such inconsistency, the last grammatical paragraph of this Section 14.3 shall govern), Subtenant agrees to be bound by all obligations and responsibilities of Sublandlord as tenant under the Head Lease. Notwithstanding anything herein to the contrary, the parties agree that the following provisions of the Head Lease are inconsistent with the terms of this Sublease and therefore are not incorporated into this Sublease and shall be inapplicable to this Sublease: Sections 1.01(e), (f), (g), and (i), Section 2.01(b), Section 2.02, Section 2.08(c), Section 2.09, Section 2.12, Section 3.02(b), Sections 5.05(c) and (d), Section 11.06, Section 11.16, Section 11.17, Section 11.22, Section 11.23, and Section 11.26. Subtenant shall neither do nor permit anything to be done that would cause the Head Lease to be terminated or forfeited by reason of any right of termination or forfeiture reserved or vested in Head Landlord under the Head Lease. Except to the extent caused by the acts or omissions of Sublandlord, Subtenant shall defend, indemnify and hold Sublandlord harmless from and against any breach of its obligations under the preceding provisions of this Section, including without limitation attorneys' fees and costs, including on appeal.

Sublandlord hereby grants to Subtenant the right to receive all of the services and benefits with respect to the Premises which are to be provided by Landlord, if any, under the Lease with respect to the Premises during the term of this Sublease.

Sublandlord agrees to pass through to Subtenant all benefits of any rent abatements or rent relief that it shall receive from the Head Landlord pursuant to the Head Lease, including, without limitation, any rent relief provided pursuant to a government relief program.

The parties hereto agree that, as between Sublandlord and Subtenant, in the event of any conflict between the provisions of the Head Lease and the provisions of this Sublease, the provisions of this Sublease shall govern and control.

15. RIGHT TO ASSIGN & SUBLEASE

Subtenant shall not sublet all or any portion of the Premises, grant any occupancy rights thereto, or assign this Sublease by operation of law or otherwise, for any period of time without first obtaining Sublandlord's and Head Landlord's written consent which may be given or withheld in accordance with Section 8.01 of the Head Lease. No subletting, assignment or other transfer under this Section shall relieve Subtenant of any liability under this Sublease, and no consent to any such transfer shall operate as a waiver of the necessity for consent to a subsequent transfer. Upon Sublandlord's request, Subtenant promptly shall provide Sublandlord with copies of any instruments of transfer. Request for a sublease, assignment or other transfer shall not relieve Subtenant of the obligation to comply with the terms of this Section for subsequent proposed transfers.

Notwithstanding anything herein to the contrary, (A) Subtenant may, without the Sublandlord's consent assign this Sublease or sublet the Premises in whole or in part to any holding body corporate, subsidiary body corporate, affiliated company or partnership, or any other partnership, and to any company or partnership with which the Subtenant has merged, amalgamated, consolidated or has

split, as defined in the Canada Business Corporations Act as of the Commencement Date, provided that the Subtenant notifies the Sublandlord in writing and remains jointly and severally responsible for the fulfilment of this Sublease obligations, (B) a change of control of Subtenant (or its affiliate) shall not be deemed to be a transfer of this Sublease and shall not require Sublandlord's consent, and (C) Subtenant shall have right to assign this Sublease or to sublet all or part of the Premises to a Related Entity (as hereinafter defined) without Sublandlord's prior consent but upon written notice to the Sublandlord. A "**Related Entity**" means a corporation, partnership or other entity that: (i) holds controlling interest in the Subtenant, (ii) is controlled by the same entity that has controlling interest in the Subtenant, (iii) is wholly owned by the Subtenant; and/or (iii) is a successor entity of the Subtenant.

Notwithstanding anything herein to the contrary, subject to Head Landlord's Consent, (I) Sublandlord and Subtenant agree that the Premises may be occupied and used by the Subtenant and the law firm of Cassels Brock & Blackwell LLP and any other Related Entity along with any such entity's partners, employees, counsel, consultants and contractors ("**Permitted Occupants**") without such occupation and use constituting an assignment of this Sublease or a sub-sublease of the Premises and (II) any withdrawal, admission, retirement, death, incompetency or bankruptcy of any partner(s) or member(s) of Subtenant or its affiliates (including, without limitation, Cassels Brock & Blackwell LLP) or the reallocation of equity, ownership, voting or other interests in Subtenant (or its affiliates) among partners or members shall not be deemed a transfer hereunder and shall not require Sublandlord's consent. Notwithstanding anything to the contrary in this Section including the occupation and use of the Premises by Permitted Occupants as described in this Section (e.g., any payment or other arrangements Subtenant may have with Permitted Occupants to use or occupy the Premises), Subtenant shall at all times remain fully and solely responsible as Subtenant to comply with the terms of this Sublease and Subtenant's indemnity obligations under Section 16 below shall apply to the acts, omissions, and willful misconduct of any and all Permitted Occupants.

16. INDEMNIFICATION

Subject to Section 21 below, Subtenant will defend, indemnify and hold harmless Sublandlord and Head Landlord from any claim, liability or suit, including attorney fees, on behalf of any party for any injury or damage occurring in or about the (a) Premises from any cause whatsoever, except to the extent caused by the negligence or intentional misconduct of Sublandlord or Head Landlord (or any of their respective agents, contractors or employees) and (b) Building, if and to the extent such damage or injury was caused by any act, omission (where there is a duty to act), negligence or intentional act of Subtenant, Subtenant's agents, employees, servants, customers, clients, contractors, or invitees, or Permitted Occupants.

Subject to Section 21 below, Sublandlord shall defend, indemnify and hold harmless Subtenant and its officers, directors, members, managers, employees, contractors, and agents, from any claim, liability or suit, including attorney fees, on behalf of any party for any breach of Sublandlord's representations hereunder and for any default by Sublandlord of any of its covenants and obligations hereunder, except to the extent caused by the negligence or intentional misconduct of Subtenant (or any of its agents, contractors or employees), or any Permitted Occupant.

17. PHYSICAL OCCUPANCY

During the Term, the Subtenant shall not be obligated to physically occupy the Premises except as required under the Head Lease; provided, however, that Subtenant shall in all cases be responsible to pay all Base Rent and Additional Rent as required under this Sublease.

18. PARKING

The Subtenant shall have the right, but not the obligation, to exclusively access and use the unreserved parking spaces as provided under Section 11.24 of the Head Lease; it being agreed, however, that for purposes of this Sublease, the Required Conditions (as such term is defined in the Head Lease), shall not be applicable. The Subtenant may exercise such right with respect to any or all of such parking spaces at any time through the Term upon 15 days' notice to the Sublandlord.

The Subtenant may terminate such use with respect to any or all such parking spaces with the Sublandlord at any time through the Term upon 15 days' notice. During any period during the Term that Subtenant elects not to use the parking spaces provided for under Section 11.24 of the Head Lease, Sublandlord may use such parking spaces; provided, however, that Subtenant shall not be responsible for any charges, rates or fees for any parking spaces that Subtenant does not elect to so access and use. Except as provided above, Sublandlord shall not, and shall not permit other parties to, use such parking spaces during the Term.

19. FURNITURE AND EQUIPMENT

Sublandlord shall leave at the Premises as of the Possession Date the following furniture, fixtures, and equipment of Sublandlord that shall become the property of Subtenant as of the Possession Date at no cost or expense to Subtenant: all furniture, fixtures and equipment listed on Schedule "C" annexed hereto ("**Retained FF&E**"); it being agreed that title to the Retained FF&E shall vest in Subtenant as of the Possession Date and such transfer of title shall occur automatically. Sublandlord hereby represents and warrants that the Retained FF&E shall be free and clear of all encumbrances, and at Subtenant's request, Sublandlord shall execute a bill of sale in a form reasonably acceptable to both parties memorializing the title transfer of the Retained FF&E from Sublandlord to Subtenant.

Sublandlord shall, at its sole cost and expense, remove from the Premises before the Possession Date all furniture, fixtures and equipment that are currently located in the Premises and not specifically identified on Schedule "C" annexed hereto (collectively, "**Removed FF&E**"). Sublandlord shall repair any damage caused by the removal of the Removed FF&E before the Possession Date.

20. WAIVER OF EXTENSION/RENEWAL OPTIONS

Sublandlord and Subtenant agree that Subtenant may negotiate and enter into a direct lease with Head Landlord with respect to the Premises for a term that shall commence upon the expiration of this Sublease Term. Notwithstanding anything to the contrary contained in the Head Lease, Sublandlord waives any and all rights and options it may have under the Head Lease to extend or renew the term under the Head Lease, including, without limitation, the option and right granted under Section 11.25 of the Head Lease; it being agreed that as an inducement to Subtenant to enter into this Sublease, Sublandlord agrees that it hereby waives and shall not exercise any such renewal or extension rights under the Head Lease. Sublandlord hereby indemnifies and holds Subtenant harmless from all costs and expenses incurred by Subtenant as a result of Sublandlord's failure to abide by the provisions of this Section 20.

21. INSURANCE; MUTUAL WAIVER; WAIVER OF SUBROGATION

The Sublandlord shall continue to maintain the required insurance coverage pursuant to Article VI of the Head Lease, as tenant under the Head Lease. The Subtenant shall, during any period of occupancy, at its sole cost and expense, obtain and maintain for the Term insurance policies in the amounts required under Article VI of the Head Lease and naming Sublandlord and Head Landlord as additional insured. Subtenant shall not be permitted to take possession of the Premises until such time as the Subtenant has provided the Sublandlord with a certificate of insurance demonstrating that such insurance has been obtained. Notwithstanding anything herein to the contrary, Sublandlord and Subtenant each release and relieve the other, and waive their entire rights of recovery for any injury or death to any person or for any loss or damage to property located within or constituting a part or all of the Premises or the Building to the extent that such injury, death, loss or damage is covered by (a) the injured party's insurance, or (b) the insurance the injured party is required to carry under this Sublease (and the Head Lease by incorporation by reference), whichever is greater. This waiver applies regardless of whether the loss is due to the negligent acts or omissions of Sublandlord or Subtenant, or their respective officers, directors, employees, agents, contractors, or invitees. Each of Sublandlord and Subtenant shall have their respective property insurers endorse the applicable insurance policies to reflect the foregoing waiver of claims. Additionally, (i) Sublandlord and Subtenant shall each ensure that all of their insurance policies required to be maintained hereunder shall contain a waiver by the insurer of any rights of subrogation to which such insurer might otherwise be entitled against Sublandlord or Subtenant, as the case may be, or any person for whom Sublandlord or Subtenant, as the case may be, are in law responsible and (ii) Sublandlord and Subtenant, as the case may be, shall ensure that all of their respective insurance policies required to be maintained hereunder shall contain a waiver by the insurer of any rights of subrogation to which such insurer might otherwise be entitled against Sublandlord, Subtenant, or any person for whom Sublandlord or Subtenant are in law responsible.

22. CONDITIONS — HEAD LANDLORD CONSENT AND NDA

Sublandlord shall request Head Landlord’s consent of this Sublease with reasonable promptness following the parties’ execution and delivery of this Sublease and Sublandlord shall use its commercially reasonable efforts to obtain such consent, at its sole cost and expense. Sublandlord and Subtenant shall negotiate and enter into a consent to this Sublease with the Head Landlord in form and substance reasonably satisfactory to the parties thereto (the “**Head Landlord’s Consent**”). If such consent is denied by Head Landlord, this Sublease shall thereupon terminate and be of no further force or effect.

Within reasonable promptness following the parties execution and delivery of this Sublease and the Head Landlord’s Consent, Sublandlord shall request that Head Landlord enter into a non- disturbance and recognition agreement with Subtenant with respect to the Sublease and Premises in form and substance reasonable acceptable to the Head Landlord, Sublandlord, and Subtenant**.**

23. SALES TAX

Federal and Provincial sales tax, if applicable, shall be added to all amounts referred to in this Sublease.

24. DEPOSIT

Within two (2) business days of the date Head Landlord's Consent of this Sublease is fully-executed, Subtenant shall pay to Sublandlord the following deposit (the "**Deposit**"):

A sum equal to two (2) months Net Rent and Additional Rent plus applicable sales taxes paid by cheque. Half of the Deposit shall be applied to the first month of Base Rent; and the balance held as security and applied to the last month of Base Rent during the Term.

25. ESTOPPEL CERTIFICATES

Upon Sublandlord's request, Subtenant agrees to, within twenty (20) days after request, execute and deliver to Sublandlord an estoppel certificate in a form reasonably acceptable to Sublandlord and Subtenant, with appropriate exceptions to the statements therein. Subtenant acknowledges that a purchaser or lender may rely upon the truth of the matters set forth in any such estoppel certificate.

26. NOTICE

Any notice under this Sublease must be in writing and be personally delivered, delivered by recognized overnight courier service or given by mail or email. Any notice given by mail must be sent, postage prepaid, by certified or registered mail, return receipt requested. All notices must be addressed to the parties at the following addresses or at such other addresses as the parties may from time to time direct in writing:

Sublandlord:	SIERRA ONCOLOGY CANADA ULC Attn: Justine Clark, Manager HR Operations 355 Burrard Street, Suite 1000 Vancouver, BC V6C 2G8 Email: jclark@sierraoncology.com
With a copy to:	SIERRA ONCOLOGY CANADA ULC Attn: Christina Thomson, General Counsel 355 Burrard Street, Suite 1000 Vancouver, BC V6C 2G8 Email: cthomson@sierraoncology.com Summit Law Group, PLLC 315 5th Avenue S, Suite 1000 Seattle, WA 98104 Email: ians@summitlaw.com
Subtenant:	SCOUGALL MANAGEMENT (1987) LIMITED Suite 2100, Scotia Plaza 40 King St West, Toronto, Ontario M5H 3C2 Attn: Chief Operating Officer Email: JTsiofas@cassels.com

With a copy to: SCOUGALL MANAGEMENT (1987) LIMITED
Suite 2100,
Scotia Plaza
40 King St West,
Toronto, Ontario
M5H 3C2

Attention: Managing Partner

Email: MBennett@cassels.com

Any notice will be deemed to have been given, if personally delivered, when delivered, and if delivered by overnight courier service (e.g., FedEx), one (1) business day after deposit with such overnight courier service, and if mailed, two (2) business days after deposit at any post office in Canada, and if delivered via email, the same day such email is verified as sent; provided that if any such verification occurs after 5 p.m. Pacific Time on a business day, or at any time on a Saturday, Sunday or holiday, such verification will be deemed to have occurred as of 9 a.m. Pacific Time on the following business day.

27. ENTIRE AGREEMENT; MERGER AND WAIVER

This Sublease supersedes and cancels all previous negotiations, arrangements, offers, agreements or understandings, if any, between the parties. This Sublease expresses and contains the entire agreement of the parties and there are no express or implied representations, warranties or agreements between them, except as contained in this Sublease. This Sublease may not be modified, amended or supplemented except by a writing signed by both Sublandlord and Subtenant. No consent given or waiver made by Sublandlord of any breach of Subtenant of any provision of this Sublease shall operate or be construed in any manner as a waiver of any subsequent breach of the same or of any other provision.

28. BENEFIT

This Sublease shall benefit and bind the parties hereto and their respective successors and assigns.

29. SEVERABILITY

If any provision of this Sublease is found to be unenforceable, the remainder of this Sublease shall not be affected thereby.

30. AMENDMENTS

This Sublease may be amended or modified only by a written instrument executed by Sublandlord and Subtenant.

31. ATTORNEY FEES

In any action filed in connection with a dispute concerning the meaning, interpretation, or enforcement of any provision of this Sublease, the party not prevailing in the dispute shall pay any and all costs and expenses incurred by the other party in enforcing or establishing its rights under this Sublease.

32. AUTHORITY

Each individual executing and delivering this Sublease represents and warrants that she/he has the authority to do so and to bind Sublandlord and Subtenant, respectively, to this Sublease.

33. LIMITATION OF LIABILITY

Notwithstanding anything herein to the contrary, neither party hereto shall be liable for any indirect or consequential damages. Notwithstanding anything to the contrary contained in this Sublease or the Head Lease, no past, current or future partner, member, manager, officer, director or shareholder of Subtenant or Sublandlord will have any personal liability under this Sublease or be personally liable for breach of any covenant or obligation of Subtenant or Sublandlord, respectively, under this Sublease, and neither Sublandlord nor Subtenant shall have recourse against the assets of any such person for any payment due under this Sublease or for damages awarded Sublandlord or Subtenant, respectively as a result of Sublandlord's or Subtenant's breach of this Sublease.

34. RISK

Except as otherwise expressly provided in this Section, all of Subtenant's personal property of any kind or description whatsoever in the Premises or Building shall be at Subtenant's sole risk.

Sublandlord and Head Landlord shall not be liable for any damage done to or loss of such personal property, injury to person or damage or loss suffered by the business or occupation of Subtenant arising from any acts or neglect of co-tenants or other occupants of the Building, or of any other persons, or from bursting, overflowing or leaking of water, sewer or steam pipes, or from the heating or plumbing or sprinkler fixtures, or from electric wires, or from gas, or odors, or caused in any other manner whatsoever unless and to the extent the damage is caused by the willful misconduct or negligence of Sublandlord or Head Landlord (or any of their agents, contractors or employees) or breach of Sublandlord's obligations under this Sublease.

35. REPRESENTATION

Each of Sublandlord and Subtenant acknowledge that Salespersons Stan Krawitz (Savills Inc.) and co-broker Jon Bishop (Devencore Company Ltd.) (the "**Subtenant's Agent**") represents the Subtenant in this transaction and Salespersons John Wu and Destry Straight (Devencore Company Ltd) are designated agents for the Sublandlord. All brokerage fees in connection with this transaction shall be paid by the Sublandlord. It is agreed that the Subtenant Agent's portion of the commission shall be an amount equal to two (2) months achieved Base Rent and Additional Rent plus GST and shall be payable by the Sublandlord upon the Commencement Date and the payment of the first monthly installment of rent hereunder. Sublandlord and Subtenant each acknowledge that the information provided by the Sublandlord's designated agent is not to be construed as expert legal, tax or environmental advice and the parties are cautioned not to rely on any such information without seeking specific legal, tax or environmental advice with respect to their unique circumstances.

36. SCAN EMAIL AND COUNTERPARTS

The Sublandlord and Subtenant acknowledge that this Sublease may be by email and signed on a scanned and emailed copy (e.g., an Adobe .pdf). Both parties accept the scanned and emailed copy as a legal and binding document. This Sublease may be executed in any number of counterparts and all such counterparts shall, for all purposes, constitute one agreement as of the date first indicated above

binding on all the parties hereto notwithstanding that all parties are not signatories to the same counterpart, provided that each party has signed at least one counterpart.

Time is of the essence of this Sublease and each part of it.

[SIGNATURE PAGE FOLLOWS; REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

The Subtenant has executed this Sublease at Toronto this 3rd day of December, 2020.

SCOUGALL MANAGEMENT (1987) LIMITED

DocuSigned by:

Per: /s/ John Tsiofas

John Tsiofas
Chief Operating Officer

The Sublandlord has executed this Sublease at Vancouver this 1st day of December, 2020.

SIERRA ONCOLOGY CANADA ULC

DocuSigned by:

Per: /s/ Stephen Dilly

Stephen Dilly
President & Chief Executive Officer

SCHEDULE “A”

SCHEDULE “B”

COPY OF HEAD LEASE

H S B C BUILDING

OFFICE LEASE

BETWEEN

VAN885 WEST GEORGIA LP by its general partner,
VAN885 WEST GEORGIA GP LTD. and ONTREA INC.,
both by their duly authorized agent,
THE CADILLAC FAIRVIEW CORPORATION LIMITED

(Landlord)

-AND-

SIERRA ONCOLOGY CANADA ULC

(Tenant)

HSBC Building
885 West Georgia Street
Vancouver, British Columbia

TABLE OF CONTENTS

THIS LEASE is dated the **12th** day of **June, 2017**

B E T W E E N:

VAN885 WEST GEORGIA LP by its general partner,
VAN885 WEST GEORGIA GP LTD. and ONTREA INC.,
both by their duly authorized agent,
THE CADILLAC FAIRVIEW CORPORATION LIMITED

(collectively, the "Landlord")

- and -

SIERRA ONCOLOGY CANADA ULC

(the "Tenant")

ARTICLE I - BASIC PROVISIONS

Section 1.01 Term Sheet

The following are certain basic terms and provisions which are part of, may be referred to and are more fully specified in this Lease. If there is a discrepancy between the terms and provisions of this Section 1.01 and any other Section of the Lease, the provisions of such other Section of the Lease shall prevail.

(a) Building:	HSBC Building, 665 West Georgia Street, Vancouver, British Columbia
(b) Premises Number	Suite **2150**, located on the 21st floor of the Building .
(c) Rentable Area of Premises:	Approximately **Eight Thousand Three Hundred Forty Seven (8,347)** square feet.
(d) BOMA Standard:	**ANSI Z65.1-1980.**
(e) Term : Extension of Term:	**Subject to Section 11.25**, the Term of this Lease is **five (5)** years from the **1st** day of **March, 2018** (the "Commencement Date") to the **28th** day of **February 2023**. **1 x 5 Years, subject to Section 11.25.**
(f) Net Rent:	(i) during the period of the Term from the Commencement Date to and including **February 28, 2019, THIRTY THREE DOLLARS ($33.00)** per square fool of the Rentable Area of the Premises per annum; (ii) during the period of the Term from **March 1, 2019** to and including **February 29, 2020, THIRTY THREE DOLLARS FIFTY CENTS ($33.50)** per square fool of the Rentable Area of The Premises per annum; (iii) during the period of the Term from **March 1, 2020** to and including **February 28, 2021, THIRTY FOUR DOLLARS ($34.00)** per square foot of the Rentable Area of The Premises per annum; (iv) during the period of the Term from **March 1, 2021** to and including **February 28, 2022, THIRTY FOUR DOLLARS FIFTY CENTS ($34.50)** per square foot of the Rentable Area of The Premises per annum; and (v) during the remainder of the Term, **THIRTY FIVE DOLLARS ($35.00)** per square foot of the Rentable Area of The Premises per annum.
(g) Possession Date:	**Subject to Section 11.26**, the date which is the later of: (i) the dale this Lease is executed, or (ii) **March 1, 2018**.
(h) Fixturing Period:	**INTENTIONALLY DELETED.**
(i) Prepaid Rent:	**EIGHTY SIX THOUSAND AND FIFTY DOLLARS ($86,050.00) (See Section 2.12).**
(j) Tenant's Address:	**Suite 2150, 885 West Georgia Street Vancouver, British Columbia V6C 3E8**

Section 1.02 Grant and Premises

In consideration of the performance by the Tenant of its obligations under this Lease, the Landlord leases the Premises to the Tenant for the Tenn. The Premises are as shown on the floor plan attached as Schedule "B" and contain a Rentable Area as set out in Section 1.01 (c).

Section 1.03 Term

The Term of this Lease is the period set out in Section 1.01 (e). If the Commencement Date set out in Section 1.01 (e) is not a fixed date, within a reasonable time after the Commencement Date occurs, the Landlord will confirm the Commencement Date by notice to the Tenant and such confirmed Commencement Date will apply for this Lease.

Section 1.04 Construction of Premises

The Tenant shall abide by the provisions of this Lease and the Tenant Construction Manual for any construction it proposes to do prior to or upon occupancy of the Premises, and any Alterations to the Premises after it takes occupancy. The Tenant agrees to accept the Premises in their current "as is" condition, subject to any Landlord's work expressly set out herein. **Notwithstanding the foregoing, on or before the Commencement Date, but in no event prior to thirty (30) days after full execution of this Lease, the Landlord, at its sole costs, shall complete the following (collectively, the "Landlord's Work"):**

(a) ensure base building lighting, HVAC and electrical equipment are in good working order in accordance with base building standard;

(b) ensure window coverings within the Premises are in good working order in accordance with base building standard;

(c) replace all damaged and/or soiled ceiling tiles within the Premises in accordance with base building standard;

(d) ensure the demising walls separating the Premises from adjacent premises span from the floor up to the underside of the concrete slab; and

(e) replace existing thermostats throughout the Premises with digital control units in accordance with base building standard.

It is understood and agreed that the Landlord is not required to provide any materials or to do any work to or in respect of the Premises except the Landlord's Work.

Section 1.05 Use and Conduct of Business

The Premises shall be used only for general office use and for no other purpose. The Tenant shall conduct its business in the Premises in a reputable and first class manner, and in no event will the Premises be used for any purpose which is inconsistent with the image and quality of the Building or which could result in exceptional demands being placed upon any of the systems or common areas of the Building, as determined by the Landlord. If the Tenant is a corporation, the Tenant will be either incorporated or extra-provincially registered in the Province and will remain in good standing during the Term with the Registrar of Companies for the Province with respect to filing annual reports.

ARTICLE II - RENT

Section 2.01 Covenant to Pay

(a) Except as otherwise expressly provided in this Lease, the Tenant shall pay Rent from the Commencement Date without prior demand and without any deduction, abatement, setoff or compensation . If the Commencement Date is not on the first day of a calendar month, or the period of time from the Commencement Date to the end of the first Fiscal Year during the Term is less than twelve (12) calendar months, or the period of time from the last Fiscal Year end during the Tenm to the end of the Tenn is less than twelve (12) calendar months, then Rent for such month and such periods shall be pro-rated on a per diem basis, based upon a period of 365 days.

(b) The Tenant will deliver to the Landlord on each Fiscal Year end throughout the Term, a series of monthly post-dated cheques for the next ensuing twelve month period, for the total of the monthly payments of Net Rent and any Additional Rent estimated by the Landlord in advance.

Section 2.02 Net Rent

The Tenant shall pay the Net Rent set out in Section 1.01 (f) in advance, in equal monthly installments on the first day of each calendar month of the Term. As soon as reasonably possible after completion of construction of the Premises, the Landlord shall measure the Useable Area of the Premises and shall calculate the Rentable Area of the Premises in accordance with the BOMA Standard, and Rent shall be adjusted accordingly.

Section 2.03 Payment of Operating Costs

The Tenant shall pay to the Landlord the Tenant's Proportionate Share of Operating Costs.

Section 2.04 Payment of Taxes

(a) The Tenant shall pay when due all Business Tax. If the Business Tax is payable by the Landlord to the relevant taxing authority, the Tenant shall pay the amount thereof to the Landlord or as it directs. If no separate tax bills for Business Tax are issued with respect to the Tenant or the Premises, the Landlord may allocate Business Tax charged, assessed or levied against the Building or the Lands to the Tenant on the basis of the Tenant's Proportionate Share.

(b) The Tenant shall pay to the Landlord its share of Taxes, which share shall be determined on the basis of the Tenant's Proportionate Share or on such other reasonable and equitable basis as the Landlord may determine.

(c) If the Landlord obtains a written statement from the assessment or taxing authorities indicating that as a result of any construction or installation of improvements in the Premises, or any act or election of the Tenant, or the exemption from taxation at full commercial rates of any part of the Building, the Taxes payable by the Tenant under subsection 2.04(b) do not accurately reflect the Tenant's proper share of Taxes, the Landlord may require the Tenant to pay such revised amount as is determined by the Landlord, acting reasonably.

(d) The Landlord may: contest *any* Taxes and appeal any assessments with respect thereto; withdraw any such contest or appeal; and agree with the taxing authorities on *any* settlement or compromise with respect to Taxes. The Tenant will co-operate with the Landlord in respect of *any* such contest or appeal and will provide the Landlord with all relevant information, documents and consents required by the Landlord in connection with *any* such contest or appeal. The Tenant will not contest any Taxes or appeal *any* assessments related thereto without the Landlord's prior written consent.

(e) The Tenant shall promptly deliver to the Landlord on request, copies of assessment notices, tax bills and other documents received by the Tenant relating to Taxes and Business Tax and receipts for payment of Taxes and Business Tax payable by the Tenant.

(f) The Tenant shall on demand, pay to the Landlord or to the appropriate taxing authority if required by the Landlord, all goods and services taxes, sales taxes, value added taxes, business transfer taxes, or any other taxes imposed on the Landlord with respect to Rent or in respect of the rental of space under this Lease, whether characterized as a goods and services tax, sales tax, value added tax, business transfer tax or otherwise. The Landlord shall have the same remedies and rights with respect to the payment or recovery of such taxes as it has for the payment or recovery of Rent under this Lease.

Section 2.05 Payment of Estimated Taxes and Operating Costs

(a) The amount of Taxes and Operating Costs may be estimated by the Landlord for such period as the Landlord determines from time to time, and the Tenant agrees to pay to the Landlord the amounts so estimated in equal installments, in advance, on the first day of each month during such period. Notwithstanding the foregoing, when bills for all or *any* portion of the amounts so estimated are received, the Landlord may bill the Tenant for the Tenant's Proportionate Share thereof (or the amount determined under Section 2.04(c)) after crediting against such amounts *any* monthly payments of estimated Taxes and Operating Costs previously made by the Tenant and the Tenant shall pay the Landlord the amounts so billed.

(b) Within a reasonable time after the end of the period for which such estimated payments have been made, the Landlord shall submit to the Tenant a statement showing the calculation of the Tenant's share of Taxes and Operating Costs together with a report from the Landlord's auditor as to the total of the amounts included in Operating Costs. If: (i) the amount the Tenant has paid is less than the amounts due, the Tenant shall pay such deficiency to the Landlord **within thirty (30) days of delivery of such Landlord's statement;** or (ii) the amount paid by the Tenant is greater than the amounts due, the Landlord shall pay such excess to the Tenant **within thirty (30) days of delivery of such Landlord's statement.**

(c) The obligations contained in this Section shall survive the expiry or earlier termination of the Term. Failure of the Landlord to render any statement of Taxes or Operating Costs shall not prejudice the Landlord's right to render such statement thereafter or with respect to *any* other period. The rendering of any such statement shall also not affect the Landlord's right to subsequently render an amended or corrected statement.

(d) The Tenant shall not claim a re-adjustment in respect of Operating Costs or Taxes or other items of Additional Rent estimated by the Landlord or the share payable by the Tenant on account thereof for *any* Fiscal Year except by notice given to the Landlord within one hundred and **eighty (180)** days after delivery of the statement, stating the particulars of the error in computation.

(e) If the time or method of collection of Taxes by the municipal, provincial, parliamentary, or other authority shall become different from the time or method of collection of Taxes which exists at the date of the execution of this Lease, the Landlord shall have the right to change the time or method of the collection of the Tenant's Proportionate Share of Taxes such that the Tenant's Proportionate Share of Taxes for the calendar year shall be fully paid to the Landlord by such time or times as the Taxes are due and owing to the municipal, provincial, parliamentary or other authority.

(f) Whenever any part or parts of the Operating Costs and/or Taxes are, in the reasonable opinion of the Landlord, attributable to certain premises or classes of premises in the Building, the Landlord may attribute such part or parts thereof to such premises or classes of premises respectively (the "Designated Premises"). If and whenever the Premises constitute all or a part of the Designated Premises with respect to any such part or parts of the Operating Costs and/or Taxes, the Tenant's share (the "Share") thereof shall be a fraction thereof, the numerator of which is the Rentable Area of the Premises or the part thereof within the Designated Premises and the denominator of which is the Rentable Area of the Designated Premises.

Section 2.06 Additional Rent

Except as otherwise provided in this Lease, all Additional Rent shall be payable by the Tenant to the Landlord within five (5) business days after demand.

Section 2.07 Rent Past Due

All Rent past due shall bear interest from the date on which the same became due until the date of payment at five percent (5%) per annum in excess of the prime interest rate for Canadian Dollar demand loans announced from time to time by any Canadian chartered bank designated by the Landlord. Such interest shall be calculated on a daily basis and compounded monthly from the time such amounts first become due and payable until such amounts and all interest thereon are paid in full by the Tenant to the Landlord.

Section 2.08 Utilities

(a) The Tenant shall pay to the Landlord, or as the Landlord directs, all gas, electricity, water, steam and other utility charges applicable to the Premises on the basis of the Rentable Area of the Premises. Charges for utilities shall be payable in advance on the first day of each month at a basic rate determined by the Landlord's engineers. The Landlord shall be entitled to allocate to the Premises an additional charge, as determined by the Landlord's engineer, for any supply of utilities to the Premises in excess of those covered by such basic charge. If any utility rates or related taxes or charges are increased or decreased during the Term, such charges shall be equitably adjusted and the decision of the Landlord, acting reasonably, shall be final and binding with respect to any such adjustment.

(b) The Landlord shall have the exclusive right to replace bulbs, tubes and ballasts in the lighting system in the Premises, on either an individual or a group basis. The Tenant shall pay the cost of such replacement on the first day of each month or at the option of the Landlord upon demand.

(c) The Tenant shall pay the cost of installing, inspecting, verifying, maintaining and repairing any meters or metering system installed at the request of the Landlord or the Tenant to measure the usage of utilities in the Premises. Where a base building metering system has been installed in the Building, the Landlord will provide, at the Tenant's expense, all necessary components and programming to connect the Premises to the Landlord's metering system.

Section 2.09 Adjustment of Areas

The Landlord may from time to time re-measure the Useable Area of the Premises or re-calculate the Rentable Area of the Premises and may re-adjust the Net Rent and/or the Tenant's Proportionate Share of Additional Rent accordingly. The effective date of any such re-adjustment shall: (a) in the case of an adjustment to the Rentable Area resulting from a change in the aggregate Useable Area of all office premises on the floor on which the Premises are situated, be the date on which such change occurred; and (b) in the case of a correction to any measurement or calculation error, be the date as of which such error was introduced in the calculation of Rent. Any necessary adjusting payment will be made by the party responsible for that payment forthwith upon the amount of the adjusting payment being determined.

Section 2.10 Net Lease

This Lease is a completely net lease to the Landlord, except as expressly herein set out. The Landlord is not responsible for any expenses or outlays of any nature arising from or relating to the Premises, or the use or occupancy thereof, or the contents thereof or the business carried on therein. The Tenant shall pay all charges, impositions and outlays of every nature and kind relating to the Premises except as expressly herein set out.

Section 2.11 Electronic Funds Transfer

At the Landlord's request, the Tenant will participate in an electronic funds transfer ("EFT") system or similar system whereby the Tenant will authorize its bank, trust company, credit union or other financial institution to credit the Landlord's bank account each month in an amount equal to the Net Rent and Additional Rent payable on a monthly basis pursuant to the provisions of this Lease.

Section 2.12 Prepaid Rent

The Landlord acknowledges receipt from the Tenant of prepaid rent in the amount set out in Section 1.01(i), which shall be held by the Landlord without interest until the expiry of the Term as it may be extended from time to time (hereinafter in this section referred to as the "Term") as non-refundable pre-paid rent for application to the period immediately preceding the expiry of the Term (the "Prepaid Rent"). In the event that the Tenant is in default of the payment of Rent under this Lease during the Term, and if the Tenant has not cured such default within the notice period set out in this Lease, the Landlord shall be entitled, upon expiry of such notice period, to draw upon the Prepaid Rent in whole or in part, without notice to the Tenant, and apply same to such arrears. Further, in the event that this Lease is terminated by the Landlord in accordance with Article IX of this Lease prior to the expiry of the Term, it is agreed by the Tenant that the Landlord shall be entitled to apply, at its option, the Prepaid Rent to any arrears of Rent up to and including the date of termination, and thereafter to the Landlord's damages caused as a result of the breach and the forfeiture of the Lease, all without prejudice to the Landlord's rights to recover the balance of any loss, damages or expense which the Landlord has suffered as a result termination of this Lease. If the Landlord has applied all or a portion of the Prepaid Rent against any arrears in accordance with this Section, the Tenant shall replenish the Prepaid Rent to its original amount by delivering to the Landlord a sufficient amount by bank draft or certified cheque upon five (5) days of the Landlord's written demand to the Tenant. The Tenant acknowledges and confirms that if the Prepaid Rent is held by the manager of the Building, such Prepaid Rent shall be held by the manager of the Building as agent of the Landlord.

In the event that the Tenant becomes bankrupt or takes the benefit of any statute for bankrupt or insolvent debtors (including, without limiting the generality of the foregoing, the *Companies Creditors' Arrangement Act* R.S.C. 1985, c.C-36, as amended or replaced) prior to expiry of the Term, then notwithstanding anything to the contrary contained in such legislation for bankrupt or insolvent debtors, the Tenant agrees that the Landlord shall be entitled to retain the Prepaid Rent for application to any amount of Rent in arrears or accelerated Rent under this Lease and, in the event that this Lease is repudiated or disclaimed by the Tenant, a trustee in bankruptcy or a court representative, then to the Landlord's damages which it has suffered as a result of such early termination of this Lease.

Prior to the expiry of the Term, the Landlord shall apply the remainder of the Prepaid Rent (if any) to Rent payable for the last month(s) of the Term or such portion thereof as applicable, provided the Tenant shall remain responsible for any Rent that remains unpaid, including any amount in connection with adjustments of Additional Rent.

ARTICLE III - CONTROL OF BUILDING

Section 3.01 Landlord's Services

(a) The Landlord shall provide climate control to the Premises during Normal Business Hours to maintain a temperature adequate for normal occupancy, except during the making of repairs, alterations or improvements, provided that the Landlord shall have no liability for failure to supply climate control service when stopped as aforesaid or when prevented from doing so by repairs, or causes beyond the Landlord's reasonable control.

(b) Subject to the Rules and Regulations, the Landlord shall provide elevator service during Normal Business Hours for use by the Tenant in common with others, except when prevented by repairs. The Landlord will operate at least one passenger elevator for use by tenants at all times except in the case of fire or other emergencies.

(c) The Landlord will provide cleaning services in the Building consistent with the standards of a first class office building (excluding interior glass areas and areas used exclusively for computer equipment) provided that the Tenant at the end of each business day shall provide access to the persons performing the janitor services and leave the Premises in a reasonably clean and tidy condition.

(d) Subject to Section 2.08, the Landlord shall make available to the Premises electricity for normal lighting and miscellaneous power requirements and, in normal quantities gas, water, and other public utilities generally made available to other tenants of the Building by the Landlord.

(e) The Tenant shall not install any equipment or systems that will exceed, or overload the capacity or interfere with the normal operation of the heating. ventilating or air-conditioning or any other service or facility in the Building and agrees that if any equipment or systems installed by the Tenant requires additional heating, ventilating or air-conditioning equipment system or any other service or facility, as determined by the Landlord acting reasonably, the same shall be installed at the Tenant's expense . If installation of any equipment, fixture or system on the Premises by the Tenant necessitates rebalancing or readjustment of the heating, ventilating and air-conditioning system by the Landlord, the same will be performed by the Landlord at the Tenant's sole expense. The Tenant shall not, without the Landlord's prior written consent in each instance, connect any equipment, fixtures, systems or appliances (other than normal office electrical fixtures, computers, typewriters, word processors, small office machines and lamps) to the Building's electric distribution system or make any alteration or addition to the electric system of the Premises.

(f) Wherever this Lease provides that the Tenant is to pay a cost or expense to the Landlord as an item of Additional Rent (except for Operating Costs, Taxes, Premises utilities and the 15% administration fee referred to in this Section), the Tenant shall pay, in addition to such cost or expense, the Landlord's administration charge of 15% of such cost or expense, which cost shall also be an item of Additional Rent. The Tenant shall pay to the Landlord the costs of all such services provided at the Tenant's request or otherwise provided for herein and which are not included in Operating Costs including, without limitation: (i) the provision of HVAC services outside of Normal Business Hours or utilities of a special nature; (ii) replacement of non-standard electric light fixtures, ballasts, tubes, starters, lamps, light bulbs and controls; (iii) special janitorial or cleaning services; (iv) special security services; (v) locksmith services; (vi) operating elevators used or reserved for the sole benefit of the Tenant and supervising the operation of the elevator and movement of furniture, equipment, freight and supplies for the Tenant; (vii) construction of any Leasehold Improvements or other work performed at the request of or on behalf of the Tenant; and (viii) other services performed at the request of or on behalf of the Tenant.

Section 3.02 Alterations by Landlord

The Landlord may:

(a) alter, add to, subtract from, construct improvements to, rearrange, build additional storeys on and construct additional facilities in, adjoining or near the Building;

(b) relocate the facilities and improvements comprising the Building or erected on the Lands, or alter or relocate the Premises, in which case the Landlord will provide the Tenant with not less than **one hundred and eighty (180)** days prior written notice, **provided that the premises as relocated, altered, or rearranged shall be in all material aspects comparable to the Premises with respect to elevator exposure and the floor level, which shall not be lower than the thirteenth (13th) floor, and provided that 60% of any relocated premises shall be on the same side of the Building as the Premises and that the Landlord shall ensure that the relocated premises are ready for occupancy prior to requiring the Tenant to vacate the Premises.** Such notice will contain a floor plan showing the location of the altered or relocated premises (the "Relocated Premises") which will contain substantially the same Rentable Area as the Premises. The Landlord will provide leasehold improvements in the Relocated Premises at its sole cost and expense, of a quality substantially equal to those in the Premises, on or before the date of relocation and the Tenant will provide vacant possession of the Premises on the relocation date set out in the notice. **In the event the Landlord exercises its right to relocate the Premises, the Landlord shall, in addition to providing leasehold improvements in the Relocated Premises as provided aforesaid, reimburse the Tenant for the reasonable direct costs of: (1) relocating furniture, telephones and computer equipment; (2) replacing personalized stationery on hand which is no longer addressed correctly; and (3) regulatory filings required under applicable securities laws as a result of the Tenant's change of address, if any, each of which costs shall be supported by invoice copies to the Landlord.**

(c) do such things on, or in the Lands or Building as are required to comply with any laws, by-laws, regulations, orders or directives affecting the Lands or any part of the Building; and

(d) do such other things on or in the Lands or Building as the Landlord, in the use of good business judgment determines to be advisable;

provided that notwithstanding anything contained in this Section, access to the Premises or the Relocated Premises, as the case may be, shall at all times be available from the elevator lobby. **In exercising the foregoing rights, the Landlord shall use its reasonable efforts (i) not to unreasonably interfere with the business operations of the Tenant in the Premises; (ii) to complete its work as expeditiously as possible under the circumstances and during non-business hours wherever reasonably possible provided there is no additional cost incurred by the Landlord; and (iii) except in the case of an emergency where no notice shall be required, to provide the Tenant with reasonable prior written notice.**

The Landlord shall not be in breach of its covenant for quiet enjoyment or liable for any loss, costs or damages, whether direct or indirect, incurred by the Tenant due to any of the foregoing.

Section 3.03 Telecommunication Service Providers

The Tenant may utilize a registered telecommunication service provider of its choice upon prior written notice to the Landlord, subject to the provisions of this Lease including but not limited to the following:

(a) the service provider shall execute and deliver the Landlord's standard form of license agreement which shall include a provision for the Landlord to receive compensation for the use of the space for the service provider's equipment and materials;

(b) the Landlord shall incur no expense or liability whatsoever with respect to any aspect of the provision of telecommunication services, including without limitation, the cost of installation, service, materials, repairs, maintenance, interruption or loss of telecommunication service;

(c) the Landlord must first reasonably determine that there is sufficient space in the risers of the Building for the installation of the service provider's equipment and materials; and

(d) the Tenant shall indemnify and hold harmless the Landlord for all losses, claims, demands, expenses and judgments against the Landlord caused by or arising out of, either directly or indirectly, any acts or omissions by the service provider (or those for whom it is responsible at law) for or on behalf of the Tenant.

The Tenant shall be responsible for the costs associated with the supply and installation of telephone, computer and other communication equipment and systems and related wiring within the Premises to the boundary of the Premises for hook up or other integration with telephone and other communication equipment and systems of a telephone or other communication service provider, which equipment and systems of the service provider are located or are to be located in the Building pursuant to the Landlord's standard form of license agreement.

The Landlord shall supply space in risers in the Building and space on floor(s) of the Building in which the Premises are located, the location of which shall be designated by the Landlord in its discretion, to telecommunication service providers who have entered into the Landlord's standard fonn of license agreement for the purpose, without any cost or expense to Landlord therefor, of permitting installation in such risers and on such floor(s) of telephone and other communication services and systems (including data cable patch panels) to the Premises at a point designated by the Landlord.

The Landlord shall have the right to assume control of cables and other telecommunication equipment in the Building and may designate them as part of the common areas.

Section 3.04 Riser Rooms

The parties understand that the Building contains one or more rooms where the fibre optic and telephone equipment for the Building is situated (hereinafter referred to as the "Riser Rooms") and the Tenant agrees that all Riser Rooms shall be for the sole and exclusive use of the Landlord. The Tenant shall not use the equipment contained in the Riser Rooms, install, or instruct the installation of any additional equipment, whether telephone equipment, fibre optic equipment or otherwise, without first obtaining the Landlord's written consent to same, which consent may be unreasonably withheld or granted upon the imposition of any terms which the Landlord deems fit, including the payment of an additional fee, the amount of which shall be established at the sole discretion of the Landlord.

ARTICLE IV - ACCESS AND ENTRY

Section 4.01 Entry for Inspection and Work

The Landlord shall be entitled at all reasonable times **after 24 hours' prior written notice** (and at any time **without notice** in case of emergency) to enter the Premises to examine them; to make such repairs, alterations or improvements in the Premises or to the Building as the Landlord considers necessary or desirable; to have access to under-floor ducts and access panels to mechanical shafts; to check, calibrate, adjust and balance controls and other parts of the heating, air conditioning, ventilating and climate control systems; and for any other purpose necessary to enable the Landlord to perfonn its obligations or exercise its rights under this Lease or in the administration of the Building or other improvements on the Lands. The Tenant shall not obstruct any pipes, conduits or mechanical or electrical equipment so as to prevent reasonable access thereto. The Landlord shall exercise its rights under this Section, to the extent possible in the circumstances, in such manner so as to minimize interference with the Tenant's use and enjoyment of the Premises.

Section 4.02 Right to Show Premises

The Landlord and its agents shall have the right to enter the Premises at all reasonable times **after 24 hours' prior written notice** during Nonnal Business Hours to show them to prospective purchasers, or Mortgagees or prospective Mortgagees, and, during the last eighteen (18) months of the Term (or the last eighteen (18) months of any extension or renewal term if this Lease is extended or renewed), to prospective tenants.

Section 4.03 Entry not Forfeiture

No entry into the Premises or anything done therein by the Landlord pursuant to a right granted by this Lease shall constitute a breach of any covenant for quiet enjoyment, or (except where expressed by the Landlord in writing) shall constitute a re-entry or forfeiture, or an actual or constructive eviction. The Tenant shall have no claim for injury, damages or loss suffered as a result of any such entry or thing, except in the case of willful misconduct by the Landlord in the course of such entry, but the Landlord shall in no event be responsible for the acts or negligence of any Persons providing cleaning or waste disposal services in the Building.

ARTICLE V- MAINTENANCE, REPAIRS AND ALTERATIONS

Section 5.01 Maintenance By Landlord

(a) The Landlord covenants to keep the following in good repair as a prudent owner: (i) the structure of the Building including exterior walls and roofs **(which obligation includes remediating any water penetration into the Premises that is not caused by the Tenant or those the Tenant is responsible at law and that does not originate from the Premises or from those improvements that are the Tenant's responsibility under Section 5.02 hereof);** (ii) the mechanical, electrical, plumbing and other base building systems, (but excluding components of such systems installed by the Tenant or that service the Tenant's Premises from the point of connection to the base building system); and (iii) the entrance, lobbies, plazas, stairways, corridors, parking areas and other facilities from time to time provided for use in common by the Tenant and other tenants of the Building. If such maintenance or repairs are required by law due to the business carried on by the Tenant, then the full cost of such maintenance and repairs plus a sum equal to fifteen percent (15%) of such cost representing the Landlord's overhead, shall be paid by the Tenant to the Landlord.

(b) The Landlord shall not be responsible for any damages caused to the Tenant by reason of failure of any equipment or facilities serving the Building or delays in the perfonnance of any work for which h the Landlord is responsible under this Lease. The Landlord shall have the right to stop, interrupt or reduce any services, systems or utilities provided to, or serving the Building or Premises to perform repairs, alterations or maintenance or to comply with laws or regulations, or requirements of its insurers, or for causes beyond the Landlord's reasonable control or as a result of the Landlord exercising its rights under Section 3.02. The Landlord shall not be in breach of its covenant for quiet enjoyment or liable for any loss, costs or damages, whether direct or indirect, incurred by the Tenant due to any of the foregoing, but the Landlord shall make reasonable efforts to restore the services, utilities or systems so stopped, interrupted or reduced.

(c) If the Tenant fails to carry out any maintenance, repairs or work required to be carried out by it under this Lease to the reasonable satisfaction of the Landlord, the Landlord may at its option carry out such maintenance or repairs without any liability for any resulting damage to the Tenant's property or business. The cost of such work, plus a sum equal to fifteen percent (15%) of such cost representing the Landlord's overhead, shall be paid by the Tenant to the Landlord.

Section 5.02 Maintenance by Tenant; Compliance with Laws

(a) The Tenant shall at its sole cost repair and maintain the Premises exclusive of base building mechanical, electrical and plumbing systems, (but specifically including components of those systems up to the point of connection to the Landlord's base building system, whether or not such components are within the Premises), all to a standard consistent with a first class office building, with the exception only of those repairs which are the obligation of the Landlord under this Lease, subject to Article VII . The Landlord may enter the Premises at all reasonable times **upon giving the Tenant at least twenty-four (24) hours' prior notice (except in the case of emergency when no notice is required)** to view their condition and the Tenant shall maintain and keep the Premises in good and substantial repair according to notice in writing. At the expiry or earlier termination of the Term, the Tenant shall surrender the Premises to the Landlord in as good condition and repair as the Tenant is required to maintain the Premises throughout the Term. The Tenant shall also manage, maintain, operate and repair the Premises and construct, use, operate and maintain Leasehold Improvements and all furnishings, fixtures and equipment located in the Premises so as to comply with the Environmental Management Plan.

(b) The Tenant shall, at its own expense, promptly comply with all laws, by-laws, government orders and with all reasonable requirements or directives of the Landlord's insurers affecting the Premises or their use, repair or alteration.

(c) The Tenant shall not commit, or permit to be committed, waste upon the Premises or Building or the fixtures and equipment thereof or any nuisance or other thing that may disturb the quiet enjoyment of any other tenant in the Building, whether or not the nuisance arises out of the use of the Premises by the Tenant for a purpose permitted by this Lease.

Section 5.03 Tenant's Alterations

(a) No Alterations shall be made to the Premises without the Landlord's written approval, **not to be unreasonably withheld provided that such Alterations are consistent with the Environmental Management Plan and the Tenant Construction Manual.** The Tenant shall submit to the Landlord details of the proposed work including four **(4)** sets of detailed working drawings and specifications prepared by qualified architects or engineers conforming to good engineering practice. All such Alterations shall be performed: (i) at the sole cost of the Tenant; (ii) by contractors and workers approved by the Landlord, in advance and having labour union affiliations compatible with those of persons working in the Building on behalf of the Landlord; (iii) in a good and workmanlike manner and consistent with the Environmental Management Plan and the Tenant Construction Manual; (iv) in accordance with drawings and specifications approved by the Landlord; (v) in accordance with all applicable legal and insurance requirements; (vi) subject to the reasonable regulations, supervision, control and inspection of the Landlord; (vii) subject to such indemnification against liens and expenses as the Landlord reasonably requires; and (viii) in accordance with all applicable laws, by-laws, regulations and government orders. The Landlord's reasonable cost incurred with respect to the Tenant's Alterations including without limitation the cost of approving, supervising and inspecting all such work shall be paid by the

Tenant. Following the completion of any such Alterations, the Tenant shall provide the Landlord within five (5) days of request, such post-construction documentation that the Landlord reasonably requires, which may include, but is not limited to, professionally prepared as-built drawings that accurately reflect the work that was performed.

(b) If the Alterations would affect the structure of the Building or any of the electrical, plumbing, mechanical, heating, ventilating or air conditioning systems or other base building systems, such work shall at the option of the Landlord be performed by the Landlord at the Tenant's cost. If the Landlord performs such work, then on completion of such work, the cost of the work plus a sum equal to fifteen percent (15%) of said cost representing the Landlord's overhead shall be paid by the Tenant to the Landlord.

(c) If the Tenant installs Leasehold Improvements, or makes Alterations which depart from the Building standard and which restrict access to any Building system or to any structural element of the Building by the Landlord or by any person or corporation authorized by the Landlord, or which restrict the installation of the leasehold improvements of any other tenant in the Building, then the Tenant shall be responsible for all costs incurred by the Landlord in obtaining access to such Building system, or in installing such other tenant's leasehold improvements and the Tenant shall, at the request of the Landlord remove any obstruction in a manner acceptable to the Landlord, failing which the Landlord may remove the same; and the Tenant will pay, or reimburse the Landlord for, the cost of such removal and for any replacement or restoration of such Leasehold Improvements or Alterations.

Section 5.04 Repair Where Tenant at Fault

Notwithstanding any other provisions of this Lease, but subject to Section 6.07, if the Building is damaged or destroyed or requires repair, replacement or alteration as a result of the act or omission of the Tenant, its employees, agents, invitees, licensees, contractors or others for whom it is in law responsible, the cost of the resulting repairs, replacements or alterations plus a sum equal to fifteen percent (15%) of such cost representing the Landlord's overhead, shall be paid by the Tenant to the Landlord.

Section 5.05 Removal of Improvements and Fixtures

All Leasehold Improvements (other than Trade Fixtures) shall immediately upon their placement, before or during the Term, become the Landlord's property without compensation to the Tenant but the Landlord shall be under no obligation to repair, maintain or insure the same, such matters being the sole responsibility of the Tenant in accordance with the provisions of this Lease. Except as otherwise agreed by the Landlord in writing, no Leasehold Improvements shall be removed from the Premises by the Tenant either during or at the expiry or sooner termination of the Term except that:

(a) the Tenant may, during the Term, in the usual course of its business, remove its Trade Fixtures, provided that the Tenant is not in default under this Lease;

(b) the Tenant shall, at the expiry or earlier termination of the Term, at its sole cost, remove its Trade Fixtures from the Premises, failing which, at the option of the Landlord, the Trade Fixtures shall become the property of the Landlord and may be removed from the Premises and sold or disposed of by the Landlord in such manner as it deems advisable;

(c) the Tenant shall, at the expiry or earlier termination of the Term, at its sole cost, either remove such of the Leasehold Improvements in the Premises as the Landlord shall require to be removed, and restore the Premises to the **condition in which the Tenant took possession of the Premises under the Existing Sublease Consent** to the extent required by the Landlord, **acting reasonably,** or at the Landlord's option, pay to the Landlord the estimated cost of such removal and restoration as determined by the Architect, acting reasonably. If the Landlord requires the Tenant to perform the aforesaid work, then:

(i) the Tenant shall submit detailed demolition drawings to the Landlord for its prior approval, and such work shall be completed under the supervision of the Landlord;

(ii) the Tenant shall, at its expense, repair any damage caused to the Building by such removal; and

(iii) if the Tenant fails to complete such work on or before the expiry of the Term, the Tenant shall pay compensation to the Landlord for each day following such expiry until the completion of such work, at a rate equal to twice the per diem Rent payable during the last month preceding the expiry of the Term, which sum is agreed by the parties to be a reasonable estimate of the damages suffered by the Landlord for the loss of use of the Premises; and

Notwithstanding Section 5.05(c) above, upon not more than six (6) months prior to the expiry of this Lease, the Tenant may request, which request shall be given in writing to the Landlord, a list of those Leasehold Improvements that the Landlord will require to be removed from the Premises and the extent to which the Tenant will be required to restore the Premises or whether the Landlord will require the Tenant to pay the estimated cost for such removal and restoration. In the event that the Landlord fails to respond within a thirty (30) day period, then the Tenant may request a response from the Landlord, which request shall be given in writing to the Landlord within two (2) days following the expiry of such thirty (30) day period, and the Landlord shall have a period of fifteen (15) days following receipt of the Tenant's notice to respond; and

(d) the Tenant shall, at the expiry or earlier termination of the Term, at its sole cost, and at the Landlord's option: (i) remove all wiring, cables, and other telecommunications installations installed by the Tenant in the risers of the Building or elsewhere in the Building (the "Wiring") or (ii) pay to the Landlord the estimated cost of removal of the Wiring as determined by the Architect acting reasonably. In the event the Landlord elects that the Tenant shall perform the required work, it shall be completed under the supervision of the Landlord, and the Tenant shall at its expense, repair any damage caused by such removal.

Any removal by the Tenant of any trade fixtures, personal property and/or Leasehold Improvements as permitted by this Section 5.05 shall be completed by or on behalf of the Tenant in accordance with the Environmental Management Plan and the Tenant Construction Manual.

Section 5.06 Liens

The Tenant shall promptly pay for all materials supplied and work done in respect of the Premises so as to ensure that no lien is registered against any portion of the Lands or Building or against the Landlord's or Tenant's interest therein. If a lien is registered or filed, the Tenant shall discharge or vacate it at its expense within five (5) business days of notice from the Landlord, failing which the Landlord may at its option discharge, vacate or otherwise release the lien by paying the amount claimed to be due into court or directly to the lien claimant and the amount so paid and all expenses of the Landlord including legal fees (on a solicitor and client or substantial indemnity basis) shall be paid by the Tenant to the Landlord. The Tenant will not grant any security interest in the Leasehold Improvements without the prior written consent of the Landlord and will promptly cause the discharge of any financing statement or notice which may be filed in respect of such security interest under any statute, unless such statement or notice is in favour of the Landlord.

Section 5.07 Notice by Tenant

The Tenant shall notify the Landlord of any accident, defect, damage or deficiency in any part of the Premises or the Building which comes to the attention of the Tenant, its employees or contractors notwithstanding that the Landlord may have no obligation in respect thereof.

Section 5.08 Not to Overload Floors

The Tenant covenants that it shall not bring upon the Premises any machinery, equipment or thing that by reason of its weight, size or use might damage the Building and shall not at any time overload the floors of the Premises by any machinery, equipment or thing. If overloading occurs and damage ensues, the Tenant shall forthwith, at the option of the Landlord, repair the damage or pay the Landlord the cost of making it good, plus a sum equal to fifteen percent (15%) of the total cost thereof for the Landlord's overhead and management, upon demand as Rent. In the event of any dispute as to whether any machinery, equipment or thing will or will not overload the floors of the Premises or whether such machinery, equipment or thing may be brought upon the Premises, the decision of the Architect shall be final and binding.

Section 5.09 Use of Hazardous Substances

The Tenant shall not use the Premises or permit them to be used, to generate, utilize, manufacture, refine, treat, transport, store, handle, transfer, produce or process Hazardous Substances.

Section 5.10 Removal of Hazardous Substances

The Tenant shall, upon expiration or termination of this Lease or any renewal thereof, promptly remove all Hazardous Substances used or brought onto the Premises by the Tenant or those acting under its authority or control. For greater certainty, the foregoing obligation of the Tenant shall include, without limitation, the responsibility to remove any Hazardous Substances which have as a result of the operations of the Tenant, or any other person acting under its authority or control, become affixed to, permeated within or accumulated on or within the Building.

ARTICLE VI -INSURANCE AND INDEMNITY

Section 6.01 Tenant's Insurance

(a) The Tenant shall maintain the following insurance throughout the Term at its sole cost:

(i) "All Risks" (including flood and earthquake) property insurance with reasonable deductibles, naming the Landlord, the owners of the Lands and Building and the Mortgagee as insured parties, as their interests may appear, containing a waiver of any subrogation rights which the Tenant's insurers may have against the Landlord and against those for whom the Landlord is in law responsible, and (except with respect to the Tenant's chattels) incorporating the Mortgagee's standard mortgage clause. Such insurance shall insure: (1) property of every kind owned by the Tenant or for which the Tenant is legally liable located on or in the Building including, without limitation, Leasehold Improvements, in an amount equal to not less than the full replacement cost thereof, subject to a stated amount co-insurance clause; and (2) extra expense insurance in such amount as will reimburse the Tenant for loss attributable to all perils referred to in this paragraph 6.01 (a)(i) or resulting from prevention of access to the Premises;

(ii) Commercial general liability insurance which includes the following coverages: owners and contractors protective; personal injury; occurrence property damage; and employers and blanket contractual liability. Such policies shall contain inclusive limits of not less than five million dollars ($5,000,000.00), provide for cross liability and severability of interests, and include the Landlord and its property manager as a named insured;

(iii) Tenant's "all risks" legal liability insurance for the replacement cost value of the Premises;

(iv) Automobile liability insurance on a non-owned form including contractual liability, and on an owner's form covering all licensed vehicles operated by or on behalf of the Tenant, which insurance shall have inclusive limits of not less than one million dollars ($1 ,000,000.00); and

(v) Any other form of insurance which the Tenant or the Landlord, acting reasonably, or the Mortgagee requires from time to time in form, in amounts and for risks against which a prudent tenant would insure.

(b) All policies referred to in this Section 6.01 shall:

(i) be taken out with insurers reasonably acceptable to the Landlord;

(ii) be in a form reasonably satisfactory to the Landlord :

(iii) be non-contributing with, and shall apply only as primary and not as excess to any other insurance available to the Landlord;

(iv) not be invalidated as respects the interests of the Landlord or the Mortgagee by reason of any breach of or violation of any warranty, representation, declaration or condition; and

(v) contain an undertaking by the insurers to notify the Landlord by registered mail not less than thirty (30) days prior to any material change, cancellation or termination. **If not available, the Tenant undertakes and agrees to notify the Landlord as described.**

(c) Certificates of insurance on the Landlord's standard form or other proof of insurance as reasonably required by the Landlord, shall be delivered to the Landlord prior to the Commencement Date and from time to time, forthwith upon request. If the Tenant fails to take out or to keep in force any insurance referred to in this Section 6.01 or should any such insurance not be approved by either the Landlord or the Mortgagee and should the Tenant not commence to diligently rectify (and thereafter proceed to diligently rectify) the situation within forty-eight (46) hours after written notice by the Landlord to the Tenant (stating, if the Landlord or the Mortgagee, from time to time, does not approve of such insurance, the reasons therefor) the Landlord has the right without assuming any obligation in connection therewith, to effect such insurance at the sole cost of the Tenant and all outlays by the Landlord shall be paid by the Tenant to the Landlord without prejudice to any other rights or remedies of the Landlord under this Lease.

(d) The Tenant will cooperate with the Landlord and each of the other entities that is added as an insured or loss payee under the policies maintained by the Tenant as required by this Lease, to ensure that each of them obtains the full benefit of the coverage and provisions of those policies intended to benefit them.

Section 6.02 Increase in Insurance Premiums

The Tenant shall not keep or use in the Premises any article which may be prohibited by any fire insurance policy in force from time to time covering the Premises or the Building. If: (a) the conduct of business in, or use or manner of use of the Premises; or (b) any acts or omissions of the Tenant in the Building or any part thereof: causes or results in any increase in premiums for any insurance carried by the Landlord with respect to the Building, the Tenant shall pay any such increase in premiums. In determining whether increased premiums are caused by or result from the use or occupancy of the Premises, a schedule issued by the organization computing the insurance rate on the Building showing the various components of such rate, shall be conclusive evidence of the items and charges which make up such rate.

Section 6.03 Cancellation of Insurance

If any insurer under any insurance policy covering any part of the Building or any occupant thereof cancels or threatens to cancel its insurance policy or reduces or threatens to reduce coverage under such policy by reason of the use of the Premises by the Tenant or by any Transferee, or by anyone permitted by the Tenant to be upon the Premises, the Tenant shall remedy such condition within forty-eight (46) hours after notice thereof by the Landlord.

Section 6.04 Loss or Damage

The Released Persons shall not be liable for any death or injury arising from or out of any occurrence in, upon, at, or relating to the Lands or Building or damage to property of the Tenant or of others located on the Premises or elsewhere in the Building, nor shall they be responsible for any loss of or damage to any property of the Tenant or others from any cause, whether or not any such death, injury, loss or damage results from the negligence of the Released Persons, their agents, employees, contractors, or others for whom they may, in law, be responsible. Without limiting the generality of the foregoing, the Released Persons shall not be liable for any injury or damage to Persons or property resulting from interruption of utilities or services including but not limited to telecommunications services, or resulting from fire, explosion, falling plaster, falling ceiling tile, falling fixtures, steam, gas, electricity, water, rain, flood, snow or leaks from any part of the Premises or from the pipes, sprinklers, appliances, plumbing works, roof, windows or subsurface of any floor or ceiling of the Building or from the street or any other place or by dampness or by any other cause whatsoever. The Released Persons shall not be liable for any such damage caused by other tenants or Persons on the Lands or in the Building or by occupants of adjacent property thereto, or the public, or caused by construction or by any private, public or quasi-public work. All property of the Tenant kept or stored on the Premises shall be so kept or stored at the risk of the Tenant only and the Tenant releases and agrees to indemnify the Released Persons and save them harmless from any claims arising out of any damage to the same including, without limitation, any subrogation claims by the Tenant's insurers. **Notwithstanding anything contained in this Section 6.04 to the contrary, it is understood and agreed that the Landlord is liable for any such death or injury or any such damage to property referred to in this Section 6.04 if any such death or injury or any such damage to property is caused by or to the extent contributed to by the negligence of the Landlord, but only to the extent that:**

(a) (i) the Tenant is not required to have insurance coverage pursuant to Section 6.01 of this Lease, and (ii) the Tenant does not otherwise have insurance coverage for such death or injury or any such damage to property, in either case without taking into account any deductible or co-insurance provisions or other clauses; and

(b) the Landlord is indemnified by its insurers for any such death or injury or any such damage to property.

Section 6.05 Landlord's Insurance

The Landlord shall throughout the Term carry: (a) insurance on the Building (excluding the foundations and excavations) and the machinery, boilers and equipment in or servicing the Building and owned by the Landlord or the owners of the Building (excluding any property which the Tenant and other tenants are obliged to insure under Section 6.01 or similar sections of their respective leases) against damage by fire and extended perils coverage; (b) public liability and property damage insurance with respect to the Landlord's operations in the Building; and (c) such other form or forms of insurance as the Landlord or the Mortgagee reasonably considers advisable. Such insurance shall be in such reasonable amounts and with such reasonable deductibles as would be carried by a prudent owner of a reasonably similar building, having regard to size, age and location. Notwithstanding the Landlord's covenant in this Section and notwithstanding any contribution by the Tenant to the cost of the Landlord's insurance premiums, the Tenant acknowledges and agrees that: (i) subject to Section 6.07, the Tenant is not relieved of any liability arising from or contributed to by its negligence or its willful act or omissions; (ii) no insurable interest is conferred upon the Tenant under any insurance policies carried by the Landlord; and (iii) the Tenant has no right to receive any proceeds of any insurance policies carried by the Landlord.

Section 6.06 Indemnification By the Tenant

Notwithstanding any other provision of this Lease and notwithstanding any negligence on the part of the Released Persons, the Tenant shall indemnify the Released Persons and save them harmless from all loss (including loss of Net Rent and Additional Rent) claims, actions, damages, liability and expense in connection with loss of life, personal injury, damage to property or any other loss or injury whatsoever arising out of this Lease, or any occurrence in, upon or at the Premises, or the occupancy or use by the Tenant of the Premises or any part thereof, or occasioned wholly or in part by any act or omission of the Tenant or by anyone permitted to be on the Premises by the Tenant **except to the extent that the Landlord is liable for such death, injury, loss or damage under Section 6.04.** If the Released Persons shall, without fault on their part, be made a party to any litigation commenced by or against the Tenant, then the Tenant shall protect, indemnify and hold the Released Persons harmless in connection with such litigation. The Released Persons may, at their option, participate in or assume carriage of any litigation or settlement discussions relating to the foregoing, or any other matter for which the Tenant is required to indemnify the Released Persons under this Lease. Alternatively, the Released Persons may require the Tenant to assume carriage of and responsibility for all or any part of such litigation or discussions.

Section 6.07 Release By the Landlord

Despite any other section or clause of this Lease (except the last sentence of this Section 6.07), the Tenant is not responsible for any part, in excess of five million dollars ($5,000,000.00), or the amount of liability insurance coverage available to the Tenant, whichever is the greater, of any loss or damage to property of the Landlord that is located in, or is part of the Building and Lands caused by any of the perils for which the Landlord is required under Section 6.05 to maintain insurance. This release applies whether or not the loss or damage arises from the negligence of the Tenant. This release does not apply, however, to damage arising from the willful or grossly negligent acts of the Tenant.

ARTICLE VII - DAMAGE AND DESTRUCTION

Section 7.01 No Abatement or Termination

If the Premises or Building are damaged or destroyed in whole or in part by fire or any other occurrence, this Lease shall continue in full force and effect and there shall be no abatement of Rent except as provided in this Article VII.

Section 7.02 Damage to Premises

If the Premises are at any time destroyed or damaged as a result of fire or any other casualty required to be insured against by the Landlord under this Lease or otherwise insured against by the Landlord and not caused or contributed to by the Tenant, then the following provisions shall apply:

(a) if the Premises are rendered untenantable only in part, the Landlord shall diligently repair the Premises to the extent only of its obligations under Section 5.01 and Net Rent shall abate proportionately to the portion of the Premises rendered untenantable from the date of destruction or damage until the Landlord's repairs have been completed;

(b) if the Premises are rendered wholly untenantable, the Landlord shall diligently repair the Premises to the extent only of its obligations pursuant to Section 5.01 and Net Rent shall abate entirely from the date of destruction or damage until the Landlord's repairs have been completed;

(c) if the Premises are not rendered untenantable in whole or in part, the Landlord shall diligently perform such repairs to the Premises to the extent only of its obligations under Section 5.01, but in such circumstances Net Rent shall not terminate or abate;

(d) upon being notified by the Landlord that the Landlord's repairs have been substantially completed, the Tenant shall diligently perform all repairs to the Premises which are the Tenant's responsibility under Section 5.02, and all other work required to fully restore the Premises for use in the Tenant's business, in every case at the Tenant's cost and without any contribution to such cost by the Landlord, whether or not the Landlord has at any time made any contribution to the cost of supply, installation or construction of Leasehold Improvements in the Premises;

(e) nothing in this Section shall require the Landlord to rebuild the Premises in the condition which existed before any such damage or destruction so long as the Premises as rebuilt will have reasonably similar facilities to those in the Premises prior to such damage or destruction, having regard, however, to the age of the Building at such time; and

(f) nothing in this Section shall require the Landlord to undertake any repairs having a cost in excess of the insurance proceeds actually received by the Landlord with respect to such damage or destruction.

Section 7.03 Right of Termination

Notwithstanding Section 7.02, if the damage or destruction which has occurred in the Premises is such that in the reasonable opinion of the Landlord the Premises cannot be rebuilt or made fit for the purposes of the Tenant within ninety (90) days of the happening of the damage or destruction, the Landlord may, at its option, terminate this Lease on notice to the Tenant given within thirty (30) days after such damage or destruction. If such notice of termination is given, Rent shall be apportioned and paid to the date of such damage or destruction and the Tenant shall immediately deliver vacant possession of the Premises in accordance with the terms of this Lease.

Section 7.04 Destruction of or Damage to Building

(a) Notwithstanding anything contained in this Lease and specifically notwithstanding the provisions of Section 7.03, if

(i) thirty-five percent (35%) or more of the Total Rentable Area of the Building; or

(ii) a portion of the Building or Lands which materially affect access or services essential thereto;

are damaged or destroyed by any cause whatsoever (irrespective of whether the Premises are damaged or destroyed) and if, in the opinion of the Landlord acting reasonably, the Building cannot be rebuilt or made fit for the purposes of their respective tenants within one hundred and eighty (180) days after the occurrence of the damage or destruction; then the Landlord may at its option (to be exercised by written notice to the Tenant within sixty (60) days following any such occurrence), terminate this Lease. In such event, the Term and the tenancy hereby created shall expire upon the thirtieth (30th) day after such notice is given, without indemnity or penalty payable by, or any other recourse against the Released Persons, and the Tenant shall, within such thirty (30) day period, vacate the Premises and surrender them to the Landlord with the Landlord having the right to re-enter and repossess the Premises discharged of this Lease and to expel all Persons and remove all property therefrom. Rent shall be due and payable without reduction or abatement until the date of termination, unless the Premises shall have been destroyed or damaged as well, in which event Section 7.02 shall apply.

(b) If the Landlord is entitled to, but does not elect to terminate this Lease under Section 7.04(a), the Landlord shall, following such damage or destruction, diligently repair if necessary that part of the Building damaged or destroyed, but only to the extent of the Landlord's obligations under the terms of the various leases for premises in the Building and exclusive of any tenant's responsibilities with respect to such repair. If the Landlord elects to repair, the Landlord may do so in accordance with plans and specifications other than those used in the original construction of the Building.

Section 7.05 Architect's Certificate

The certificate of the Architect shall bind the parties as to: (a) the percentage of the Total Rentable Area of the Building damaged or destroyed; (b) whether or not the Premises are rendered untenantable and the percentage of the Premises rendered untenantable; (c) the date upon which either the Landlord's or Tenant's work of reconstruction or repair is completed or substantially completed and the date when the Premises are rendered tenantable; and (d) the state of completion of any work of the Landlord or the Tenant.

ARTICLE VIII -ASSIGNMENT, SUBLETTING AND TRANSFERS

Section 8.01 Assignments, Subleases and Transfers

Save and except as permitted in Section 8.01A, the Tenant shall not enter into, consent to, or permit (whether voluntarily, involuntarily or by operation of law) any Transfer without the prior written consent of the Landlord in each instance, which consent shall not be unreasonably withheld but shall be subject to the Landlord's rights under Section 8.02. Notwithstanding any statutory provision to the contrary, it shall not be considered unreasonable for the Landlord to take into account the following factors in deciding whether to grant or withhold its consent:

(a) whether such Transfer is in violation or in breach of any covenants or restrictions made or granted by the Landlord to other tenants or occupants or prospective tenants or occupants of the Building;

(b) whether in the Landlord's reasonable opinion, the financial background, business history and capability of the proposed Transferee is satisfactory;

(c) whether the nature of the business of the proposed Transferee might harm the Landlord's business or reputation or reflect unfavourably on the Building or its tenants, or is unethical or illegal;

(d) if the Transfer is to an existing tenant of the Landlord;

(e) the proposed assignee or sublessee is a governmental department, agency or consulate;

(f) in the Landlord's reasonable judgment, the use of the Premises by the proposed assignee or sublessee would involve occupancy by other than primarily general office personnel or otherwise in violation of Section 1.05 of this Lease, would involve any alterations which would lessen the value of the leasehold improvements in the Premises, would require increased services, including increased load on elevator services, by the Landlord or alter the reputation or character of the Building;

(g) in the Landlord's reasonable judgment, the proposed assignee or sublessee does not have a good reputation in the community as a tenant of property;

(h) the use of the Premises by the proposed assignee or subtenant will violate any applicable law, by-law or regulation;

(i) there has occurred and is continuing an Event of Default by the Tenant under this Lease;

(j) in the case of a subletting of less than the entire Premises, if the subletting would result in the division of any one floor of the Premises into more than three subspaces or would require access to be provided through space leased or held for lease to another tenant or improvements to be made outside of the Premises; or

(k) the Landlord does not receive sufficient information from the Tenant of the proposed assignee or subtenant to enable it to make a determination concerning the matters herein set out.

Consent by the Landlord to any Transfer if granted shall not constitute a waiver of the necessity for such consent to any subsequent Transfer. This prohibition against Transfer shall include a prohibition against any Transfer by operation of law and no Transfer shall take place by reason of the failure of the Landlord to give notice to the Tenant within thirty (30) days as required by Section 8.02. Notwithstanding anything to the contrary herein contained, the Tenant may not assign this Lease while any Rent is in arrears hereunder or while any other Event of Default exists hereunder. Before making any assignment of this Lease the Tenant will pay all Rent in arrears and will remedy any Event of Default which then exists or will cause any Event of Default to cease to exist.

Section 8.01 A Transfer to a Permitted Transferee

Notwithstanding anything contained to the contrary in Section 8.01, and so long as the Required Conditions apply, the Tenant shall not require the consent of the Landlord (but in each case shall provide the Landlord with prior written notice) in the case of any Transfer to an entity which is:

(a) an Affiliate (within the meaning of the Canada Business Corporations Act) of Sierra Oncology Canada ULC, but only so long as such Affiliate remains an Affiliate of Sierra Oncology Canada ULC; or

(b) a corporation or other legal entity which is a successor of the Tenant by way of a merge, amalgamation, consolidation or other form of re-organization with an Affiliate of Oncology Canada ULC, whether voluntary or involuntary, by operation of law or otherwise;

(collectively, a "Permitted Transferee"),

provided that in either case (1) such Permitted Transferee shall carry on only the same business as is permitted to be carried on by the Tenant pursuant to Section 1.05; (2) the Tenant shall cause such Permitted Transferee to enter into an agreement prepared by and in a form satisfactory to the Landlord in which such Permitted Transferee covenants directly with the Landlord to be bound by all the terms, covenants and conditions contained in this Lease as if such Permitted Transferee had originally executed the Lease as Tenant; and (3) all the provisions of Section 8.03 shall apply in respect of such Transfer.

In no event will any Transfer permitted pursuant to this Section 8.01A relieve the Tenant from the performance of the terms, covenants and conditions herein on its part contained to be observed and performed. In the event of any further proposed Transfer, the terms of this Lease shall prevail as if this Section 8.01A had not formed part of this Lease.

Section 8.02 Landlord's Rights

If the Tenant intends to effect a Transfer, the Tenant shall give prior notice to the Landlord of such intent specifying the identity of the Transferee, the type of Transfer contemplated, the portion of the Premises affected thereby, and the financial and other terms of the Transfer, and shall provide such financial, business or other information relating to the proposed Transferee and its principals as the Landlord or any Mortgagee requires, together with copies of any documents which record the particulars of the proposed Transfer. The Landlord shall, within thirty (30) days after having received such notice and all requested information, notify the Tenant either that:

(a) it consents or does not consent to the Transfer in accordance with the provisions and qualifications of this Article VIII; or

(b) it elects to terminate this Lease as to the whole or part, as the case may be, of the Premises affected by the proposed Transfer, in preference to giving such consent.

If the Landlord elects to terminate this Lease it shall stipulate in its notice the termination date of this Lease, which date shall be no less than thirty (30) days nor more than ninety (90) days following the giving of such notice of termination. If the Landlord elects to terminate this Lease, the Tenant shall notify the Landlord within ten (10) days thereafter of the Tenant's intention either to refrain from such Transfer or to accept termination of this Lease or the portion thereof in respect of which the Landlord has exercised its rights. If the Tenant fails to deliver such notice within such ten (10) days or notifies the Landlord that it accepts the Landlord's termination, this Lease will as to the whole or affected part of the Premises, as the case may be, be terminated on the date of termination stipulated by the Landlord in its notice of termination. If the Tenant

notifies the Landlord within ten (10) days that it intends to refrain from such Transfer, then the Landlord's election to terminate this Lease shall become void. If the Landlord does not elect to terminate this Lease then Section 8.01 and 8.03 shall continue to apply to such Transfer. **For greater certainty, the foregoing does not apply to a Transfer to a Permitted Transferee.**

Section 8.03 Conditions of Transfer

The following terms and conditions apply in respect of a Transfer:

(a) If there is a permitted Transfer, the Landlord may collect rent from the Transferee and apply the net amount collected to the Rent payable under this Lease but no acceptance by the Landlord of any payments by a Transferee shall be deemed a waiver of the Tenant's covenants or any acceptance of the Transferee as tenant or a release of the Tenant from the further performance by the Tenant of its obligations under this Lease. Any consent by the Landlord shall be subject to the Tenant and Transferee executing an agreement with the Landlord agreeing: (i) that the Transferee will be bound by all of the terms of this Lease and, except in the case of a sublease, that the Transferee will be so bound as if it had originally executed this Lease as tenant; and (ii) to amend the Lease to incorporate such terms, covenants and conditions as are necessary so that the Lease will be in accordance with the Landlord's standard form of office lease in use for the Building at the time of the Transfer, and so as to incorporate any conditions imposed by the Landlord in its consent or required by this Section 8.03.

(b) The Tenant shall remain liable under this Lease and shall not be released from performing or observing any of the terms or conditions of this Lease.

(c) The rent and additional rent payable by the Transferee shall not be less than the Net Rent and Additional Rent payable by the Tenant under this Lease as at the effective date of the Transfer, (including any increases provided for in this Lease).

(d) If the net and additional rent to be paid by the Transferee under such Transfer exceeds the Rent payable under this Lease, the amount of such excess shall be paid by the Tenant to the Landlord. If the Tenant receives from any Transferee, either directly or indirectly, any consideration other than rent or additional rent for such Transfer, either in the form of cash, goods or services (other than the proceeds of any financing as the result of a Transfer involving a mortgage, charge or similar security interest in this Lease) the Tenant shall forthwith pay to the Landlord an amount equivalent to such consideration. The Tenant and the Transferee shall execute any agreement required by the Landlord to give effect to the foregoing terms.

(e) If the Transfer is a sublease, the Transferee will agree to waive any statutory right to retain the unexpired portion of the term of the sublease or the Term of this Lease or to enter into a lease directly with the Landlord, in the event this Lease is terminated, surrendered, disclaimed or otherwise disposed of or dealt with.

(f) Notwithstanding the effective date of any permitted Transfer as between the Tenant and the Transferee, all Rent for the month in which such effective date occurs shall be paid in advance by the Tenant so that the Landlord will not be required to accept partial payments of Rent for such month from either the Tenant or Transferee.

(g) Any document evidencing any Transfer permitted by the Landlord, or setting out any terms applicable to such Transfer or the rights and obligations of the Tenant or Transferee thereunder, shall be prepared by the Landlord or its solicitors and all associated legal costs shall be paid by the Tenant.

Section 8.04 Change of Control

If the Tenant is at any time a corporation or partnership, any actual or proposed Change of Control in such corporation or partnership shall be deemed to be a Transfer and subject to all of the provisions of this Article VIII. The Tenant shall make available to the Landlord or its representatives all of its corporate or partnership records, as the case may be, for inspection at all reasonable times, in order to ascertain whether any Change of Control has occurred. **Notwithstanding the foregoing, so long as the Required Conditions are satisfied, the foregoing requirement that the Tenant make available to the Landlord or its representatives all of its corporate or partnership records shall be suspended provided that, upon the request of the Landlord, the Tenant will provide a certificate executed by the President of the Tenant, certifying whether or not a Change of Control has occurred and, if so, the particulars of such Change of Control.**

Section 8.05 No Advertising

The Tenant shall not advertise that the whole or any part of the Premises are available for a Transfer and shall not permit any broker or other Person to do so unless the text and format of such advertisement and the publications in which such advertisement is to be placed are approved in writing by the Landlord. No such advertisement shall contain any reference to the rental rate of the Premises.

Section 8.06 Assignment By Landlord

The Landlord shall have the unrestricted right to sell, lease, convey or otherwise dispose of all or any part of the Building or Lands or this Lease or any interest of the Landlord in this Lease. To the extent that the purchaser or assignee from the Landlord assumes the obligations of the Landlord under this Lease, the Landlord shall thereupon and without further agreement be released from all liability under this Lease.

ARTICLE IX- DEFAULT

Section 9.01 Default and Remedies

If and whenever an Event of Default occurs, then without prejudice to any other rights which it has pursuant to this Lease or at law, the Landlord shall have the following rights and remedies, which are cumulative and not alternative:

(a) terminate this Lease by notice to the Tenant, whether or not the Landlord has, with respect to the same or another Event of Default, previously elected or pursued a right or remedy which is inconsistent with termination of this Lease;

(b) to enter the Premises as agent of the Tenant and to relet the Premises for whatever term, and on such terms as the Landlord in its discretion may determine and to receive the rent therefor and as agent of the Tenant to take possession of any property of the Tenant on the Premises, to store such property at the expense and risk of the Tenant or to sell or otherwise dispose of such property in such manner as the Landlord may see fit without notice to the Tenant; to make alterations to the Premises to facilitate their reletting; and to apply the proceeds of any such sale or reletting first, to the payment of any expenses incurred by the Landlord with respect to any such reletting or sale; second, to the payment of any indebtedness of the Tenant to the Landlord other than Rent; and third, to the payment of Rent in arrears; with the residue to be held by the Landlord and applied in payment of future Rent as it becomes due and payable. The Tenant shall remain liable for any deficiency to the Landlord. If any reletting extends for a period beyond the end of the Term, such reletting shall not constitute a termination of this Lease, but a reletting as agent of the Tenant up to the end of the Term and a letting thereafter by the Landlord for its own account;

(c) to remedy or attempt to remedy any default of the Tenant under this Lease for the account of the Tenant and to enter upon the Premises for such purposes. No notice of the Landlord's intention to perform such covenants need be given the Tenant unless expressly required by this Lease. The Landlord shall not be liable to the Tenant for any loss, injury or damage caused by acts of the Landlord in remedying or attempting to remedy such default and the Tenant shall pay to the Landlord all expenses incurred by the Landlord in connection with remedying or attempting to remedy such default;

(d) to recover from the Tenant all damages, and expenses incurred by the Landlord as a result of any breach by the Tenant including, if the Landlord terminates this Lease, any deficiency between those amounts which would have been payable by the Tenant for the portion of the Term following such termination and the net amounts actually received by the Landlord during such period of time with respect to the Premises;

(e) to recover from the Tenant the full amount of the current month's Rent together with the next three (3) months' installments of Rent, all of which shall accrue on a day-to-day basis and shall immediately become due and payable as accelerated rent; and

(f) if the Lease has been terminated in accordance with Section 9.01 (a), to recover from the Tenant the unamortized portion of any leasehold improvement allowance or inducement paid or given by the Landlord under the terms of this Lease, calculated from the date which is the later of the date of payment by the Landlord or the Commencement Date, on the basis of an assumed rate of depreciation on a straight line basis to zero over the initial Term of this Lease.

Section 9.02 Distress

Notwithstanding any provision of this Lease or any provision of applicable legislation, none of the goods and chattels of the Tenant on the Premises at any time during the Term shall be exempt from levy by distress for Rent in arrears, and the Tenant waives any such exemption. If the Landlord makes any claim against the goods and chattels of the Tenant by way of distress, this provision may be pleaded as an estoppel against the Tenant in any action brought to test the right of the Landlord to levy such distress. The Tenant acknowledges and agrees that the Landlord is entitled to levy by distress any accelerated rent which becomes due and is payable pursuant to Section 9.01 (e) of this Lease.

Section 9.03 Damages and Costs

The Tenant shall pay to the Landlord all damages and costs (including, without limitation, all legal fees on a solicitor and client or substantial indemnity basis) incurred by the Landlord in enforcing the terms of this Lease, or with respect to any matter or thing which is the obligation of the Tenant under this Lease, or in respect of which the Tenant has agreed to insure, or to indemnify the Landlord.

Section 9.04 Allocation of Payments

The Landlord may at its option apply sums received from the Tenant against any amounts due and payable by the Tenant under this Lease in such manner as the Landlord sees fit.

Section 9.05 Survival of Obligations

If the Tenant has failed to fulfill its obligations under this Lease with respect to the payment of Rent, the maintenance, repair and alteration of the Premises and removal of improvements and fixtures from the Premises during or at the end of the Term, such obligations and the Landlord's rights in respect thereto shall remain in full force and effect notwithstanding the expiry, surrender or sooner termination of the Term.

ARTICLE X- STATUS STATEMENT, ATTORNMENT AND SUBORDINATION

Section 10.01 Status Statement

Within ten (10) days after written request by the Landlord, the Tenant shall deliver in a form supplied by the Landlord a statement or estoppel certificate to the Landlord as to the status of this Lease, including as to whether this Lease is unmodified and in full force and effect (or, if there have been modifications that this Lease is in full force and effect as modified and identifying the modification agreements); the amount of Net Rent and Additional Rent then being paid and the dates to which same have been paid; whether or not there is any existing or alleged default by either party with respect to which a notice of default has been served and if there is any such default, specifying the nature and extent thereof; and any other matters pertaining to this Lease as to which the Landlord shall request such statement or certificate.

Section 10.02 Subordination

This Lease and all rights of the Tenant shall be subject and subordinate to any and all Mortgages and any ground, operating, overriding, underlying or similar leases from time to time in existence against the Lands and Building. On request, the Tenant shall acknowledge in writing the subordination of this Lease and its rights under this Lease to any and all such Mortgages and leases and to all advances made under such Mortgages. The form of such subordination shall be as required by the Landlord or any Mortgagee or the lessor under any such lease.

Section 10.03 Attornment

The Tenant shall promptly, on request, attorn to any Mortgagee, or to the owners of the Building and Lands, or the lessor under any ground, operating, overriding, underlying or similar lease of all or substantially all of the Building made by the Landlord or otherwise affecting the Building and Lands, or the purchaser on any foreclosure or sale proceedings taken under any Mortgage, and shall recognize such Mortgagee, owner, lessor or purchaser as the Landlord under this Lease.

Section 10.04 Execution of Documents

The Tenant irrevocably constitutes the Landlord the agent and attorney of the Tenant for the purpose of executing any agreement, certificate, attornment or subordination required by this Lease and for registering postponements in favour of any Mortgagee if the Tenant fails to execute such documents within ten (10) days after request by the Landlord.

ARTICLE XI - GENERAL PROVISIONS

Section 11.01 Rules and Regulations

The Tenant shall comply with all Rules and Regulations, and amendments thereto, adopted by the Landlord from time to time including those set out in Schedule "D". Such Rules and Regulations may differentiate between different types of businesses in the Building, and the Landlord shall have no obligation to enforce any Rule or Regulation or the provisions of any other lease against any other tenant, and the Landlord shall have no liability to the Tenant with respect thereto.

Section 11.02 Delay

Except as expressly provided in this Lease, whenever the Landlord or Tenant is delayed in the fulfillment of any obligation under this Lease (other than the payment of Rent and surrender of the Premises on termination) by an unavoidable occurrence which is beyond the reasonable control (except a delay caused by lack of funds or other financial reason) of the party delayed in performing such obligation, then the time for fulfillment of such obligation shall be extended during the period in which such circumstances operate to delay the fulfillment of such obligation.

Section 11.03 Overholding

If the Tenant remains in possession of the Premises after the end of the Term with the consent of the Landlord but without having executed and delivered a new lease or an agreement extending the Term, there shall be no tacit renewal of this Lease and the Tenant shall be deemed to be occupying the Premises as a Tenant from month to month at a monthly Net Rent payable in advance on the first day of each month equal to **150% of** the monthly amount of Net Rent payable during the last month of the Term, and otherwise upon the same terms as are set forth in this Lease, so far as these are applicable to a monthly tenancy.

Section 11.04 Waiver

If either the Landlord or Tenant excuses or condones any default by the other of any obligation under this Lease, no waiver of such obligation shall be implied in respect of any continuing or subsequent default.

Section 11.05 Registration

The Tenant may register, at the Tenant's sole costs, a notice of lease or short form of lease in a form first approved by the Landlord, which approval shall not be unreasonably withheld or delayed. The Tenant consents and agrees that no financial terms of this Lease shall be disclosed in such notice of lease or short form of lease. If the Lands comprise more than one parcel of land, the Landlord may direct the Tenant or Transferee as to the parcel or parcels against which registration may be effected.

Section 11.06 Notices

Any notice, consent or other instrument which may be or is required to be given under this Lease shall be in writing and shall be delivered in person or sent by registered mail postage prepaid, addressed: (a) if to the Landlord: c/o The Cadillac Fairview Corporation Limited, 20 Queen Street West, 5th Floor, Toronto, Ontario, M5H 3R4, Attention: Executive Vice President, Property Management, with a copy to the Building Manager; and (b) if to the Tenant, at the Premises, or, at the Landlord's option, to the Tenant at the address set out in Section 1.01(j). Any such notice or other instrument shall be deemed to have been given and received on the day upon which personal delivery is made or, if mailed, then forty-eight (48) hours following the date of mailing. Either party may give notice to the other of any change of address and after the giving of such notice, the address therein specified is deemed to be the address of such party for the giving of notices. If postal service is interrupted or substantially delayed, all notices or other instruments shall be delivered in person.

Section 11.07 Successors

The rights and liabilities created by this Lease extend to and bind the successors and assigns of the Landlord and the heirs, executors, administrators and permitted successors and assigns of the Tenant. No rights, however, shall enure to the benefit of any Transferee unless the provisions of Article VIII are complied with.

Section 11.08 Joint and Several Liability

If there is at any time more than one Tenant or more than one Person constituting the Tenant, their covenants shall be considered to be joint and several and shall apply to each and every one of them. If the Tenant is or becomes a partnership, each Person who is a member, or shall become a member, of such partnership or its successors shall be and continue to be jointly and severally liable for the performance of all covenants of the Tenant pursuant to this Lease, whether or not such Person ceases to be a member of such partnership or its successor.

Section 11.09 Captions and Section Numbers

The captions, section numbers, article numbers and table of contents appearing in this Lease are inserted only as a matter of convenience and in no way affect the substance of this Lease.

Section 11.10 Extended Meanings

The words "hereof', "hereto" and "hereunder" and similar expressions used in this Lease relate to the whole of this Lease and not only to the provisions in which such expressions appear. This Lease shall be read with all changes in number and gender as may be appropriate or required by the context.

Section 11.11 Partial Invalidity

All of the provisions of this Lease are to be construed as covenants even though not expressed as such. If any such provision is held or rendered illegal or unenforceable it shall be considered separate and severable from this Lease and the remaining provisions of this Lease shall remain in force and bind the parties as though the illegal or unenforceable provision had never been included in this Lease.

Section 11.12 Entire Agreement

This Lease and the Schedules and riders, if any, attached hereto and the Tenant Construction Manual, set forth the entire agreement between the Landlord and Tenant concerning the Premises and there are no agreements or understandings between them other than as are herein set forth. Subject to Section 11.01, this Lease and its Schedules and riders may not be modified except by agreement in writing executed by the Landlord and Tenant.

Section 11.13 Governing Law

This Lease shall be construed in accordance with and governed by the laws of the Province.

Section 11.14 Time of the Essence

Time is of the essence of this Lease.

Section 11.15 Quiet Enjoyment

If the Tenant pays Rent, fully observes and performs all of its obligations under this Lease, and there has been no Event of Default, the Tenant shall be entitled to peaceful and quiet enjoyment of the Premises for the Term without interruption or interference by the Landlord or any Person claiming through the Landlord.

Section 11.16 Energy Conservation

In addition to the requirements set out in the Environmental Management Plan, the Tenant covenants with the Landlord to cooperate with the Landlord and to comply with all regulations, orders, laws and requirements passed by any governmental authorities or other agencies having jurisdiction respecting energy conservation, waste reduction, emissions reduction or any other related initiatives in relation to the use, occupancy, maintenance and operation of the Building, or any part thereof. The Tenant shall, at its cost, comply with all reasonable requests and demands of the Landlord made with a view to energy conservation, waste reduction, emissions reduction or any other related initiatives. Any costs the Landlord incurs in an effort to promote the foregoing and complying with such regulations, orders, laws and requirements shall be added to

Operating Costs in the financial year of the Landlord or portion thereof that such expenditures are incurred. The Landlord shall not be liable as a result of undertaking any action or work to comply with any such regulations, orders, laws and requirements even where the same results in a reduction, change, or elimination in heating, ventilation or air-conditioning in the Premises or Building, or any part thereof, or any other service or utility provided by the Landlord.

Section 11.17 1ndemnity Agreement

If any Indemnifier is named in this Lease, the Indemnifier agrees to execute and deliver to the Landlord an indemnity agreement ~~in the form attached as Schedule "F" hereto (with blanks completed)~~ with respect to this Lease and any and all renewals hereof; and the Tenant agrees that failure of the Indemnifier to do so shall constitute an Event of Default.

Section 11.18 Confidentiality

The Tenant acknowledges that the terms, conditions and provisions of this Lease are of a highly confidential nature and therefore agrees on behalf of itself, its directors, officers, employees, agents, affiliates, and any other Persons having access to this Lease through the Tenant, that the terms, conditions and provisions of this Lease will remain confidential and further that no term, condition or provision of this Lease will be communicated to a third party without the express written consent of the Landlord. Only in the event that the Landlord first provides its express written consent to the Tenant to release any or all the terms, conditions and provisions of Lease to a third party, the Tenant agrees to obtain from that third party, a suitable confidentiality and non-disclosure agreement obliging the third party to keep confidential the terms, conditions and provisions of this Lease. These confidentiality provisions shall survive the expiration or earlier termination of this Lease. A violation of these confidentiality obligations shall be deemed to constitute an Event of Default.

Section 11.19 Execution

If the Tenant is a corporation, the Tenant confirms and agrees that this Lease has been executed by its authorized signatories and that if only one signatory has signed this Lease, the Tenant is authorized by its articles of incorporation or other constating documents to execute leases by such sole authorized signatory and if this Lease is not executed under seal by the Tenant, the Tenant is authorized by its articles of incorporation or other constating documents to execute leases without a seal.

Section 11.20 Accord and Satisfaction

No payment by the Tenant or receipt of the Landlord of a lesser amount than the monthly instalment of Net Rent and Additional Rent herein stipulated will be deemed to be other than on account of the earliest stipulated monthly instalment of Net Rent and Additional Rent, nor will an endorsement or statement on a cheque or in a letter accompanying a cheque or payment as Rent be deemed an acknowledgement of full payment or an accord and satisfaction, and the Landlord may accept a cheque or payment without prejudice to the Landlord's right to recover the balance of the Rent or pursue any other remedy. No payment of Rent hereunder made by any third party and accepted by the Landlord will constitute or in any way be interpreted to be the consent or acknowledgement by the Landlord to an assignment or subletting by the Tenant.

Section 11.21 Head Lease

The Tenant acknowledges that the Landlord is the current tenant of the Lands pursuant to an indenture of lease made as of the 24th day of February, 1984 and originally between the Bank of British Columbia, J.K.S. Holdings Ltd. and IBC Properties Limited, as landlords, and lmbrook Properties Limited, as tenant, registered in the Lower Mainland Land Titles Office ("LTO") under No. M14613, as amended by lease amending agreements made as of the 16th day of August, 1984 and the 18th day of November, 1985 registered in the LTO under Nos. M68521 and P12195, respectively, and assigned and amended by an assignment and modification of lease agreement made as of the 31st day of March 1989 and registered in the LTO under Nos. GC46629 and GC46630, respectively, and by a non-disturbance agreement registered in the LTO under No. BK312523 and assumed by the Landlord pursuant to an Assignment of Land Lease effective the 1st day of September, 2005 and filed for registration in the LTO on September 1, 2005 under Nos. BX186432 and BX186433.

Section 11.22 Landlord's Limited Recourse and Severability

The Tenant acknowledge and agrees that (i) only the interest of Landlord (which, as at date of this Lease, is comprised of Van885 West Georgia LP, by its general partner Van885 West Georgia GP Ltd. and Ontrea Inc., each as to an undivided 50% interest) in the Building shall be bound hereby and the obligations hereunder are not otherwise binding upon nor shall resort be had to any other property of the Landlord; and (ii) the rights and obligations hereunder of each party comprising the Landlord shall be several in accordance with each such party's respective ownership interest in the Building, and not either joint or joint and several.

Section 11.23 Tenant Inducement

Subject to the Required Conditions, the Landlord will pay the Tenant a Leasehold Improvement allowance of SEVEN DOLLARS ($7.00) per square foot of the Rentable Area of the Premises, plus goods and services tax if applicable (the "Allowance") to be applied towards the cost of construction of the Tenant's Leasehold Improvements. Ninety percent (90%) of the Allowance will be paid within thirty (30) days after the last to occur of:

(a) the execution of the Lease by all parties;

(b) the commencement of the Term;

(c) **satisfactory completion of the construction of the Tenant's Leasehold Improvements in accordance with terms and conditions provided in this Lease and delivery to the Landlord of such post-construction documentation that the Landlord reasonably requires;**

(d) **receipt by the Landlord of a statutory declaration from the Tenant documenting (i) that payment has been made in full to all contractors, sub-contractors, suppliers and any other personnel retained to complete construction of the Tenant's Leasehold Improvements; (ii) that construction of the Tenant's Leasehold Improvements has been carried out and performed in accordance with all applicable by-laws, rules, regulations and orders of any lawful authority (iii) the last date on which any work was done or materials were provided in connection with the construction of the Leasehold Improvements; and (iv) that all assessments under the Workers' Compensation Act against the Tenant, its contractors, subcontractors and other persons or business entities who perfonned work in the Building or the Premises in connection with the Tenant's work have been paid in full; and**

(e) **the delivery to the Landlord of an invoice for ninety percent (90%) of the Allowance (plus GST as applicable), such invoice to include the Tenant's business number(s).**

The remaining ten percent (10%) of the Allowance will be paid forthwith after the expiry of the applicable statutory lien period, provided no liens have been registered in respect of the Tenant's Leasehold Improvements and provided that the Tenant has delivered to the Landlord an invoice for the remaining ten percent (10%) of the Allowance (plus GST as applicable), such invoice to include the Tenant's business number(s). The Tenant will deliver to the Landlord copies of bona fide receipts, paid invoices or other evidence acceptable to the Landlord substantiating the materials and services supplied on account of the Renovation. Provided that the Required Conditions are satisfied and the Tenant has claimed and received 90% of the Allowance in accordance with this Section 11.23 and the remaining 10% is due and payable, to the extent that the Allowance exceeds the amount that has been spent on the construction of the Tenant's Leasehold Improvements, such extra amount, up to a maximum limit of TWO Dollars ($2.00) per square foot, shall be applied by the Landlord to the next Rent due under the Lease.

Section 11.24 Parking

Subject to the Required Conditions, the Landlord agrees to make available to the Tenant during the Tenn EIGHT (8) unreserved parking spaces in the parking facility provided for the Building. The Tenant shall pay parking fees to the Landlord (or to the parking operator if the Landlord so directs) throughout the Tenn at the prevailing rates being charged for parking pennits in the parking facility, from time to time. Each such payment shall be made in advance on the first day of each month throughout the Tenn. The use of each parking pennit by the Tenant is subject to the following conditions:

(a) **one vehicle will be designated by the Tenant for each pennit and initially the Tenant will be issued by the Landlord (or the parking operator) the number or parking permits requested by the Tenant under Section 11.24(e);**

(b) **the Landlord reserves the right to make such Rules and Regulations with respect to the use of the parking facility provided for the Building as the Landlord deems advisable from time to time;**

(c) **the use by the Tenant of the parking facility is subject to the exclusive control of the Landlord;**

(d) **the Tenant shall use the parking facility at its sole risk;**

(e) **the Tenant shall give the Landlord not less than one month written notice prior to the Commencement Date setting out the number of parking permits (subject to the maximum number of parking spaces set out above) it requires as at the Commencement Date; and**

(f) **following the expiry of the first two (2) full calendar months of the parking agreement (as described below), the Tenant shall give one month prior written notice if it requires an increase or decrease in the number of parking permits at any given time, and permits must be used from the first day of a calendar month to the last day of a calendar month. If the Tenant requests an increase in its number of permits at any time after the notice provided under Section 11.24(e), such request for an increase in the number of permissible parking permits shall be subject to availability at the time of the request, and the Landlord will have no liability to the Tenant if the Landlord (or the parking operator) is unable to satisfy such request; and**

(g) **the Tenant shall enter into a separate parking agreement with the Landlord (or the parking operator if the Landlord so directs) in the Landlord's standard form (or the parking operator's standard form, as the case may be) with respect to the above mentioned parking spaces.**

Section 11.25 Option to Extend

Provided that:

(a) **the Required Conditions have been met; and**

(b) **the Tenant has given written notice to the Landlord no less than twelve (12) months and no more than eighteen (18) months prior to the expiration of the initial Term of its intention to exercise the within option to extend;**

the Landlord will grant to the Tenant the right to extend the Term of the Lease for the Premises on an "as is" basis for a further period of FIVE (5) years (the "Extension of Term") commencing upon the expiration of the initial Term, and such Extension of Term shall be upon the same terms and conditions as during the Term, save and except: (i) there shall be no further right to extend the Term, (ii) there will be no inducement or leasehold improvement allowance payable to the Tenant, (iii) there will be no rent free period or Landlord's Work, and (iv) the rental rate will be the fair market net rental rate for extending tenants for similar improved premises in a similar building with similar amenity packages

and location at the time of the exercise by the Tenant of the within option to extend (the "Extension Rent"), provided that in no event shall the Extension Rent be less than the rate payable during the last year of the initial Term.

The Landlord may, at its option, require that the Tenant (i) execute a new lease on the Landlord's standard lease for the Building currently in use at the time of the Tenant's exercise of the option to extend, or (ii) enter into an extension agreement in order to give effect to the Extension of Term and the revised rental, but the Tenant shall be deemed to have exercised the option to extend on the terms referred to above upon delivery of said notice to the Landlord whether or not such a new lease or extension agreement is executed.

If the Tenant fails to give the appropriate notice within the time limit set out herein for extending the Term then this option to extend shall be null and void and of no further force or effect. If the Tenant gives such appropriate notice within the time limit set out herein for extending the Term it will forthwith execute the documentation submitted by the Landlord as hereinbefore set out within ten (10) days of its receipt thereof.

Section 11.26 Subject to Vacant Possession

The Tenant acknowledges that the Premises are presently occupied by and subject to a lease in favour of a third party. Notwithstanding anything contained in this Lease to the contrary, it is understood and agreed by the Landlord and the Tenant that the Tenant's right to occupy the Premises is conditional upon the Landlord obtaining vacant possession of the Premises from that third party prior to the Commencement Date, failing which the Commencement Date and all other relevant dates shall be postponed by notice in writing from the Landlord. The Tenant agrees to execute any further documentation, prepared by the Landlord, and which the Landlord, acting reasonably, determines is necessary to give effect to the foregoing.

IN WITNESS WHEREOF the Landlord and Tenant have executed this Lease.

VAN885 WEST GEORGIA LP by its general partner,
VAN885 WEST GEORGIA GP LTD. and ONTREA INC.,
both by their duly authorized agent,
THE CADILLAC FAIRVIEW CORPORATION LIMITED
(collectively, Landlord)

Per: _____
Authorized Signature

Per: _____
Authorized Signature

I/We have authority to bind the corporation.

SIERRA ONCOLOGY CANADA ULC
(Tenant)

Per: _____
Authorized Signature

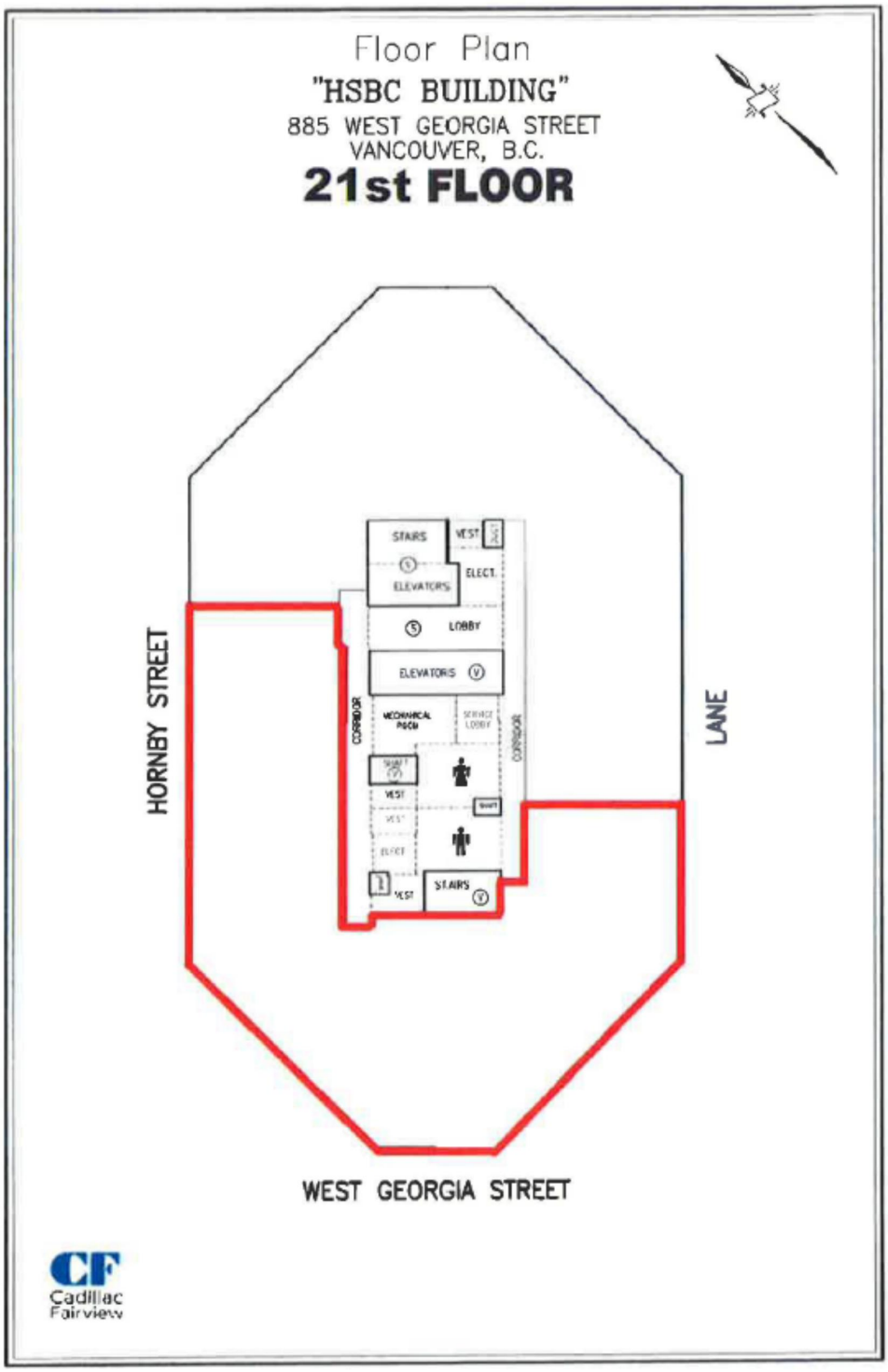
Per: _____
Authorized Signature

I/We have authority to bind the corporation.

SCHEDULE "A" - LEGAL DESCRIPTION OF THE LANDS

Those lands and premises lying and being in the City of Vancouver in the Province of British Columbia more particularly known and described as

Lots 5-20, both inclusive
Block 41
District Lot 541
Plan 210



The purpose of this plan is to identify the approximate location of the Premises in the Building.

SCHEDULE "C"- DEFINITIONS

In this Lease and in the Schedules to this Lease:

"Additional Rent" means all sums of money required to be paid by the Tenant under this Lease (except Net Rent) whether or not the same are designated "Additional Rent" or are payable to the Landlord or otherwise.

"Alterations" means all repairs, replacements, improvements or alterations to the Premises by the Tenant and the placing of a load of more than 50 lbs per square foot in any part of the Premises or the relocation of any such load.

"Architect" means the architect or land surveyor or other qualified expert from time to time named by the Landlord.

"BOMA Standard" means the standard method for measuring floor area in office buildings as sanctioned by the Building Owners and Managers Association International which is set out in Section 1.01 (d), provided that the Landlord may, **at any time after the fifth anniversary of the Commencement Date of the Term,** at the Landlord's discretion and upon notice in writing to the Tenant, substitute for this standard any subsequent standard of measure published by BOMA or by any organization or authority performing a function similar to that performed by BOMA.

"Building" means the multi-storey building set out in Section 1.01 (a) and situated on the Land described in Schedule "A" from and including the ground floor of such Building to and including the roof thereof and including all premises rented or intended to be rented therein, whether for office, retail, cafeteria, banking or other purposes; and the areas, building systems and facilities serving the Building or having utility in connection therewith, as determined by the Landlord, whether or not located directly under the Building, which areas and facilities may include, without limitation, the roof, internal malls, passageways, tunnels, concourses, sidewalks and plazas, supports to accommodate any +15 bridge, if any, entrances and exits, exhibit areas, storage and mechanical areas, janitor rooms, mail rooms, telephone, mechanical and electrical rooms, heating, ventilating and air conditioning systems, fire prevention, security, communication and music systems, common washrooms, stairways, escalators, elevators, truck and receiving areas, roadways and driveways, parking facilities, loading docks and corridors all as may be altered, expanded, reduced or reconstructed from time to time.

"Business Tax" means all business, sales, machinery, or other taxes, rates, duties, assessments, license fees and other charges levied, charged or imposed by any competent authority with respect to the business operations of the Tenant (whether imposed on the Landlord or Tenant) or attributable to the personal property, trade fixtures, business, income, occupancy or sales of the Tenant or any other occupant of the Premises and to any leasehold improvements installed in the Premises and to the use of the Building or Lands by the Tenant.

"Capital Tax" is an amount determined by multiplying each of the "Applicable Rates" by the "Building Capital" and totalling the products. "Building Capital" is the amount of capital which the Landlord determines, without duplication, is invested from time to time by the Landlord, the owners, or all of them, in doing all or any of the following: acquiring, developing, expanding, redeveloping and improving the Lands and Building. Building Capital will not be increased by any financing or refinancing except to the extent that the proceeds are invested directly as Building Capital. An "Applicable Rate" is the capital tax rate specified from time to time under any statute of Canada and any statute of the Province which imposes a tax in respect of the capital of corporations. Each Applicable Rate will be considered to be the rate that would apply if none of the Landlord or the owners employed capital outside of the Province.

"Carbon Offset Credits" shall mean and refer to activities undertaken by either the Landlord or the Tenant which cause, directly or indirectly, measurable greenhouse gas emission reductions or removal enhancements within or in respect of the Building and that have financial or exchange value in the regulatory or voluntary market.

"Carbon Tax" means the aggregate of all taxes, rates, duties, levies, fees, charges and assessments whatsoever, imposed, assessed, levied, confirmed, rated or charged against or in respect of the energy consumption of the Building or the emissions of greenhouse gases from the Building or any part of it or levied in lieu thereof, levied against the Landlord by any local, provincial or federal government or any agency thereof having jurisdiction.

"Change of Control" means, in the case of any corporation or partnership, the transfer or issue by sale, assignment, subscription, transmission on death, mortgage, charge, security interest, operation of law or otherwise, of any shares, voting rights or interest which would result in any change in the effective control of such corporation or partnership unless such change occurs as a result of trading in the shares of a corporation listed on a recognized stock exchange in Canada or the United States and then only so long as the Landlord receives assurances reasonably satisfactory to it that there will be a continuity of management and of the business practices of such corporation notwithstanding such Change of Control.

"Commencement Date" means the date on which the Term commences as set out in Section 1.01 (e).

"Environmental Laws" means all applicable federal, provincial and municipal laws, regulations, by-laws, standards, requirements, ordinances, codes, policies, guidelines, orders, notices, permits or directives, or parts thereof, pertaining to protection, conservation, utilization, impairment or degradation of the environment in effect as of the date hereof and as may be brought into effect or amended at a future date.

"Environmental Management Plan" means those provisions set out in Schedule "E" attached hereto. An **"Event of Default"** shall occur whenever:

(a) any Rent is in arrears and is not paid within five (5) days after written demand by the Landlord;

(b) the Tenant has breached any of its obligations in this Lease (other than the payment of Rent) and:

(i) fails to remedy such breach within fifteen (15) days (or such shorter period as may be provided in this Lease); or

(ii) if such breach cannot be reasonably remedied within fifteen (15) days or such shorter period, the Tenant fails to commence to remedy such breach within such fifteen (15) days or shorter period or thereafter fails to proceed diligently to remedy such breach; in either case after notice in writing from the Landlord;

(c) the Tenant or any Indemnifier becomes bankrupt or insolvent or takes the benefit of any statute for bankrupt or insolvent debtors or makes any proposal, assignment or arrangement with its creditors, or any steps are taken or proceedings commenced by any Person for the dissolution, winding-up or other termination of the Tenant's existence or the liquidation of its assets;

(d) a trustee, receiver, receiver/manager or like Person is appointed with respect to the business or assets of the Tenant or any Indemnifier;

(e) the Tenant makes a sale in bulk of all or a substantial portion of its assets other than in conjunction with a Transfer approved by the Landlord;

(f) this Lease or any of the Tenant's assets are taken under a writ of execution;

(g) the Tenant purports to make a Transfer other than in compliance with the provisions of this Lease;

(h) the Tenant abandons or attempts to abandon the Premises or disposes of its goods so that there would not after such disposal be sufficient goods of the Tenant on the Premises subject to distress to satisfy Rent for at least three (3) months, or the Premises become vacant and unoccupied for a period of ten (10) consecutive days or more without the consent of the Landlord;

(i) any insurance policies covering any part of the Building or any occupant thereof are actually or threatened to be cancelled or adversely changed as a result of any use or occupancy of the Premises;

(j) the Tenant shall default in the full and timely performance of any covenant of this Lease and any such default shall be repeated two (2) times in any Fiscal Year, notwithstanding that such defaults may have been cured within the period after notice has been provided pursuant to the terms hereof;

(k) an Event of Default as defined in this paragraph occurs with respect to any lease or agreement under which the Tenant occupies other premises in the Building;

(I) the Tenant or any Indemnifier is a corporation and at any time during the Term does not remain in good standing with the Office of the Registrar of Companies for the Province; or,

(m) **the Tenant defaults in connection with the Existing Sublease Consent (as defined below) beyond any applicable cure period.**

"Existing Sublease Consent" means the consent to sublease and made among the Landlord as successor in interest to Ontrea Inc., Thompson Creek Metals Company Inc. as tenant and the Tenant as sub-tenant dated February 27, 2015 under which the Tenant presently sublets and occupies the Premises as sub-tenant.

"Fiscal Year" means (i) the period of time commencing on the Commencement Date and ending on the last day of the next ensuing October; and (ii) thereafter the period of time commencing on the first day of November and ending on the last day of the next ensuing October, or (iii) the fiscal period designated by the Landlord from time to time.

"Fixturing Period" means the period specified in Section 1.01 (h).

"Hazardous Substance" means any substance or material whose discharge, release, use, storage, handling or disposal is regulated, prohibited or controlled, either generally or specifically, by any governmental authority pursuant to or under any Environmental Laws, including, but not limited to, any contaminant, pollutant, deleterious substance, or material which may impair the environment, petroleum and other hydrocarbons and their derivatives and by-products, dangerous substances or goods, asbestos, gaseous, solid and liquid waste, special waste, toxic substance, hazardous or toxic chemical, hazardous waste, hazardous material or hazardous substance, either in fact or as defined in or pursuant to any Environmental Laws.

"Indemnifier" means the Person, if any, who has executed or agreed to execute ~~the indemnity Agreement attached to this Lease as Schedule "F", or~~ any ~~other~~ indemnity agreement in favour of the Landlord.

"Landlord" means the party named as landlord on the first page of this Lease and those for whom it is responsible at law.

"Lands" means the lands situated in the city of Vancouver in the Province in which the Building is constructed, as more particularly described in Schedule "A", or as such lands may be expanded or reduced from time to time.

"Lease" means this document as originally executed and delivered or as amended from time to time, which amendments shall be in writing, executed and delivered by both the Landlord and the Tenant.

"Leasehold Improvements" means leasehold improvements in the Premises determined according to common law, and shall include, without limitation, all fixtures, improvements, installations, alterations and additions from time to time made, erected or installed in the Premises by or on behalf of the Tenant or any previous occupant of the Premises, including signs and lettering, partitions, doors and hardware however affixed

and whether or not movable, all mechanical, electrical and utility installations and all carpeting and drapes with the exception only of furniture and equipment not in the nature of fixtures.

"Mortgage" means any and all mortgages, charges, debentures, security agreements, trust deeds, hypothecs or like instruments resulting from financing, refinancing or collateral financing (including renewals or extensions thereof) made or arranged by the Landlord of its interest in all or any part of the Building or Lands.

"Mortgagee" means the holder of, or secured party under, any Mortgage and includes any trustee for bondholders.

"Net Rent" means the annual rent payable by the Tenant under Section 1.01(f).

"Normal Business Hours" means the hours from 6:00 a.m. to 6:00 p.m. on Mondays through Fridays, and the hours from 8:00 a.m. to 2:00 p.m. on Saturdays, unless any such day is a statutory holiday. Normal Business Hours may be modified or amended by the Landlord from time to time, acting reasonably and consistent with the standards of a first class office building.

"Operating Costs" means, for any period designated by the Landlord, (without duplication) any amounts, whether direct or indirect, paid, payable or incurred by or on behalf of the Landlord for maintenance, operation, repair, replacement to and administration of the Lands and Building including without limitation the fitness centre (if any) or allocated by the Landlord to the Lands and Building and for services provided generally to tenants, calculated as if the Building were 100% occupied by tenants during the Term, including without limitation:

(a) the cost of insurance which the Landlord is obligated or permitted to obtain under this Lease and any deductible amount applicable to any claim made by the Landlord under such insurance;

(b) the cost of security, janitorial, cleaning, landscaping, window cleaning, garbage removal and snow removal services and periodic sanding, the cost of providing loudspeakers, public address and musical broadcasting systems and providing fire protection and detection systems, communications systems and connections, the cost of operating and maintaining supply holding areas, storage areas, loading docks, bays or areas and truckways;

(c) the cost of heating, ventilating and air-conditioning;

(d) the cost of fuel, steam, water, electricity, telephone and other utilities used in the maintenance, operation or administration of the Building, including the replacement of building standard electric bulbs, tubes, starters and ballasts; including charges and imposts related to such utilities to the extent such costs, charges and imposts are not recovered from other tenants;

(e) management office expenses of operation (or to the extent there is no on-site management offices, a portion of the operating expenses of the off-site management office bearing responsibility for, *inter alia*, the Building determined by the Landlord on an equitable basis), including the fair market rental value of any space used by the Landlord and/or its manager in connection with the repair, maintenance, operation or management of the Building and salaries, wages and other amounts paid or payable for all personnel involved in the repair, maintenance, operation, management, security, supervision or cleaning of the Building, including fringe benefits, employment and worker's compensation insurance premiums, pension plan contributions and other employment costs and the cost of engaging contractors for the repair, maintenance, security, supervision or cleaning of the Building;

(f) auditing, accounting, legal and other professional and consulting fees and disbursements;

(g) the costs: (i) of repairing, operating and maintaining the Building (including the parking facilities) and the equipment serving the Building and of all replacements and modifications to the Building or such equipment, including those made by the Landlord in order to comply with laws or regulations affecting the Building; (ii) incurred by the Landlord in providing and installing energy conservation equipment or systems and life safety systems; (iii) incurred by the Landlord to make alterations, replacements or additions to the Building intended to reduce operating costs, improve the operation of the Building or maintain its operation as a first class office building; (iv) incurred to replace machinery or equipment which by its nature requires periodic replacement; and (v) incurred by the Landlord, **acting reasonably,** in modifying and operating the Building to achieve the objectives of the Environmental Management Plan; all to the extent that such costs are fully chargeable in the Fiscal Year in which they are incurred in accordance with sound accounting principles;

(h) the cost of the rental of all equipment, supplies, tools, materials and signs;

(i) all costs incurred by the Landlord in administering, contesting or appealing Taxes or related assessments including legal, appraisal and other professional fees, and administration and overhead costs;

(j) Capital Tax and Carbon Tax;

(k) depreciation or amortization of the costs referred to in paragraph (g) above as determined by the Landlord in accordance with sound accounting principles, if such costs have not been charged fully in the Fiscal Year in which they are incurred;

(I) interest calculated at two percentage points above the average daily prime bank commercial lending rate charged during such Fiscal Year by any Canadian chartered bank designated from time to time by the Landlord upon the undepreciated or unamortized balance of the costs referred to in paragraph (k) above; and

(m) a reasonable fee for the administration and management of the Building equal to an amount which the Landlord might reasonably pay to a third party for the administration and management of developments in the city of Vancouver similar to the Building.

Operating Costs shall exclude or have deducted from them as the case may be:

(aa) all amounts which otherwise would be included in Operating Costs which are recovered by the Landlord from tenants (other than under sections of their leases comparable to section 2.03 of this Lease);

(bb) such of the Operating Costs as are recovered from insurance proceeds, warranties or guarantees, to the extent such recovery represents reimbursements for costs previously included in Operating Costs;

(cc) interest on debt and capital retirement of debt;

(dd) ground rent payable by the Landlord to the owner of the Lands under any ground lease of the Lands;

(ee) commissions and other expenses payable in connection with the marketing and leasing of the Building including the cost of any leasehold improvement allowance or other inducement paid to tenants of the Building; and

(ff) the amount of any goods and services tax ("Sales Tax") paid or payable by the Landlord on the purchase of goods and services included in Operating Costs which may be available to the Landlord as a credit in determining the Landlord's net tax liability or refund on account of Sales Tax.

Operating Costs may be attributed by the Landlord to the various components of the Building in accordance with reasonable and current practices and on a basis consistent with the nature of the particular costs being attributed, and the costs so attributed may be allocated to the tenants of such components accordingly.

"Person" means any person, firm, partnership or corporation, or any group or combination of persons, firms, partnerships or corporations.

"Possession Date" means the date for possession of the Premises by the Tenant, as set out in Section 1.01(g).

"Premises" means the premises leased to the Tenant described in Sections 1.01 (b) and 1.02 and includes Leasehold Improvements in such premises. The boundaries of the Premises are as follows: (i) the interior face of all exterior walls, doors and windows; (ii) the interior face of all interior walls, doors and windows separating the Premises from common areas; (iii) the centre line of all interior walls separating the Premises from adjoining leasable premises; and (iv) the top surface of the structural subfloor and the bottom surface of the structural ceiling.

"Proportionate Share" means a fraction which has as its numerator the Rentable Area of the Premises and as its denominator the Total Rentable Area of the Building.

"Province" means the province in which the Building is located.

"Released Persons" means collectively and individually, the Landlord, any manager of the Building, the owners of the Building, the Mortgagee, and their respective officers, directors and employees, in the course of their employment.

"Rent" means the aggregate of Net Rent and Additional Rent.

"Rentable Area" means the Rentable Area of the Premises and/or other premises in the Building, as determined in accordance with the BOMA Standard.

"Required Conditions" means that the Tenant is the original Tenant, **SIERRA ONCOLOGY CANADA ULC,** and that the Tenant is not in default and has not been in default under this Lease during the Term hereof, and that the Tenant is itself in possession of and conducting business in the whole of the Premises in accordance with this Lease.

"Rules and Regulations" means the rules and regulations adopted and promulgated by the Landlord from time to time pursuant to Section 11.01. The Rules and Regulations existing as at the Commencement Date are those set out in Schedule "D".

"Taxes" means all taxes, levies, charges, local improvement rates and assessments whatsoever assessed or charged against the Building and the Lands or any part thereof by any lawful taxing authority and including any amounts assessed or charged in substitution for or in lieu of any such taxes, but excluding only such taxes as capital gains taxes, corporate, income, profit or excess profit taxes to the extent such taxes are not levied in lieu of any of the foregoing against the Building or Lands or the Landlord in respect thereof. Taxes shall in every instance be calculated on the basis of the Building being fully assessed and taxed at prevailing commercial tax rates for occupied space for the period for which Taxes are being calculated.

"Tenant" means the party named as tenant on the first page of this Lease, and those for whom it is responsible in law.

"Tenant Construction Manual" means the tenant construction and improvements manual or other similar document supplied by the Landlord from time to time to office tenants of the Building intending to perform alterations to or work within their respective premises.

"Term" means the period set out in Section 1.01 (e).

"Total Rentable Area of the Building" means the aggregate of the Rentable Area of each floor in the Building intended for office or retail use as if each floor is occupied by one tenant, all as determined by the Architect in accordance with the BOMA Standard. The Total Rentable Area of the Building shall: (a) exclude the main telephone, mechanical, electrical and other utility rooms and enclosures, public lobbies on the ground floor, and other public space common to the entire Building; and, (b) be adjusted by the Architect from time to time to take account of any structural, functional or other change affecting the same.

"Trade Fixtures" means trade fixtures as determined at common law, but for greater certainty, shall not include: (a) heating, ventilating or air conditioning systems, facilities and equipment in or serving the Premises; (b) floor coverings affixed to the floor of the Premises; (c) light fixtures; (d) internal stairways and doors; and, (e) any fixtures, facilities, equipment or installations installed by or at the expense of the Landlord pursuant to this Lease or otherwise.

"Transfer" means an assignment of this Lease in whole or in part, a sublease of all or any part of the Premises (whether by the Tenant or by a subtenant), any transaction whereby the rights of the Tenant under this Lease or the rights of any subtenant or to the Premises are transferred to another, any transaction by which any right of use or occupancy of all or any part of the Premises is conferred upon anyone, any mortgage, charge or encumbrance of this Lease or the Premises or any part thereof or other arrangement under which either this Lease or the Premises become security for any indebtedness or other obligations and includes any transaction or occurrence whatsoever (including, but not limited to, expropriation, receivership proceedings, seizure by legal process and transfer by operation of law), which has changed or might change the identity of the Persons having lawful use or occupancy of any part of the Premises or which creates a security interest in any part of the Premises, including without limitation, any of the Leasehold Improvements.

"Transferee" means the Person or Persons to whom a Transfer is or is to be made.

"Useable Area" means the Useable Area of the Premises as defined and determined in accordance with the BOMA Standard.

SCHEDULE "D" - RULES AND REGULATIONS

1 . Life Safety.

(a) The Tenant shall not do or permit anything to be done in the Premises, or bring or keep anything therein which will in any way increase the risk of fire or the rate of fire insurance on the Building or on property kept therein, or obstruct or interfere with the rights of other tenants or in any way injure or annoy them or the Landlord, or contravene the fire code or the regulations of the Fire Department, or any insurance requirements with respect to the Lands or Building or in any part thereof, or violate or act in conflict with any statutes, rules and ordinances governing health and safety standards or with any other statute or municipal by-law.

(b) No inflammable oils or other inflammable, dangerous or explosive materials save those approved in writing by the Landlord's insurers shall be kept or permitted to be kept in the Premises.

2. Security.

(a) The Landlord shall permit the Tenant and the Tenant's employees and all Persons lawfully requiring communication with them to have the use, during Normal Business Hours in common with others entitled thereto, of the main entrance and the stairways, corridors, elevators, escalators, or other mechanical means of access leading to the Building and the Premises. At times other than during Normal Business Hours the Tenant and its employees shall have access to the Building and to the Premises only in accordance with the Rules and Regulations and shall be required to satisfactorily identify themselves and to register in any book which may at the Landlord's option be kept by the Landlord for such purpose. If identification is not satisfactory, the Landlord is entitled to prevent the Tenant or the Tenant's employees or other Persons lawfully requiring communication with the Tenant from having access to the Building and to the Premises. In addition, the Landlord is not required to open the door to the Premises for the purpose of permitting entry therein to any Person not having a key or passcard to the Premises.

(b) The Tenant shall not place or cause to be placed any additional locks upon any doors of the Premises without the approval of the Landlord. Two keys shall be supplied to the Tenant for each entrance door to the Premises and all locks shall be Building standard to permit access by the Landlord's master key. If additional keys are required, they must be obtained from the Landlord at the cost of the Tenant. Keys or other means of access for entrance doors to the Building will not be issued without the written authority of the Landlord.

3. Housekeeping.

(a) The Tenant shall permit window cleaners to clean the windows of the Premises during Normal Business Hours.

(b) The Tenant shall not place any debris, garbage, trash or refuse or permit same to be placed or left in or upon any part of the Lands or Building outside of the Premises, other than in a location provided by the Landlord specifically for such purposes, and the Tenant shall not allow any undue accumulation of any debris, garbage, trash or refuse in or outside of the Premises. If the Tenant uses perishable articles or generates wet garbage, the Tenant shall provide refrigerated storage facilities suitable to the Landlord.

(c) The Tenant shall not place or maintain any supplies, or other articles in any vestibule or entry to the Premises, on the adjacent footwalks or elsewhere on the exterior of the Premises or elsewhere on the Lands or Building.

(d) The sidewalks, entrances, passages, escalators, elevators and staircases shall not be obstructed or used by the Tenant, its agents, servants, contractors, invitees or employees for any purpose other than ingress to and egress from the Premises and the Building. The Landlord reserves entire control of all parts of the Lands and Building employed for the common benefit of the tenants and without restricting the generality of the foregoing, the sidewalks, entrances, corridors and passages not within the Premises, washrooms, lavatories, air conditioning closets, fan rooms, janitor's closets, electrical closets and other closets, stairs, escalators, elevator shafts, flues, stacks, pipe shafts and ducts and shall have the right to place such signs and appliances therein, as it deems advisable, provided that ingress to and egress from the Premises is not unduly impaired thereby.

(e) The Tenant shall not cause or permit: any waste or damage to the Premises; any overloading of the floors or the utility, electrical or mechanical facilities of the Premises; any nuisance in the Premises; or any use or manner of use causing a hazard or annoyance to other occupants of the Building or to the Landlord.

4. Receiving, Shipping, Movement of Articles.

(a) The Tenant shall not receive or ship articles of any kind except through designated facilities and doors and at hours designated by the Landlord and under the supervision of the Landlord.

(b) Hand trucks, carryalls or similar appliances shall only be used in the Building with the consent of the Landlord and shall be equipped with rubber tires, slide guards and such other safeguards as the Landlord requires.

(c) The Tenant, its agents, servants, contractors, invitees or employees, shall not bring in or take out, position, construct, install or move any safe, business machinery or other heavy machinery or equipment or anything liable to injure or destroy any part of the Building, including the Premises, without first obtaining the consent in writing of the Landlord. In giving such consent, the Landlord shall have the right in its sole discretion, to prescribe the weight permitted and the position thereof, the use and design of planks, skids or platforms, and to distribute the weight thereof. All damage done to the Building, including the Premises, by moving or using any such heavy equipment or other office equipment or furniture shall be repaired at the expense of the Tenant.

The moving of all heavy equipment or other office furniture shall occur only by prior arrangement with the Landlord. The cost of such moving shall be paid by the Tenant. Safes and other heavy office equipment and machinery shall be moved through the halls and corridors only in a manner expressly approved by the Landlord. No freight or bulky matter of any description will be received into any part of the Building, including the Premises, or carried in the elevators except during hours approved by the Landlord.

5. Prevention of Injury to Premises.

(a) It shall be the duty of the Tenant to assist and co-operate with the Landlord in preventing injury to the Premises.

(b) The Tenant shall not deface or mark any part of the Building, including the Premises, and shall not drive nails, spikes, hooks or screws into the walls, floors, ceilings or woodwork of any part of the Building, including the Premises, or bore, drill or cut into the walls, floors, ceilings or woodwork of any part of the Building including the Premises, in any manner or for any reason. (c) If the Tenant desires

telecommunications connections, the Landlord, in its sole discretion, may direct the electricians as to where and how the wires are to be introduced. No gas pipe or electric wire will be permitted which has not been ordered or authorized by the Landlord. No outside antenna shall be allowed on any part of the Premises or Building without authorization in writing by the Landlord.

6. Windows.
Except for the proper use of approved blinds and drapes, the Tenant shall not cover, obstruct or affix any object or material to any of the skylights and windows that reflect or admit light into any part of the Building, including, without limiting the generality of the foregoing, the application of solar films.

7. Washrooms.
(a) The Landlord shall permit the Tenant and the employees of the Tenant in common with others entitled thereto, to use the washrooms on the floor of the Building on which the Premises are situated or, in lieu thereof, those washrooms designated by the Landlord, save and except when the general water supply may be turned off from the public main or at such other times when repair and maintenance undertaken by the Landlord shall necessitate the non-use of the facilities.
(b) The water closets and other apparatus shall not be used for any purposes other than those for which they were intended, and no sweepings, rubbish, rags, ashes or other substances shall be thrown into them. Any damage resulting from misuse by the Tenant or its agents, servants, invitees, or employees shall be repaired at the expense of the Tenant.

8. Use of Premises.
(a) The Premises shall not be used for sleeping apartments or residential purposes, or for the storage of personal effects or articles other than those required for business purposes.
(b) No cooking or heating of any foods or liquids (other than the use of microwave ovens or coffee makers or kettles) shall be permitted in the Premises without the written consent of the Landlord.
(c) The Tenant shall not install or permit the installation or use of any machine dispensing goods for sale in the Premises or the Building or permit the delivery of any food or beverage to the Premises without the written approval of the Landlord, **which consent shall not be unreasonably withheld,** or in contravention of the Rules and Regulations. **The Tenant shall not** permit the delivery of any food or beverage to the Premises, **save and except in accordance with the Landlord's reasonable requirements, including but not limited to sub clause (d) below with respect to any odours created by such catering.**
(d) The Tenant shall not permit any odours, vapours, steam, water, vibrations, noises or other undesirable effects to emanate from the Premises or any equipment or installation therein which, in the Landlord's opinion, are objectionable or cause any interference with the safety, comfort or convenience of the Building to the Landlord or the occupants and tenants thereof or their agents, servants, invitees or employees.

9. Canvassing, Soliciting, Peddling.
Canvassing, soliciting and peddling in or about the Lands and Building are prohibited.

10. Bicycles.
No bicycles or other vehicles shall be brought within any part of the Lands or Building without the consent of the Landlord.

11 . Animals and Birds.
No animals or birds shall be brought into any part of the Lands or Building without the consent of the Landlord.

12. Signs and Advertising.
The Tenant shall not paint, affix, display or cause to be painted, affixed or displayed, any sign, picture, advertisement, notice, lettering or decoration on any part of the outside of the Building or in the interior of the Premises which is visible from the outside of the Building. The Tenant will not paint, affix, display or cause to be painted, affixed or displayed any sign, picture, advertisement, notice, lettering or decoration on the outside or inside of the Premises for exterior view without the written consent of the Landlord. Any approved signs shall remain the property of the Tenant and shall be maintained at the Tenant's sole cost and expense. At the expiry of the Term, or earlier termination of this Lease, the Tenant shall remove any such sign, picture, advertisement, notice, lettering or decoration from the Premises at the Tenant's expense and shall promptly repair all damage caused by such removal. The sign to be placed on the outside of (or beside, as the case may be) the interior door leading to the Premises shall be: (i) installed by the Landlord at the Tenant's sole cost and expense; (ii) consistent with the uniform pattern, size and design prescribed by the Landlord; (iii) the property of the Landlord and shall be maintained by the Landlord throughout the Term at the Tenant's sole cost and expense; and (iv) removed by the Landlord (or, at the Landlord's option, by the Tenant) at the sole cost and expense of the Tenant. All damage caused by the removal of such sign shall be promptly repaired by the party that removed the sign, at the Tenant's sole cost and expense. The Tenant's obligation to observe and perform this covenant shall survive the expiration of the Term or earlier termination of the Lease.

13. Directory Board.
The Tenant shall be entitled at its expense to have its name shown upon the directory board of the Building and the Landlord shall design the style of such identification and shall determine the number of spaces available on the directory board for each tenant. The directory board shall be located in an area designated by the Landlord in the main lobby of the Building.

SCHEDULE "E" - ENVIRONMENTAL MANAGEMENT PLAN

SECTION 1 - ENVIRONMENTAL OBJECTIVES

1.1 Context

The provisions of this Environmental Management Plan have been designed to encourage and promote the implementation of certain environmental objectives on the part of each of the Landlord and the Tenant. Subject to Section 4.1 of the Schedule "E", a breach by either the Landlord or the Tenant of any of the provisions of this Environmental Management Plan on the part of either the Landlord or the Tenant to be observed or performed, as the case may be, shall not constitute a default under this Lease, but the party committing such breach agrees, to the extent possible under the circumstances, to use commercially reasonable efforts to co-operate with the other party to remedy such breach.

1.2 General Objectives

The Tenant acknowledges the Landlord's intention to operate the Building so as to provide for:

(a) a comfortable, productive and healthy indoor environment;

(b) reduced energy use and reduced production, both direct and indirect, of greenhouse gases;

(c) reduced use of potable water and the use of recycled water where appropriate;

(d) the effective diversion of construction, demolition, and land-clearing waste from landfill and incineration disposal, and the recycling of tenant waste streams;

(e) the use of cleaning products certified in accordance with EcoLogoM (Canada), Green Seal™ (United States) or equivalent standards;

(f) the facilitation of alternate transportation options for individuals attending at the Building;

(g) the avoidance of high volatile organic compound ("VOC") materials, furniture and improvements within the Building and individual tenant premises; and

(h) the achievement of such other more specific targets as may be determined by the Landlord from time to time.

1.3 Specific Objectives

Notwithstanding the provisions of Section 1.2 in this Schedule "E" above, the Tenant acknowledges that it is the Landlord's intention to meet or exceed the specific targets published from time to time by the Canada Green Building Council or its successor in order to achieve and maintain the applicable accreditation pursuant to the various LEED or other similar accreditation programs, in connection with:

(a) overall reduction of utilities (such as electricity, natural gas, water and/or steam) consumed in/by the Building ;

(b) increasing waste diversion rates in the Building; and

(c) reduction of waste generated in the Building.

In addition, the Tenant acknowledges that it is the Landlord's intention to reduce carbon dioxide levels, through introduction of outside fresh air and required number of air changes in the Building to equal or better than the American Society of Heating, Refrigerating and Air-Conditioning Engineers ("ASHRAE") standard 62.1-2007 or equivalent standard as it may be amended or replaced from time to time.

1.4 Regulatory Standards

Notwithstanding the provisions of Section 1.2 herein, in the event that any governmental authority imposes a resource reduction target on the Building for any utility or resource otherwise than as set out in Section 1.2 above, then the Environmental Objectives shall be deemed to have been amended so as to stipulate such resource reduction target and all changes required to be made by the Landlord to the Environmental Management Plan, or which are necessitated as a result of such mandatory resource reduction target, shall be deemed to be included and permitted, as the case may be, pursuant to the provisions of this Section and this Lease.

1.5 Carbon Offsets

The Landlord shall be entitled to all Carbon Offset Credits that may be created, credited or recoverable as a result of activities conducted within the Premises or the Building, excluding Carbon Offset Credits to which the Tenant is entitled in accordance with Applicable Law. The Landlord shall be entitled to allocate, acting reasonably, Carbon Offset Credits created with the participation of the Tenant and/or other tenants in the Building.

SECTION 2- ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION

2.1 The Tenant agrees to conduct its operations in the Building and within the Premises in accordance with the following provisions:

(a) Comfortable. Healthy and Productive Indoor Environment

(i) The Landlord shall be entitled at any time and from time to time to undertake greenhouse gas production monitoring and testing, including testing within the Premises, on reasonable notice to the Tenant and accompanied by a representative of the Tenant if required, which representative Tenant agrees to make available.

(ii) The Tenant shall ensure that all work done within the Premises by the Tenant or its representatives shall be undertaken in accordance herewith and with the Tenant Construction Manual. Notwithstanding the foregoing, the Tenant shall specify that all paints, sealants and adhesives used or to be used within the Premises meet EcoLogoM (Canada), Green Seal™ (United States) or equivalent standards so as to ensure no or low emissions of VOC's within the Building. Landlord may from time to time conduct tests to measure VOC's within the Premises.

(iii) The Tenant shall have regard to the procurement guidelines set out in the Tenant Construction Manual in procuring furniture, fixtures, materials, supplies and equipment to be brought into the Premises.

(iv) To the extent the Tenant is expressly permitted in this Lease to undertake its own cleaning of, or within, the Premises, the Tenant shall require that in any cleaning contracts gran ted directly by it, the cleaning contractor shall use cleaning 1 products certified in accordance with EcoLogoM (Canada), Green Seal™ (United States) or equivalent standards. The Landlord shall reserve the right to approve, acting reasonably, any such Tenant cleaning contracts, but without liability. The Tenant shall ensure that any cleaning contracts entered into by it require the cleaning contractor to comply with elements of the Environmental Management Plan applicable to it. Particularly, any such cleaning contracts that extend to specialized green facilities shall ensure the cleaning contractor properly understands the maintenance of such specialized green facilities.

(v) At the Tenant's sole cost and expense **and if requested by the Tenant,** the Landlord agrees at its option, to either purge Building air during a Tenant move in to minimize offgassing of wallpaper, carpet and furniture glues and dyes or to test for VOC's, in both cases subject to the prior approval of the Landlord acting reasonably.

(b) Reduce Indirect and Direct Energy Consumption and Greenhouse Gas Emissions

(i) The Tenant agrees to the installation of electricity smart meters in respect of the Tenant's consumption of electricity within the Premises that will be connected to the Landlord's metering system for the Building (if one is in place), at the Tenant's sole cost and expense.

(ii) The Tenant shall take reasonable steps to minimize its electrical consumption within the Premises such as, by way of example only, adopting conservation practices (e.g. reducing its use of lighting where unnecessary); the use of Energy Star equipment; the types of lighting, lighting switches, sensors and zones as may be specified in the Tenant Construction Manual.

(iii) The Landlord shall be entitled at any time or from time to time to acquire all or part of the power for the common areas and facilities or shared electrical power from sources with low carbon output. In addition to the foregoing, where it is considered feasible to do so, the Landlord may install onsite generation capacity either to reduce peak load or to supplement base load requirements for the Building from time to time, and any incremental cost in so doing shall be included in Operating Costs.

(iv) The Landlord shall be entitled to benchmark itself against any building rating system for electrical, natural gas, water or other resource consumption.

(v) The Landlord shall operate Building common areas and facilities in accordance with, and shall encourage other tenants to operate in conformity with, the Environmental Objectives.

(c) Reduce Water Consumption

(i) The Tenant agrees to the installation of water meters or check meters that will be connected to the Landlord's metering system for the Building (if one is in place), in respect of the Tenant's consumption of water, at the Landlord's option and at the Tenant's sole cost and expense.

(ii) Where potable water usage is not a necessity, the Tenant acknowledges and consents to the use of treated recycled or treated natural water in washrooms and in other applications within and around the Building.

(iii) The Tenant consents to rainwater collection, treatment and reuse by the Landlord and wastewater collection, treatment and reuse by the Landlord from time to time. The Tenant consents to the use of water-saving appliances, such as waterless urinals, and other equipment as may be otherwise consistent with the Environmental Objectives.

(d) Recycled Materials Usage

(i) Tenant shall be entitled to use recycled materials in its Leasehold Improvements and Alterations if so permitted either pursuant to the Tenant Construction Manual, or as may be consented to by the Landlord, acting reasonably.

(ii) Tenant shall be entitled to use recycled furniture, fixtures and equipment in the Premises to the extent consistent with the Environmental Objectives and the Tenant Construction Manual.

(iii) The Tenant agrees to recycle or cause its contractor to recycle any waste created in the construction and/or demolition of Leasehold Improvements or Alterations within the Premises in accordance with the Tenant Construction Manual, so as to minimize the amount of waste ending in landfill. The Tenant shall provide satisfactory evidence to the Landlord of such recycling upon request by the Landlord, such as, by way of example, providing copies of waybills indicating the amount of waste recycled and the amount ending in landfill. The Landlord reserves the right to monitor and measure the amount of waste leaving the Building from the Premises and going to landfill from time to time. If available, the Landlord agrees to provide to the Tenant a staging area for the sorting and recycling of materials during construction.

(iv) If **requested by the Tenant,** the Landlord will use commercially reasonable efforts to co-operate with the Tenant, at the Tenant's sole cost, in the certification of the Premises pursuant to any rating scheme, such as ASHRAE standard 189.1, or equivalent standard as the Landlord may agree to, acting reasonably. The Tenant agrees to consider locally sourced materials where possible in the completion of Leasehold Improvements and any subsequent Alterations, consistent with the terms as set out in the Tenant Construction Manual.

SECTION 3- ENVIRONMENTAL ASSESSMENT AND REPORTING

3.1 The Landlord and Tenant, acting reasonably and in good faith, agree to cooperate from time to time in determining compliance with the Environmental Objectives as set out in Section 1 herein and in refining such Environmental Objectives from time to time. The Landlord and the Tenant agree to meet periodically in order to determine and discuss the achievement of the Environmental Objectives for the Building and the Premises and any further steps that could be taken to achieve the Environmental Objectives. The Tenant agrees to keep such records as are required by the Landlord to evidence compliance with the Environmental Management Plan.

SECTION 4 - COVENANTS

4.1 The Landlord and Tenant agree to:

(a) use their reasonable commercial efforts to achieve the Environmental Objectives;

(b) constructively consult with each other on enhancements that may achieve the Environmental Objectives and consider undertaking any such enhancements; and

(c) constructively consult with each other on issues, events and circumstances likely to detract from achieving the Environmental Objectives.

SCHEDULE "C"

FF&E LIST

Item	#	Notes
Electronics/Appliances		
Canon C5250 64 Printer/Copier/Scanner	1	
Wall mounted televisions	4	
Industrial dishwasher	2	
Standard dishwasher	1	
Fridge	2	
Microwave	2	
Chairs		
Swivel	54	
Guest	26	
Armchairs	2	
Dining	6	
Tables		
Confererence	1	eight person
	1	twelve to sixteen person
	2	four person (round)
Kitchen/Dining	1	six person
Side Table	1	round, glass
Desks		
Reception	1	
U-Shaped Executive Desk with 2 drawer legal filing cabinets and filing pedestal	9	3 with overhead hutch additions
Left hand bullet desks wih filing pedestal	3	
Right hand bullet desks wih filing pedestal	7	
L-shape desks with filing pedestal	9	
Computer desk with filing pedestal	1	
Hotelling Stations/Desks		
2 person hotelling station with filing pedestals	1	
4 person hotelling station with filing pedestals	1	
Credenzas		
Small with enclosed cupboards	1	
Large with enclosed cupboards	2	

Large with two 2-drawer lateral metal filing cabinets built in	1	
Tall credenza with enclosed cupboards	1	
Filing Cabinets/Storage Cabinets		
4-drawer filing cabinet	2	
2-drawer lateral filing cabinet	5	
3-drawer metal lateral filing cabint	3	
4-drawer metal lateral filing cabint	3	
Large 4-shelf metal storage cabinets	2	
Wall mounted overhead storage cupboards, enclosed	4	
Freestanding wood look storage locker/closet	1	
Bookcases		
2-shelf bookcase	1	
3-shelf bookcase	1	
4-shelf bookcase	1	
5-shelf bookcase	4	
Whiteboards		
Small/personal use	8	
Large/meeting room size	5	
Cork Bulletin Boards		
Large	2	
Small	9	
Miscellaneous		
4 four foot partition	1	

EXHIBIT 10.15

OFFICE LEASE

SAN MATEO GATEWAY
1820 GATEWAY DRIVE,
SAN MATEO, CA 94404

KW FUND VI-SAN MATEO, LLC,
a Delaware limited liability company,

as Landlord,

and

SIERRA ONCOLOGY, INC.,
a Delaware corporation,

as Tenant

SAN MATEO GATEWAY

SUMMARY OF BASIC LEASE INFORMATION

This Summary of Basic Lease Information (the "Summary") is hereby incorporated by reference into and made a part of the attached Office Lease. Each reference in the Office Lease to any term of this Summary shall have the meaning as set forth in this Summary for such term. In the event of a conflict between the terms of this Summary and the Office Lease, the terms of the Office Lease shall prevail. Any initially capitalized terms used herein and not otherwise defined herein shall have the meaning as set forth in the Office Lease.

	TERMS OF LEASE (References are to the Office Lease)	DESCRIPTION
1.	Dated as of:	December 10, 2020
2.	Landlord:	KW FUND VI-SAN MATEO, LLC, a Delaware limited liability company
3.	Address of Landlord (Section 24.14):	Address For Notices: c/o CBRE, Inc. 1820 Gateway Drive, Suite 110 San Mateo, CA 94404 Attn: Property Manager E-Mail: carey.liggett@cbre.com with a copy to: c/o Kennedy-Wilson Properties, Ltd. 151 S. El Camino Drive Beverly Hills, California 90212 Attn: Asset Manager E-Mail: djamal@kennedywilson.com and: c/o Kennedy-Wilson Properties, Ltd. 151 S. El Camino Drive Beverly Hills, California 90212 Attn: General Counsel E-Mail: kmouton@kennedywilson.com Address For Payment of Rent: KW Fund VI – San Mateo, LLC P.O. Box 301043 Los Angeles, CA 90030-1043
4.	Tenant:	SIERRA ONCOLOGY, INC., a Delaware corporation
5.	Address of Tenant (Section 24.14):	Sierra Oncology, Inc. 46701 Commerce Center Drive Plymouth MI 48170 Attn: Legal E-Mail: Legal@sierraoncology.com (Prior to Lease Commencement Date) and Sierra Oncology, Inc. 1820 Gateway Drive, Suite 110 San Mateo, California 94404 Attn: Legal

E-Mail: Legal@sierraoncology.com

With a copy via email to:

Gabe.chao@transwestern.com

(After Lease Commencement Date)

6. Premises (Article 1):

6.1	Premises:	Approximately 3,792 rentable square feet of space located on the first (1st) floor of the Building (as defined below), as depicted on Exhibit A attached hereto, known as Suite 110.
6.2	Building:	The Premises are located in the "Building" whose address is 1820 Gateway Drive, San Mateo, California 94404.

7. Term (Article 2):

7.1	Lease Term:	Forty-eight (48) months.
7.2	Lease Commencement Date:	The earlier of (i) the date Tenant commences business operations in the Premises, and (ii) the later of (A) the date that is three (3) business days after the Possession Date (as that term is defined in Section 1.2 of the Lease), and (B) January 1, 2021. The Lease Commencement Date is anticipated to be January 1, 2021 (the "Anticipated Lease Commencement Date").
7.3	Lease Expiration Date:	The date which is the last day of the month which is forty-eight (48) months after the Lease Commencement Date.

8. Base Rent (Article 3):

Months of Lease Term	Annual Base Rent	Monthly Installment of Base Rent
1-12*	$211,593.60	$17,632.80
13-24	$217,941.36	$18,161.78
25-36	$224,479.68	$18,706.64
37-48	$231,214.08	$19,267.84

*Subject to abatement during the first four (4) months of the Lease Term pursuant to Section 3.2 of the Office Lease.

9. Additional Rent (Article 4):

9.1	Base Year:	Calendar year 2021.
9.2	Tenant's Share of Operating Expenses and Tax Expenses:	5.11% (3,792 rentable square feet within the Premises/74,176 rentable square feet within the Building) (See Section 4.2.5 of the Office Lease).

10. Security Deposit (Article 20): $38,535.68.

11. Number of Parking Spaces (Article 23): Ten (10) unreserved parking spaces (i.e., 2.7 unreserved parking spaces for each 1,000 rentable square feet of the Premises).

12. Brokers (Section 24.19): Cushman & Wakefield, representing Landlord, and Transwestern Real Estate Services, representing Tenant.

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SAN MATEO GATEWAY

OFFICE LEASE

This Office Lease, which includes the preceding Summary attached hereto and incorporated herein by this reference (the Office Lease and Summary to be known sometimes collectively hereafter as the "Lease"), dated as of the date set forth in Section 1 of the Summary, is made by and between KW FUND VI-SAN MATEO, LLC, a Delaware limited liability company ("Landlord"), and SIERRA ONCOLOGY, INC., a Delaware corporation ("Tenant").

ARTICLE 1

PROJECT, BUILDING AND PREMISES

1.1 Project, Building and Premises. Upon and subject to the terms set forth in this Lease, Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises described in Section 6.1 of the Summary (the "Premises"), which Premises are located in the Building (as defined in Section 6.2 of the Summary). The Premises shall not include any storage area in the Building, which shall be leased, if at all, pursuant to a separate agreement. The floor plan of the Premises is attached hereto as Exhibit A. The Building is part of an office project currently known as "San Mateo Gateway" The term "Project," as used in this Lease, shall mean (i) the Building, (ii) the other buildings located at 1800 and 1810 Gateway Drive, San Mateo, California 94404 (collectively, the "Additional Buildings"), (iii) the surface parking areas serving the Building and the Additional Buildings (collectively, the "Parking Facilities"), (iv) any outside plaza areas, land and other improvements surrounding the Building and the Additional Buildings, and (v) the land upon which all of the foregoing are situated. Tenant acknowledges that Landlord has made no representation or warranty regarding the condition of the Project except as specifically set forth in this Lease. Tenant shall have the right to the nonexclusive use of the common corridors and hallways, stairwells, elevators, restrooms and other public or common areas located in the Building and/or on the Project; provided, however, that the use thereof shall be subject to the rules and regulations attached hereto as Exhibit B (the "Rules and Regulations"), as the same may be reasonably modified by Landlord from time to time. If there is any conflict between the Rules and Regulations and the other terms and provisions of this Lease, the terms and provisions of this Lease shall control. Landlord reserves the right to make alterations or additions to or to change the location of elements of the Project and the common areas thereof.

1.2 Condition of Premises; Delivery of Possession; Abatement Penalty.

1.2.1 Condition of Premises; Delivery of Possession. Except as expressly set forth in this Lease, Landlord shall not be obligated to provide or pay for any improvements, work or services related to the improvement, remodeling or refurbishment of the Premises, and Landlord shall tender possession of the Premises to Tenant in its "AS IS" condition . The date of Landlord's tendering of possession of the Premises to Tenant (as evidenced by notice from Landlord to Tenant) following the date that Landlord’s Work is Substantially Completed (as such terms are defined hereinbelow) is the "Possession Date". If for any reason, Landlord is delayed in tendering possession of the Premises to Tenant with Landlord’s Work Substantially Completed by any particular date, Landlord shall not be subject to any liability for such failure, and the validity of this Lease shall not be impaired, except as otherwise provided in Section 1.2.2 below. Tenant acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty regarding the condition of the Premises, the Building or the Project (except as specifically set forth in this Lease) or regarding the suitability of the Premises for the conduct of Tenant’s permitted use set forth in Section 5.1 below or for any other purpose. Landlord shall, at Landlord’s expense, in accordance with Building standards and using Building standard materials, perform the following work (collectively, “Landlord’s Work”): (i) repaint the interior painted walls of the Premises; (ii) install new carpet in the carpeted areas of the Premises; (iii) construct three (3) additional private offices within the Premises along the wall opposite of those certain existing offices currently located in the Premises, which additional offices shall contain similar lighting, electrical outlets, wiring and finishes as those existing in those certain existing offices located in the Premises; (iv) relocate that certain server room door to the corner nearest to the kitchen area located in the Premises; (v) install a new dishwasher in the kitchen area located in the Premises; and (vi) replace all damaged or missing ceiling tiles located in the Premises, as reasonably necessary, as reasonably determined by Landlord. For purposes of this Lease, Landlord's Work shall be deemed "Substantially Completed" upon the completion of performance of Landlord's Work, except for minor punch-list items. If Landlord shall encounter any delays in causing Landlord's Work to be Substantially Completed as a result of any acts or omissions (where there is a duty to act) of Tenant, or Tenant's agents or employees (collectively, "Tenant Delays"), then, notwithstanding anything to the contrary set forth in this Lease, Landlord's Work shall be deemed to be Substantially Completed as of the date that Landlord's Work would have been Substantially Completed were it not for such Tenant Delays.

1.2.2 Abatement Penalty. Notwithstanding Section 1.2.1 above to the contrary, if Landlord is unable to tender possession of the Premises to Tenant with Landlord's Work Substantially Completed on or before the date that is ninety (90) days after the Anticipated Lease Commencement Date (the "Outside Delivery Date"), as such date shall be extended day for day for each day Landlord is delayed in tendering possession of the Premises to Tenant with Landlord's Work Substantially Completed as a result of delays due to Force Majeure pursuant to Section 24.13 below and/or Tenant Delays, then Landlord shall abate one (1) day of Base Rent for every one (1) day of delay that Landlord fails to tender possession of the Premises to Tenant with Landlord's Work Substantially Completed beyond the Outside Delivery Date (as may be so extended), provided that the Lease Commencement Date has not occurred pursuant to Section 7.2(i) of the Summary. The abatement right afforded to Tenant under this Section 1.2.2 shall be Tenant's sole and exclusive remedy for Landlord's failure to tender possession of the Premises to Tenant with Landlord's Work Substantially Completed on or before the Outside Delivery Date, as it may be extended as provided hereinabove.

1.3 Rentable Square Feet. The rentable square feet of the Premises is approximately as set forth in Section 6.1 of the Summary. For purposes hereof, the rentable square feet of the Premises and the Building shall be calculated by Landlord pursuant to the Standard Method for Measuring Floor Area in Office Buildings, ANSI Z65.1-2017 ("BOMA"), as modified for the Building pursuant to Landlord's standard rentable area measurements for the Building. The rentable square feet of the Premises and the Building are subject to re-measurement from time to time by Landlord's planner/designer and such re- measurements shall be made in accordance with the provisions of this Section 1.3; provided, however, the rentable square feet of the Premises shall only be subject to re-measurement in the event of a physical increase or decrease in the size of the Premises. Tenant's architect may consult with Landlord's planner/designer regarding such re-measurements, except to the extent it relates to the rentable square feet of the Building; provided, however, the determination of Landlord's planner/designer shall be conclusive and binding upon the parties. If Landlord's planner/designer determines that the rentable square footage amounts shall be different from those set forth in this Lease, all amounts, percentages and figures appearing or referred to in this Lease based upon such different rentable square footage (including, without limitation, the amount of the Base Rent and Tenant's Share) shall be modified in accordance with such determination. If such determination is made, it will be confirmed in writing by Landlord to Tenant.

ARTICLE 2

LEASE TERM

The terms and provisions of this Lease shall be effective as of the date of execution of this Lease. The term of this Lease (the "Lease Term") shall be as set forth in Section 7.1 of the Summary and shall commence on the date (the "Lease Commencement Date") set forth in Section 7.2 of the Summary, and shall terminate on the date (the "Lease Expiration Date") set forth in Section 7.3 of the Summary, unless this Lease is sooner terminated as hereinafter provided. For purposes of this Lease, the term "Lease Year" shall mean each consecutive twelve (12) month period during the Lease Term; provided, however, that the first (1st) Lease Year shall commence on the Lease Commencement Date and the last Lease Year shall end on the Lease Expiration Date. Following the Lease Commencement Date, Landlord shall deliver to Tenant an amendment to lease in the form attached hereto as Exhibit C, setting forth the Lease Commencement Date and the Lease Expiration Date, and Tenant shall execute and return such amendment to Landlord within five (5) business days after Tenant's receipt thereof.

ARTICLE 3

BASE RENT

3.1 Base Rent. Tenant shall pay, without notice or demand, to Landlord at such place as Landlord may from time to time designate in writing, in currency or a check for currency which, at the time of payment, is legal tender for private or public debts in the United States of America, base rent ("Base Rent") as set forth in Section 8 of the Summary, payable in equal monthly installments as set forth in Section 8 of the Summary in advance on or before the first (1st) day of each and every calendar month during the Lease Term, without any setoff or deduction whatsoever. At Landlord's option, upon prior written notice to Tenant, all Rent shall be paid to Landlord electronically via wire transfer or other direct deposit method and copies of all such electronic payments shall be provided to the Landlord on a monthly basis. The Base Rent for the fifth (5th) full calendar month of the Lease Term shall be paid at the time of Tenant's execution of this Lease. If any rental payment date (including the Lease Commencement Date) falls on a day of a calendar month other than the first (1st) day of such calendar month or if any Rent payment is for a period which is shorter than one calendar month (such as during the last month of the Lease Term), the Rent for any fractional calendar month shall be the proportionate amount of a full calendar month's rental based on the proportion that the number of days in such fractional month bears to the number of days in the calendar month during which such fractional month occurs. All other payments or adjustments required to be made under the terms of this Lease that require proration on a time basis shall be prorated on the same basis.

3.2 Abatement of Base Rent. Notwithstanding anything to the contrary contained herein and provided that Tenant is not in default under this Lease, Landlord hereby agrees to abate Tenant's obligation to pay the monthly installments of Base Rent otherwise payable by Tenant for the Premises (collectively, the "Abated Rent") during the first four (4) full calendar months of the Lease Term (collectively, the "Abatement Period") (for a total abatement of Base Rent equal to $70,531.20). During the Abatement Period, Tenant shall remain responsible for the payment of all of its other monetary obligations under this Lease. In the event of a default by Tenant under the terms of this Lease that results in the early termination of this Lease pursuant to the provisions of Article 19 below, then as a part of the recovery set forth in Article 19 below, Landlord shall be entitled to recover the unamortized portion of the Abated Rent. For purposes of this Section 3.2, the Abated Rent shall be amortized on a straight-line basis over the scheduled forty-eight (48)-month Lease Term, and the unamortized balance thereof shall be determined based upon the unexpired portion of such Lease Term.

ARTICLE 4

ADDITIONAL RENT

4.1 Additional Rent. In addition to paying the Base Rent specified in Article 3 above, Tenant shall pay as additional rent the sum of the following: (i) Tenant's Share of the annual Operating Expenses allocated to the Building (pursuant to Section 4.3.4 below) for each Expense Year which are in excess of the amount of Operating Expenses allocated to the Building during the Base Year (as such terms are defined below); plus (ii) Tenant's Share of the annual Tax Expenses (as defined below) allocated to the Building (pursuant to Section 4.3.4 below) for each Expense Year which are in excess of the Tax Expenses allocated to the Building during the Base Year. Such additional rent, together with any and all other amounts payable by Tenant to Landlord hereunder pursuant to the terms of this Lease (other than the Base Rent), shall be deemed additional rent, and hereinafter collectively referred to as the "Additional Rent." The Base Rent and Additional Rent are herein collectively referred to as the "Rent." All amounts due under this Article 4 as Additional Rent shall be payable in the same manner, time and place as the Base Rent, except as otherwise expressly set forth in this Article 4. Without limitation on other obligations of Tenant which shall survive the expiration of the Lease Term, the obligations of Tenant to pay the Additional Rent provided for in this Article 4 shall survive the expiration of the Lease Term.

4.2 Definitions. As used in this Article 4, the following terms shall have the meanings hereinafter set forth:

4.2.1 "Base Year" shall mean the year set forth in Section 9.1 of the Summary.

4.2.2 "Expense Year" shall mean each calendar year, including the Base Year, in which any portion of the Lease Term falls, through and including the calendar year in which the Lease Term expires.

4.2.3 "Operating Expenses" shall mean all expenses, costs and amounts of every kind and nature which Landlord shall pay or incur during any Expense Year because of or in connection with the ownership, management, maintenance, repair, restoration or operation of the Project, including, without limitation, any amounts paid or incurred for: (i) the cost of supplying all utilities (including, without limitation, any telephone risers or intra building network cabling), the cost of janitorial service, alarm and security service, window cleaning, and trash removal, the cost of operating, maintaining, repairing, replacing, renovating and managing the utility systems, mechanical systems, sanitary and storm drainage systems, and escalator and elevator systems, and the cost of supplies, tools, and equipment and maintenance and service contracts in connection therewith; (ii) the cost of licenses, certificates, permits and inspections and the cost of contesting the validity or applicability of any governmental enactments which may affect Operating Expenses, and the costs incurred in connection with the implementation and operation of a transportation system management program or similar program; (iii) the cost of insurance carried by Landlord in connection with the Project (including, without limitation, general or other liability insurance), in such amounts as Landlord may reasonably determine, or as may be required by any mortgagees of any mortgage, or the lessor of any ground lease affecting the Project; (iv) the cost of landscaping, relamping, supplies, tools, equipment (including equipment rental agreements) and materials, and all fees, charges and other costs, including management fees (or amounts in lieu thereof), consulting fees, legal fees and accounting fees, incurred in connection with the management, operation, administration, maintenance and repair of the Project; (v) the cost of parking area repair, restoration and maintenance, including, but not limited to, resurfacing, repainting, restriping, and cleaning; (vi) wages, salaries and other compensation and benefits of all persons engaged in the operation, management, maintenance or security of the Project (excluding compensation (including benefits) of any employee of Landlord above the grade of Project manager or Project engineer), and employer's Social Security taxes, unemployment taxes or insurance, and any other taxes which may be levied on such wages, salaries, compensation and benefits; (vii) payments under any easement, license, operating agreement, declaration, restrictive covenant, or instrument pertaining to the sharing of costs by the Project; (viii) amortization (including interest on the unamortized cost at a rate equal to ten percent (10%) per annum (the

"Amortization Interest Rate")) of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and repair of the Project; (ix) the cost (including fair market rent) of Landlord's property management office for the Project and all utilities, supplies and materials used in connection therewith; and (x) the cost of any capital alterations, capital additions, or capital improvements made to the Project or any portion thereof (A) which are deemed reasonably necessary by Landlord to maintain the quality, integrity and/or character of the Project and all systems, equipment and/or facilities which serve the Project (including replacement of wall and floor coverings, ceiling tiles and fixtures in lobbies, corridors, restrooms and other common or public areas or facilities, maintenance and replacement of curbs, walkways and parking areas), (B) which are intended as a labor-saving device or to effect other economies in the operation or maintenance of the Project, or any portion thereof, or (C) that are required under any governmental law or regulation that is then being enforced by a federal, state or local governmental agency from and after the Possession Date; provided, however, that each such permitted capital expenditure shall be amortized (including interest on the unamortized cost at the Amortization Interest Rate in effect at the time such expenditure is placed in service) over the shorter of (I) its useful life as Landlord shall reasonably determine, in accordance with standard real estate accounting principles consistently applied, (II) the period during which the reasonably estimated savings in Operating Expenses equals the expenditures, or (III) three (3) years.

If during any Expense Year (including the Base Year) Landlord is not furnishing any particular work or service (the cost of which, if performed or provided by Landlord, would be included in Operating Expenses) to a tenant who has undertaken to perform such work or service in lieu of the performance thereof by Landlord, Operating Expenses shall be deemed to be increased by an amount equal to the additional Operating Expenses which would reasonably have been incurred during such period by Landlord if it had at its own expense furnished such work or service to such tenant. If the Building, Additional Buildings and/or any other office buildings located in the Project are less than 95% occupied during all or a portion of any Expense Year, including the Base Year (including, without limitation, if any portion of the Building is unleased or is leased, but is not then being used by a tenant in the ordinary course of its business), Landlord shall make an appropriate adjustment to the variable components of Operating Expenses that vary based on occupancy for such Expense Year (including the Base Year) as reasonably determined by Landlord employing sound accounting and management principles, to determine the amount of Operating Expenses that would have been paid had the Building, the Additional Buildings and/or any other office buildings located in the Project been 95% occupied, and the amount so determined shall be deemed to have been the amount of Operating Expenses for such Expense Year. For purposes hereof, cost savings in components of Operating Expenses arising by reason of the cessation of use by tenants at the Building due to Casualty (as that term is defined in Section 11.1 below), Force Majeure (as that term is defined in Section 24.13 below), or other extraordinary circumstances are considered variable Operating Expenses that may be grossed up in Operating Expenses during any Expense Year. Landlord shall not (x) make a profit by charging items to Operating Expenses that are otherwise also charged separately to others, or (y) collect Operating Expenses from Tenant and all other tenants/occupants in the Building in an amount in excess of what Landlord incurred for the items included in Operating Expenses.

Landlord shall have the right, from time to time, to equitably allocate and prorate some or all of the Operating Expenses among different tenants and/or buildings of the Project (the "Cost Pools"). Such Cost Pools may include, without limitation, the office space tenants and retail space tenants, if any, of the Project, and allocation of those Operating Expenses attributable solely to a specific building in the Project to that building.

If Operating Expenses for the Base Year, include amortized costs, or costs (including, but not limited to, costs of insurance, personnel, and increased or new services) relating to extraordinary circumstances, including, but not limited to, Casualty, Force Majeure, conservation surcharges, boycotts, embargoes or other shortages, then at such time as such costs are no longer applicable, the increased Operating Expenses attributable thereto shall be excluded from the Operating Expenses for the Base Year.

Notwithstanding the foregoing, for purposes of this Lease, Operating Expenses shall not, however, include: (1) except as otherwise set forth above in this Section 4.2.3, interest on debt and amortization on mortgages; (2) ground lease payments; (3) costs of leasing commissions, attorneys' fees and other costs and expenses incurred in connection with negotiations or disputes with present or prospective tenants or other occupants of the Project; (4) the cost of providing any service directly to and paid directly by any tenant; (5) any costs expressly excluded from Operating Expenses elsewhere in this Lease; (6) costs of any items to the extent Landlord receives reimbursement from insurance proceeds (such proceeds to be excluded from Operating Expenses in the year in which received, except that any deductible amount under any insurance policy shall be included within Operating Expenses) or from a third party; (7) costs, including permit, license and inspection costs, incurred in renovating or otherwise improving, decorating, or redecorating rentable space (including vacant rentable space) for tenants or other occupants in the Project; (8) tax penalties incurred as a result of Landlord's negligence, inability or unwillingness to make payments or file returns when due; (9) costs arising from Landlord's charitable or political contributions; (10) costs incurred due to the violation by Landlord of the terms and conditions of

any lease of space in the Project; (11) expenses which relate to the preparation of rental space for a tenant; (12) reserves for bad debts or for future improvements, repairs, additions, etc.; (13) costs (including, without limitation, fines, penalties, interest, and costs of repairs, replacements, alterations and/or improvements) incurred in bringing the Project into compliance with laws in effect as of the Possession Date and as interpreted by applicable governmental authorities as of such date, including, without limitation, any costs to correct building code violations pertaining to the initial design or construction of the Building, the Parking Facilities or any other improvements to the Project, to the extent such violations exist as of the Possession Date under any applicable laws in effect and as interpreted by applicable governmental authorities as of such date; (14) tax penalties incurred as a result of Landlord's negligence, inability or unwillingness to make payments when due or to file any income tax or informational returns when due; (15) costs and overhead and profit increment paid to Landlord or to subsidiaries or affiliates of Landlord for goods and/or services in or to the Project to the extent the same exceeds typical costs and overhead and profit increment of such goods and/or services rendered by qualified unaffiliated third parties on a competitive basis; (16) costs of acquisition of sculptures, painting and other objects of art; (17) advertising and promotional expenditures; (18) costs incurred to comply with applicable laws with respect to the cleanup, removal, investigation and/or remediation of any Hazardous Materials (as defined below) in, on or under the Project and/or the Building to the extent such Hazardous Materials are: (a) in existence as of the Possession Date and in violation of applicable laws in effect as of the Possession Date; or (b) introduced onto the Project and/or the Building after the Possession Date by Landlord or any of Landlord's agents, employees, contractors or other tenants in violation of applicable laws in effect at the date of introduction; (19) costs of items considered capital improvements, capital repairs, capital replacements, and/or capital equipment, all as determined in accordance with standard real estate accounting practices, except as specifically permitted in Sections 4.2.3(viii) and (x) above; (20) costs, including penalties, fines and associated legal expenses, incurred due to the violation by Landlord or any other tenant in the Project of applicable laws, that would not have been incurred but for any such violations by Landlord or any tenant in the Project; or (21) attorneys' fees incurred in connection with the Project (including, without limitation, any financing, sale or syndication of the Project), except (A) as specifically enumerated as an Operating Expense in this Lease or (B) to the extent the expenditure of such attorneys' fees generally benefits the tenants of the Project.

4.2.4 "Tax Expenses" shall mean all federal, state, county, or local governmental or municipal taxes, fees, assessments, charges or other impositions of every kind and nature, whether general, special, ordinary or extraordinary (including, without limitation, real estate taxes, general and special assessments, transit assessment fees and taxes, business or license taxes or fees, annual or periodic license or use fees, open space charges, housing fund assessments, leasehold taxes or taxes based upon the receipt of rent, including gross receipts or sales taxes applicable to the receipt of rent, personal property taxes imposed upon the fixtures, machinery, equipment, apparatus, systems and equipment, appurtenances, furniture and other personal property used in connection with the Project), which Landlord shall pay or incur during any Expense Year because of or in connection with the ownership, leasing and operation of the Project or Landlord's interest therein. For purposes of this Lease, Tax Expenses shall be calculated as if the tenant improvements in the Building and the Additional Buildings were fully constructed and the Building and the Additional Buildings and all tenant improvements in the Building and the Additional Buildings were fully assessed for real estate tax purposes. When calculating Tax Expenses for the Base Year, Tax Expenses shall exclude any category of real property taxes imposed during the Base Year that is not imposed in a subsequent Expense Year.

4.2.4.1 Tax Expenses shall include, without limitation:

(i) any assessment, tax, fee, levy or charge in addition to, or in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax, it being acknowledged by Tenant and Landlord that Proposition 13 was adopted by the voters of the State of California in the June 1978 election ("Proposition 13") and that assessments, taxes, fees, levies and charges may be imposed by governmental agencies for such services as fire protection, street, sidewalk and road maintenance, conservation, refuse removal and for other governmental services formerly provided without charge to property owners or occupants, and, in further recognition of the decrease in the level and quality of governmental services and amenities as a result of Proposition 13, Tax Expenses shall also include any governmental or private assessments or the Project's contribution towards a governmental or private cost-sharing agreement for the purpose of augmenting or improving the quality of services and amenities normally provided by governmental agencies. It is the intention of Tenant and Landlord that all such new and increased assessments, taxes, fees, levies, and charges and all similar assessments, taxes, fees, levies and charges be included within the definition of Tax Expenses for purposes of this Lease;

(ii) any assessment, tax, fee, levy, or charge allocable to or measured by the area of the Premises or the Rent payable hereunder, including, without limitation, any gross receipts with respect to the receipt of such Rent, and/or any tax upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof;

(iii) any assessment, tax, fee, levy or charge, upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises; and

(iv) any expenses incurred by Landlord in attempting to protest, reduce or minimize Tax Expenses.

4.2.4.2 Notwithstanding anything to the contrary contained in this Section 4.2.4, there shall be excluded from Tax Expenses (i) all excess profits taxes, franchise taxes, gift taxes, capital stock taxes, inheritance and succession taxes, estate taxes, federal and state income taxes, and other taxes to the extent applicable to Landlord's general or net income (as opposed to rents, receipts or income attributable to operations at the Project), (ii) any items paid by Tenant under Section 4.4 below, and (iii) tax penalties incurred as a result of Landlord's negligence, inability or unwillingness to make payments when due or to file any income tax or informational returns when due.

4.2.4.3 Notwithstanding anything to the contrary set forth in this Lease, the amount of Tax Expenses for the Base Year and any Expense Year shall be calculated without taking into account any decreases in real estate taxes obtained in connection with Proposition 8, and, therefore, the Tax Expenses in the Base Year and/or an Expense Year may be greater than those actually incurred by Landlord, but shall, nonetheless, be the Tax Expenses due under this Lease; provided that (i) any costs and expenses incurred by Landlord in securing any Proposition 8 reduction shall not be included in Operating Expenses for purposes of this Lease, and (ii) tax refunds under Proposition 8 shall not be deducted from Tax Expenses, but rather shall be the sole property of Landlord. Landlord and Tenant acknowledge that this Section 4.2.4.3 is not intended to in any way affect (A) the inclusion in Tax Expenses of any annual increases in Tax Expenses pursuant to applicable laws, or (B) the inclusion or exclusion of Tax Expenses pursuant to the terms of Proposition 13.

4.2.5 "Tenant's Share" shall mean the percentage set forth in Section 9.2 of the Summary. Tenant's Share was calculated by dividing the number of rentable square feet of the Premises by the total rentable square feet in the Building. Landlord shall have the right from time to time to redetermine the rentable square feet of the Premises and/or the Building, and Tenant's Share shall be appropriately adjusted to reflect any such determination; provided, however, the rentable square feet of the Premises shall only be subject to re-measurement in the event of a physical increase or decrease in the size of the Premises. If Tenant's Share is adjusted pursuant to the foregoing, then, as to the Expense Year in which such adjustment occurs, Tenant's Share for such year shall be determined on the basis of the number of days during such Expense Year that each such Tenant's Share was in effect.

4.3 Calculation and Payment of Additional Rent.

4.3.1 Calculation of Excess. If for any Expense Year ending or commencing within the Lease Term, (i) Tenant's Share of Operating Expenses allocated to the Building (pursuant to Section 4.3.4 below) for such Expense Year exceeds Tenant's Share of the Operating Expenses allocated to the Building for the Base Year, and/or (ii) Tenant's Share of Tax Expenses allocated to the Building (pursuant to Section 4.3.4 below) for such Expense Year exceeds Tenant's Share of the Tax Expenses allocated to the Building for the Base Year then Tenant shall pay to Landlord, in the manner set forth in Section 4.3.2, below, and as Additional Rent, an amount equal to such excess (the "Excess").

4.3.2 Statement of Actual Expenses and Payment by Tenant. Within one hundred twenty (120) days after the end of each Expense Year, Landlord shall use commercially reasonable efforts to give Tenant a statement (the "Statement"), which shall state the Operating Expenses and Tax Expenses that were incurred or accrued for such preceding Expense Year and allocated to the Building (pursuant to Section 4.3.4 below), and which shall indicate the amount, if any, of any Excess. Within thirty (30) days after Tenant's receipt of the Statement for each Expense Year ending during the Lease Term, Tenant shall pay to Landlord the full amount of the Excess for such Expense Year, less the amounts, if any, paid during such Expense Year as Estimated Excess (as defined in and pursuant to Section 4.3.3, below). If any Statement reflects that the amount of Estimated Excess paid by Tenant to Landlord for such Expense Year is greater than the actual amount of the Excess for such Expense Year, then Landlord shall, at Landlord's option, either (i) remit such overpayment to Tenant within thirty (30) days after such applicable Statements is delivered to Tenant, or (ii) credit such overpayment toward the Additional Rent next due and payable to Tenant under this Lease. The failure of Landlord to timely furnish the Statement for any Expense Year shall not prejudice Landlord from enforcing its rights under this Article 4; provided, however, Landlord's failure to provide Tenant with a Statement for a particular Expense Year within eighteen (18) months after the end of the Expense Year in question shall constitute a waiver of Landlord's right to collect any additional Operating Expenses and Tax Expenses payable for such Expense Year that would be disclosed by such Statement. Notwithstanding the foregoing, such limitation on Landlord's ability to collect any Operating Expenses and Tax Expenses as a result of any late delivery of such Statement shall not preclude Landlord from modifying any Statement once such Statement is timely delivered, as provided hereinabove, to reflect any additional expenses levied by any governmental

authority or by any public utility companies (including, without limitation, as a result of any new or supplemental tax bills issued by the applicable taxing authority). Even though the Lease Term has expired and Tenant has vacated the Premises, if the Statement for the Expense Year in which this Lease terminates reflects that Tenant's payment to Landlord of Estimated Excess for such Expense Year was greater than or less than the actual amount of Excess for such last Expense Year, then within thirty (30) days after Landlord's delivery of such Statement to Tenant, Landlord shall refund to Tenant any such overpayment, or Tenant shall pay to Landlord any such underpayment, as the case may be. The provisions of this Section 4.3.2 shall survive the expiration or earlier termination of the Lease Term.

4.3.3 Statement of Estimated Expenses. Prior to each Expense Year, Landlord shall give Tenant a yearly expense estimate statement (the "Estimate Statement") which shall set forth Landlord's reasonable estimate (the "Estimate") of what the total amount of Operating Expenses and Tax Expenses allocated to the Building (pursuant to Section 4.3.4 below) for the then-current Expense Year shall be and the estimated Excess (the "Estimated Excess") as calculated by comparing (i) Tenant's Share of Operating Expenses allocated to the Building (pursuant to Section 4.3.4 below) for such then-current Expense Year, which shall be based upon the Estimate, to Tenant's Share of Operating Expenses allocated to the Building for the Base Year, and (ii) Tenant's Share of Tax Expenses allocated to the Building (pursuant to Section 4.3.4 below) for such then-current Expense Year, which shall be based upon the Estimate, to Tenant's Share of Tax Expenses allocated to the Building for the Base Year, which Estimate Statement may be revised and reissued by Landlord from time to time; provided, however, to the extent Landlord fails to deliver an Estimate Statement for such then-current Expense Year, Tenant shall pay the Estimated Excess for such then-current Expense Year in accordance with the previous Estimate Statement (if any) given by Landlord for the previous Expense Year. The failure of Landlord to timely furnish the Estimate Statement for any Expense Year shall not preclude Landlord from enforcing its rights to collect any Estimated Excess under this Article 4. If pursuant to the Estimate Statement (or a revision thereof) an Estimated Excess is calculated for the then-current Expense Year, Tenant shall pay, with its next installment of Base Rent due, but in no event later than thirty (30) days after receipt of such Estimate Statement, a fraction of the Estimated Excess (or the increase in the Estimated Excess if pursuant to a revised Estimate Statement) for the then-current Expense Year (reduced by any amounts paid pursuant to the last sentence of this Section 4.3.3). Such fraction shall have as its numerator the number of months which have elapsed in such current Expense Year to the month of such payment, both months inclusive, and shall have twelve (12) as its denominator. Until a new Estimate Statement is furnished, Tenant shall pay monthly, with the monthly Base Rent installments, an amount equal to one-twelfth (1/12) of the total Estimated Excess set forth in the previous Estimate Statement delivered by Landlord to Tenant.

4.3.4 Allocation of Operating Expenses and Tax Expenses to Building. The parties acknowledge that the Building is part of a multi-building project, and that the costs and expenses incurred in connection with the Project (i.e., the Operating Expenses and Tax Expenses) are determined annually for the Project as a whole but then allocated by Landlord among (i) the tenants of the Building, (ii) the tenants of the Additional Buildings, and (iii) if and when other buildings are constructed on the Project and are in operation, the tenants of such other buildings, for purposes of determining such tenants' shares of Operating Expenses and Tax Expenses. In making such allocation of Operating Expenses and Tax Expenses for purposes of determining Tenant's Share of Operating Expenses and Tax Expenses, Operating Expenses and Tax Expenses shall be allocated as follows: the portion of Operating Expenses and Tax Expenses allocated to the tenants of the Building shall consist of (A) all Operating Expenses and Tax Expenses attributable solely to the Building, and (B) an equitable portion (as determined by Landlord in accordance with standard real estate accounting principles consistently applied) of the Operating Expenses and Tax Expenses attributable to the Project as a whole and not attributable solely to the Building, the Additional Buildings or to any other buildings of the Project.

4.4 Taxes and Other Charges for Which Tenant Is Directly Responsible. Tenant shall reimburse Landlord, as Additional Rent, within thirty (30) days after demand, for all taxes and assessments required to be paid by Landlord (except to the extent included in Tax Expenses by Landlord), excluding state, local and federal personal or corporate income taxes measured by the net income of Landlord from all sources and estate and inheritance taxes, whether or not now customary or within the contemplation of the parties hereto, when:

4.4.1 said taxes are measured by or reasonably attributable to the cost or value of Tenant's equipment, furniture, fixtures and other personal property located in the Premises, or by the cost or value of any leasehold improvements made in or to the Premises by or for Tenant, to the extent the cost or value of such leasehold improvements exceeds the cost or value of a building standard build-out as determined by Landlord regardless of whether title to such improvements shall be vested in Tenant or Landlord;

4.4.2 said taxes are assessed upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises or any portion of the Project; or

4.4.3 said taxes are assessed upon this transaction or any document to which Tenant is a party creating or transferring an interest or an estate in the Premises.

4.5 Late Charges. If any installment of Rent or any other sum due from Tenant shall not be received by Landlord or Landlord's designee by the due date therefor, then Tenant shall pay to Landlord a late charge equal to five percent (5%) of the amount due plus any attorneys' fees incurred by Landlord by reason of Tenant's failure to pay Rent and/or other charges when due hereunder. The late charge shall be deemed Additional Rent and the right to require it shall be in addition to all of Landlord's other rights and remedies hereunder, at law and/or in equity and shall not be construed as liquidated damages or as limiting Landlord's remedies in any manner. In addition to the late charge described above, any Rent or other amounts owing hereunder which are not paid by the date that they are due shall thereafter bear interest until paid at a rate equal to the lesser of (i) twelve percent (12%) per annum, and (ii) the highest rate permitted by applicable law (the “Interest Rate”).

4.6 Audit Right. If Tenant disputes the amount of the Operating Expenses and/or Tax Expenses set forth in the Statement for any particular Expense Year delivered by Landlord to Tenant pursuant to Section 4.3.2 above, then Tenant shall have the right, at Tenant's cost, upon thirty (30) days' prior written notice to Landlord, to have Tenant's authorized employees inspect, at Landlord's offices during normal business hours, Landlord's books, records and supporting documents concerning the Operating Expenses and Tax Expenses set forth in such Statement; provided, however, Tenant shall have no right to conduct such inspection, have an audit performed by the Accountant (as defined and described hereinbelow), or object to or otherwise dispute the amount of the Operating Expenses and Tax Expenses set forth in any such Statement unless Tenant notifies Landlord of such objection and dispute, completes such inspection, and has the Accountant commence and complete such audit within twelve (12) months immediately following Landlord's delivery of the particular Statement in question (the "Review Period"); provided, further, that notwithstanding any such timely objection, dispute, inspection, and/or audit, and as a condition precedent to Tenant's exercise of its right of objection, dispute, inspection and/or audit as set forth in this Section 4.6, Tenant shall not be permitted to withhold payment of, and Tenant shall timely pay to Landlord, the full amounts as required by the provisions of this Article 4 in accordance with such Statement. However, such payment may be made under protest pending the outcome of any audit which may be performed by the Accountant as described hereinbelow. In connection with any such inspection by Tenant, Landlord and Tenant shall reasonably cooperate with each other so that such inspection can be performed pursuant to a mutually acceptable schedule, in an expeditious manner and without undue interference with Landlord's operation and management of the Project. If after such inspection and/or request for documentation, Tenant still disputes the amount of the Operating Expenses and Tax Expenses set forth in the Statement, then Tenant shall have the right, within the Review Period, to cause a nationally recognized independent certified public accountant (which is not paid on a commission or contingency basis and which has not been engaged by Tenant within the preceding five (5) year period) mutually approved by Landlord and Tenant, which approval shall not be unreasonably withheld or delayed (the "Accountant") to complete an audit of Landlord's books and records to determine the proper amount of the Operating Expenses and Tax Expenses incurred and amounts payable by Tenant for the Expense Year which is the subject of such Statement. Such audit by the Accountant shall be final and binding upon Landlord and Tenant. If Landlord and Tenant cannot mutually agree as to the identity of the Accountant within thirty (30) days after Tenant notifies Landlord that Tenant desires an audit to be performed, then the Accountant shall be one of the "Big 4" accounting firms or another nationally recognized accounting firm (which is not paid on a commission or contingency basis and which has not been engaged by Tenant within the preceding five (5) year period), as selected by Tenant. If such audit reveals that Landlord has over- charged Tenant, then within thirty (30) days after the results of such audit are made available to Landlord, Landlord shall reimburse to Tenant the amount of such over-charge. If the audit reveals that the Tenant was under-charged, then within thirty (30) days after the results of such audit are made available to Tenant, Tenant shall reimburse to Landlord the amount of such under-charge. Tenant agrees to pay the cost of such audit unless it is subsequently determined that Landlord's original Statement that was the subject of such audit overstated Operating Expenses and Tax Expenses by ten percent (10%) or more of the actual Operating Expenses and Tax Expenses verified by such audit, in which case Landlord shall reimburse Tenant for the reasonable cost of such audit (but not in excess of the amount of the Operating Expenses and Tax Expenses so overstated). The payment by Tenant of any amounts pursuant to this Article 4 shall not preclude Tenant from questioning, during the Review Period, the correctness of the particular Statement in question provided by Landlord, but the failure of Tenant to object thereto, conduct and complete its inspection and have the Accountant conduct the audit as described above prior to the expiration of the Review Period for such Statement shall be conclusively deemed Tenant's approval of the Statement in question and the amount of Operating Expenses and Tax Expenses shown thereon. In connection with any inspection and/or audit conducted by Tenant pursuant to this Section 4.6, Tenant agrees to keep, and to cause all of Tenant's employees and consultants and the Accountant to keep, all of Landlord's books and records and the audit, and all information pertaining thereto and the results thereof, strictly confidential, and in connection therewith, Tenant shall cause such employees, consultants and the Accountant to execute commercially reasonable confidentiality agreements as Landlord may require prior to conducting any such inspections and/or audits.

ARTICLE 5

USE OF PREMISES

5.1 Use. Tenant shall use the Premises solely for general, executive and administrative non- medical office purposes consistent with the character of the Project as a first-class office building project, and Tenant shall not use or permit the Premises to be used for any other purpose or purposes whatsoever. Tenant shall, at its sole cost and expense, obtain all governmental licenses and permits required to allow Tenant to conduct Tenant's permitted use. The population density within the Premises as a whole shall at no time exceed one person for each 250 rentable square feet in the Premises. Tenant shall not use, or permit any of Tenant's employees, agents, representatives, contractors, invitees or licensees to use, the Premises or any part thereof for any use or purpose: (i) contrary to the Rules and Regulations; or (ii) in violation of any applicable laws, including, without limitation, those with respect to Hazardous Materials; or (iii) which would adversely affect or render more expensive (unless Tenant directly pays to Landlord the additional premium therefor) any fire or other insurance maintained by Landlord for the Project or any of its contents; or (iv) which would impair or interfere with any of the Building systems and equipment or the janitorial, security and building maintenance services; or (v) which would impair or materially and adversely interfere with the structural portions of the Building including, without limitation, the foundation, floor/ceiling slabs, roof, curtain wall, exterior glass and mullions, columns, beams, shafts (including elevator shafts), stairs, Parking Facilities, stairwells, elevator cabs, plazas, washrooms, mechanical, electrical and telephone closets. Tenant shall comply with all recorded covenants, conditions, and restrictions, and the provisions of all ground leases, now or hereafter affecting the Project and shall not at any time use or occupy or allow any person to use or occupy the Premises or the Project or do or permit anything to be done or kept in the Premises or the Project in any manner which: (A) violates any certificate of occupancy in force for the Premises, the Building or the Project; (B) causes or is likely to cause damage to the Premises or the Project or any equipment, facilities or other systems therein; (C) results in repeated demonstrations, bomb threats or other events which require evacuation of the Building or Project or otherwise disrupt the use, occupancy or quiet enjoyment of the Building or Project by other tenants and occupants; or (D) interferes with the transmission or reception of microwave, television, radio or other communications signals by antennae located on the roof of the Building or elsewhere in the Building or Project. Landlord shall not be responsible to Tenant for the nonperformance of any of Rules and Regulations by or otherwise with respect to the acts or omissions of any other tenants or occupants of the Project.

5.2 Hazardous Materials.

5.2.1 General. Tenant shall not use or allow another person or entity to use any part of the Premises and Tenant shall not use any part of the Building or Project for the storage, use, treatment, manufacture or sale of Hazardous Materials. Landlord acknowledges, however, that Tenant will maintain and use ordinary office products in the Premises which are incidental to the operation of its offices, such as photocopy supplies, secretarial supplies and limited janitorial supplies, which products contain chemicals which are categorized as Hazardous Materials. Landlord agrees that the presence and use of reasonable amounts of such products in the Premises in compliance with all applicable laws and in the manner in which such products are designed to be used shall not be a violation by Tenant of this Section 5.2. Tenant shall immediately notify Landlord of any inquiry, test, investigation or enforcement proceeding by or against Tenant or the Premises concerning the presence of any Hazardous Material. Tenant shall promptly commence and diligently complete all actions, at its sole cost and expense, as are necessary to return the Premises, the Building and the Project to the condition existing prior to the introduction, use or release of any Hazardous Materials by Tenant or the contractors, agents, employees, licensees or invitees of Tenant, provided, however, (i) Landlord's approval of such actions shall first be obtained, and (ii) any investigation or remediation by or on Tenant's behalf taken on or about the Premises or Project shall be conducted only by a consultant approved in writing by Landlord and pursuant to a work letter, approved in writing by Landlord. Tenant shall not excavate, disturb or conduct any testing of any soils or groundwater on or about the Premises or Project without obtaining Landlord's prior written consent. If Tenant shall fail to comply with the provisions of this Section 5.2.1 within five (5) days after written notice by Landlord, or such shorter period of time as shall be required by applicable laws or in order to minimize any hazard to persons or property, Landlord may (but shall not be obligated to) arrange for such compliance directly or as Tenant's agent through contractors or other parties selected by Landlord, at Tenant's expense (without limiting Landlord's other remedies under this Lease or applicable laws). In addition, Tenant shall indemnify, defend, protect and hold harmless the Landlord Parties (as defined below) from and against any and all Claims (as defined below) incurred in connection with or arising from violation of this Section 5.2 by Tenant, or any person claiming by, through or under Tenant, or of the contractors, agents, employees, licensees or invitees of Tenant.

5.2.2 Acknowledgement of Notice Regarding Hazardous Materials Release. Tenant acknowledges that, prior to entering into this Lease, Landlord notified Tenant pursuant to Health and Safety Code Section 25359.7 that hazardous substances had come to be located beneath the Project.

5.2.3 Definitions; Survival. As used herein, the term "Hazardous Materials" means any hazardous or toxic substance, material or waste which is or becomes regulated by any local governmental authority, the State of California or the United States Government, including, without limitation, any material or substance which is (i) defined or listed as a "hazardous waste," "extremely hazardous waste," "restricted hazardous waste," "hazardous substance" or "hazardous material" under any applicable federal, state or local law or administrative code promulgated thereunder, (ii) petroleum or petroleum-based chemicals or substances, (iii) asbestos, (iv) PCB, and (v) urea formaldehyde. The provisions of this Section 5.2 shall survive the expiration or sooner termination of this Lease with respect to any Claims in violation of this Section 5.2 occurring prior to such expiration or termination.

5.3 Asbestos. Tenant acknowledges that Landlord has advised Tenant that the Building contains or, because of its age, is likely to contain, asbestos. Reports indicate that such asbestos is present in various locations throughout the Building. Upon request by Tenant, Landlord shall make available for review by Tenant at the Project during normal business hours (without warranty) copies of any current asbestos management plans, inspection reports, test results or other similar documents in Landlord's possession relating to the presence of asbestos at the Building. To the extent such reports or documents indicate the presence of asbestos at the Building, this Section 5.3 shall constitute notice to Tenant as required by the California Health & Safety Code. In connection with performing any work that may disturb asbestos at the Building, Tenant shall comply, at its cost, with any applicable laws and asbestos management plans relating to the Building. Tenant shall also comply with all applicable laws, rules and regulations requiring disclosure to employees and/or invitees of the presence of asbestos or other Hazardous Materials at or around the Premises, the Building or the Project. Landlord has no special knowledge of the general procedures or handling restrictions to minimize or prevent the disturbance, release or exposure to asbestos or of the potential health risks that may result from any exposure to asbestos. Tenant is encouraged to contact local or state public health agencies for further information.

ARTICLE 6

SERVICES AND UTILITIES

6.1 Standard Tenant Services. Landlord shall provide the following services on all days during the Lease Term, unless otherwise stated below.

6.1.1 Subject to all governmental rules, regulations and guidelines applicable thereto, Landlord shall provide heating, ventilation and air conditioning ("HVAC") when necessary for normal comfort for normal office use in the Premises, from Monday through Friday during the period from 7:00 a.m. to 6:00 p.m. (collectively, the "Building Hours"), except for the date of observation of New Year's Day, Martin Luther King Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day and any other nationally and/or locally recognized holidays as designated by Landlord (collectively, the "Holidays"). Notwithstanding the foregoing, if during the Lease Term Landlord permits Tenant to install one (1) or more independent HVAC units (collectively, the "HVAC Units") in the Premises pursuant to Article 8 below for Tenant's exclusive use within the Premises, then the electrical usage for the HVAC Units shall be separately metered, at Tenant's sole cost and expense, and Tenant shall, within thirty (30) days after Tenant's receipt of invoice therefor from Landlord, pay to Landlord or reimburse Landlord for the actual electrical costs charged by the entity providing electricity to the HVAC Units. Tenant shall be responsible for repair and maintenance of the HVAC Units at Tenant's expense and, accordingly, Tenant shall, throughout the Lease Term, maintain a service and/or maintenance contract for the HVAC Units, with a service provider reasonably approved by Landlord, which service provider shall perform all maintenance and repair on the HVAC Units. Tenant shall provide to Landlord a copy of periodic service reports for the HVAC Units, as such reports are received by Tenant.

6.1.2 Landlord shall provide adequate electrical wiring and facilities and power for normal general office use as determined by Landlord. As part of Operating Expenses, Landlord shall replace lamps, starters and ballasts for Building standard lighting fixtures within the Premises. Tenant shall bear the cost of replacement of lamps, starters and ballasts for non-Building standard lighting fixtures within the Premises.

6.1.3 Landlord shall provide city water from the regular Building outlets for drinking, lavatory and toilet purposes.

6.1.4 Landlord shall provide janitorial services five (5) days per week, except the date of observation of the Holidays, in and about the Premises.

6.1.5 Landlord shall provide nonexclusive, non-attended automatic passenger elevator service during the Building Hours, and have one elevator available at all other times, including on the Holidays.

6.1.6 Landlord shall provide nonexclusive freight elevator service subject to scheduling by Landlord.

6.2 Overstandard Tenant Use. Tenant shall not, without Landlord's prior written consent, use heat-generating machines, machines other than normal fractional horsepower office machines, or equipment or lighting other than building standard lights in the Premises, which may affect the temperature otherwise maintained by the air conditioning system or increase the need for water normally furnished for the Premises by Landlord pursuant to the terms of Section 6.1 above. If Tenant uses water or HVAC in excess of that supplied by Landlord pursuant to Section 6.1 above, or if Tenant's consumption of electricity shall exceed an average of three (3) watts per usable square foot of the Premises, connected load, calculated on a monthly basis during the Building Hours set forth in Section 6.1.1 above, then Tenant shall pay to Landlord, within ten (10) days after billing, the cost of such excess consumption, the cost of the installation, operation, and maintenance of equipment which is installed in order to supply such excess consumption, and the cost of the increased wear and tear on existing equipment caused by such excess consumption; and Landlord may install devices to separately meter any increased use and in such event Tenant shall pay the increased cost directly to Landlord, within ten (10) days after demand, including the cost of such additional metering devices. If Tenant desires to use HVAC from other than the HVAC Units (if applicable) during hours other than the Building Hours, (i) Tenant shall give Landlord such prior notice, as Landlord shall from time to time establish as appropriate, of Tenant's desired use, (ii) Landlord shall supply such after- hours HVAC to Tenant at such hourly cost to Tenant as Landlord shall from time to time establish, and (iii) Tenant shall pay such cost to Landlord within ten (10) days after billing as Additional Rent hereunder.

6.3 Interruption of Use. Except as provided in Section 6.6 below, Tenant agrees that Landlord shall not be liable for damages, by abatement of Rent or otherwise, for failure to furnish or delay in furnishing any service (including telephone and telecommunication services), or for any diminution in the quality or quantity thereof, when such failure or delay or diminution is occasioned, in whole or in part, by repairs, replacements, or improvements, by any strike, lockout or other labor trouble, by inability to secure electricity, gas, water, or other fuel at the Building or Project after reasonable effort to do so, by any accident or Casualty whatsoever, by act or default of Tenant or other parties, or by any other cause beyond Landlord's reasonable control; and such failures or delays or diminution shall never be deemed to constitute an eviction or disturbance of Tenant's use and possession of the Premises or relieve Tenant from paying Rent (except as provided in Section 6.6 below) or performing any of its obligations under this Lease. It is understood that any such condition may require the temporary evacuation or closure of all or a portion of the Building and Project. Furthermore, Landlord shall not be liable under any circumstances for a loss of, or injury to, property or for injury to, or interference with, Tenant's business, including, without limitation, loss of profits, however occurring, through or in connection with or incidental to a failure to furnish any of the services or utilities as set forth in this Article 6. Further, in the event any governmental authority or public utility promulgates or revises any law, ordinance, rule or regulation, or issues mandatory controls or voluntary controls relating to the use or conservation of energy, water, gas, light or electricity, the reduction of automobile or other emissions, or the provision of any other utility or service, Landlord may take any reasonably appropriate action to comply with such law, ordinance, rule, regulation, mandatory control or voluntary guideline and Tenant’s obligations hereunder shall not be affected by any such action of Landlord. The parties acknowledge that safety and security devices, services and programs provided by Landlord, if any, while intended to deter crime and ensure safety, may not in given instances prevent theft or other criminal acts, or ensure safety of persons or property. The risk that any safety or security device, service or program may not be effective, or may malfunction, or be circumvented by a criminal, is assumed by Tenant with respect to Tenant’s property and interests, and Tenant shall obtain insurance coverage to the extent Tenant desires protection against such criminal acts and other losses, as further described in this Lease. Tenant agrees to cooperate in any reasonable safety or security program developed by Landlord or required by law.

6.4 Additional Services. Landlord shall also have the exclusive right, but not the obligation, to provide any additional services which may be required by Tenant, including, without limitation, locksmithing, additional janitorial service, and additional repairs and maintenance, provided that Tenant shall pay to Landlord, within ten (10) days after billing, and as Additional Rent hereunder, the sum of all costs to Landlord of such additional services plus a ten percent (10%) administration fee.

6.5 Access to Building and Parking Facilities. Subject to the other provisions of this Lease (including, without limitation, the Rules and Regulations and any modifications thereof adopted by Landlord from time to time), Tenant shall be granted access to the Building, the Premises, and the Parking Facilities twenty-four (24) hours per day, seven (7) days per week, every day of the year.

6.6 Abatement Event. If (i) Landlord fails to provide services required of Landlord under Sections 6.1 and/or 6.5 above, and (ii) such failure causes all or a material portion of the Premises to be untenantable by Tenant and Tenant actually ceases to use all or a material portion of the Premises, (iii) such failure is not the result of a Force Majeure event and is reasonably within Landlord's ability to cure, and (iv) such failure is not the result of the acts and/or omissions of Tenant and/or its agents, contractors,

employees, licensees or invitees, then in order to be entitled to receive the benefits of this Section 6.6, Tenant must give Landlord notice (the "Initial Notice"), specifying such failure to perform by Landlord (the "Abatement Event"). If Landlord has not commenced to cure such Abatement Event within three (3) business days after the receipt of the Initial Notice and is not otherwise excused from such performance by this Lease, then prior to any abatement, Tenant must deliver an additional written notice to Landlord (the "Additional Notice"), specifying such Abatement Event and Tenant's intention to abate the payment of Rent under this Lease. If Landlord does not commence to cure such Abatement Event within three (3) business days of receipt of the Additional Notice and thereafter diligently pursue the cure to completion, Tenant may, upon written notice to Landlord, immediately abate Base Rent and Tenant's Share of Operating Expenses and Tax Expenses payable under this Lease for that portion of the Premises rendered untenantable and not actually used by Tenant, for the period beginning on the date that is three (3) business days after the Initial Notice to the earlier of the date Landlord cures such Abatement Event or the date Tenant recommences the use of such portion of the Premises. If Tenant fails to immediately provide the Additional Notice and commence applying any abatement of Base Rent and Tenant's Share of Operating Expenses and Tax Expenses payable under this Lease for that portion of the Premises rendered untenantable and not actually used by Tenant, then Tenant's right to abate Base Rent and Tenant's Share of Operating Expenses and Tax Expenses shall be of no further force or effect with respect to the applicable Abatement Event. Except as provided in this Section 6.6, nothing contained herein shall be interpreted to mean that Tenant is excused from paying Rent due hereunder.

ARTICLE 7

REPAIRS

7.1 Tenant's Repairs. Subject to Landlord's repair obligations in Sections 7.2 and 11.1 below, Tenant shall, at Tenant's own expense, keep the Premises, including all improvements, fixtures and furnishings therein, in good order, repair and condition at all times during the Lease Term, which repair obligations shall include, without limitation, the obligation to promptly and adequately repair all damage to the Premises and replace or repair all damaged or broken fixtures and appurtenances; provided however, that, at Landlord's option, if Tenant fails to make such repairs within thirty (30) days after written notice thereof from Landlord, Landlord may, but need not, make such repairs and replacements, and Tenant shall pay Landlord the cost thereof, including an administrative fee equal to four percent (4%) of the cost thereof forthwith upon being billed for same.

7.2 Landlord's Repairs. Anything contained in Section 7.1 above to the contrary notwithstanding, and subject to Articles 11 and 12 below, Landlord shall repair and maintain the structural portions of the Building and the basic plumbing, mechanical, HVAC, life-safety and electrical systems serving the Building and not located in the Premises; provided, however, (but subject to the mutual waiver of subrogation below) to the extent such maintenance and repairs are caused by the act, neglect, fault of or omission of any duty by Tenant, its agents, contractors, employees, licensees or invitees, Tenant shall pay to Landlord, as Additional Rent, the reasonable cost of such maintenance and repairs. Landlord shall not be liable to Tenant for any failure to make any such repairs, or to perform any maintenance hereunder. There shall be no abatement of Rent and no liability of Landlord by reason of any injury to or interference with Tenant's business arising from the making of or failure to make any repairs, alterations or improvements in or to any portion of the Premises or Project or in or to fixtures, appurtenances and equipment therein. Tenant hereby waives and releases its right to make repairs at Landlord's expense under Sections 1941 and 1942 of the California Civil Code, or under any similar law, statute, or ordinance now or hereafter in effect.

ARTICLE 8

ADDITIONS AND ALTERATIONS

8.1 Landlord's Consent to Alterations. Tenant may not make any improvements, alterations, additions or changes to the Premises (collectively, the "Alterations") without first procuring the prior written consent of Landlord to such Alterations, which consent shall be requested by Tenant not less than ten (10) days prior to the commencement thereof, and which consent shall not be unreasonably withheld by Landlord; provided, however, Landlord may withhold its consent in its sole and absolute discretion with respect to any Alterations which (i) may affect the structural components of the Building, or the Building's mechanical, electrical, HVAC, or life safety systems, or (ii) are visible from or affect any area located outside the Premises. Tenant shall pay for all overhead, general conditions, fees and other costs of the Alterations, and shall pay to Landlord a Landlord supervision fee of four percent (4%) of the cost of the Alterations.

8.2 Manner of Construction. Landlord may impose, as a condition of its consent to any and all Alterations or repairs of the Premises, such requirements as Landlord in its reasonable discretion may deem desirable, including, but not limited to, the requirement that Tenant utilize for such purposes only contractors, materials, mechanics and materialmen approved by Landlord; provided, however, Landlord

may impose such requirements as Landlord may determine, in its sole and absolute discretion, with respect to any work affecting the structural components of the Building and/or the Building's systems and equipment (including designating specific contractors to perform such work). Tenant shall construct such Alterations and perform such repairs in compliance with all applicable laws (including, without limitation, California Energy Code, Title 24) and pursuant to a valid building permit, issued by the city or municipality governing the Building, and in conformance with Landlord's construction rules and regulations. All work with respect to any Alterations must be done in a good and workmanlike manner and diligently prosecuted to completion to the end that the Premises shall at all times be a complete unit except during the period of work. Tenant shall cause all Alterations to be performed in such manner as not to obstruct access by any person to the Building or Project or the common areas, and as not to obstruct the business of Landlord or other tenants in the Project, or interfere with the labor force working at the Building or Project. If Tenant makes any Alterations, Tenant agrees to carry "Builder's All Risk" insurance in an amount approved by Landlord covering the construction of such Alterations, and such other insurance as Landlord may require, it being understood and agreed that all of such Alterations shall be insured by Tenant pursuant to Article 10 below immediately upon completion thereof. Landlord may, in its discretion, require Tenant to obtain a lien and completion bond or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien-free completion of such Alterations and naming Landlord as a co-obligee. Upon completion of any Alterations, Tenant shall (i) cause a timely Notice of Completion to be recorded in the office of the Recorder of the County in which the Project is located in accordance with the terms of Section 8182 of the Civil Code of the State of California or any successor statute, (ii) deliver to the Building management office a reproducible copy of the "as built" drawings of the Alterations, and (iii) deliver to Landlord evidence of payment, contractors' affidavits and full and final waivers of all liens for labor, services or materials.

8.3 Landlord's Property. All Alterations, improvements and fixtures which may be installed or placed in or about the Premises shall be at the sole cost of Tenant and shall be and become the property of Landlord. Notwithstanding the foregoing, Landlord may, by written notice to Tenant prior to the end of the Lease Term, require Tenant at Tenant's expense to remove any improvements or Alterations from the Premises and repair any damage to the Premises and Building caused by such removal if Landlord's consent to such improvement or Alteration was not obtained. With respect to any improvement or Alteration made or caused to be made by Tenant with Landlord's consent, Tenant shall have no obligation to remove such improvement or Alteration unless at the time Landlord approved the final working drawings for any such improvement or Alteration, Landlord, by written notice to Tenant, identified those improvements or Alterations which Landlord would require Tenant to remove at the expiration or earlier termination of this Lease, in which event Tenant, at Tenant's sole cost and expense, shall remove such identified improvements or Alterations on or before the expiration of the Lease Term and repair any damage resulting from such removal. If Tenant fails to complete such removal and/or repair by the end of the Lease Term, Landlord may do so and may charge the cost thereof to Tenant.

ARTICLE 9

COVENANT AGAINST LIENS

Tenant has no authority or power to cause or permit any lien or encumbrance of any kind whatsoever, whether created by act of Tenant, operation of law or otherwise, to attach to or be placed upon the Project or any portion thereof, and any and all liens and encumbrances created by Tenant shall attach to Tenant's interest only. Landlord shall have the right at all times to post and keep posted on the Premises any notice which it deems necessary for protection from such liens. Tenant shall not cause or permit any lien of mechanics or materialmen or others to be placed against the Project or any portion thereof, with respect to work or services claimed to have been performed for or materials claimed to have been furnished to Tenant or the Premises, and, in case of any such lien attaching or notice of any lien, Tenant shall cause it to be immediately released and removed of record. If such lien is not released and removed within five (5) business days after notice of such lien is delivered by Landlord to Tenant, then Landlord may, at its option, take all action necessary to release and remove such lien, without any duty to investigate the validity thereof, and all sums, costs and expenses, including reasonable attorneys' fees, incurred by Landlord in connection with such lien shall be deemed Additional Rent under this Lease and shall immediately be due and payable by Tenant.

ARTICLE 10

INSURANCE

10.1 Indemnification and Waiver. Tenant hereby assumes all risk of damage to property and injury to persons in, on or about the Premises from any cause whatsoever (including Casualty), and agrees that Landlord, its members, partners, submembers and subpartners, and their respective officers, directors, shareholders, agents, property managers, employees and independent contractors, Kennedy-Wilson Properties Ltd. and Landlord's mortgagees (collectively, the "Landlord Parties") shall not be liable for, and are hereby released from any responsibility for, any damage or injury either to person or property or

resulting from the loss of use thereof, which damage or injury is sustained by Tenant or by other persons claiming through Tenant. Tenant shall indemnify, defend, protect and hold harmless the Landlord Parties from and against any and all loss, cost, damage, expense, claims and liability, including without limitation court costs, reasonable attorneys' fees, laboratory testing fees, personal injury claims, clean-up costs and environmental consultants' fees (collectively "Claims") incurred in connection with or arising from any cause in, on or about the Premises, and/or any acts, omissions or negligence of Tenant or of any person claiming by, through or under Tenant, or of the contractors, agents, employees, licensees or invitees of Tenant or any such person in, on or about the Project, provided, however, that the terms of the foregoing indemnity shall not apply to: (i) any Claims to the extent resulting from the negligence or willful misconduct of Landlord or the Landlord Parties and not insured (or required to be insured) by Tenant under this Lease; or (ii) any loss of or damage to Landlord's property to the extent Landlord has waived such loss or damage pursuant to Section 10.4 below. Tenant's agreement to indemnify Landlord pursuant to this Section 10.1 is not intended and shall not relieve any insurance carrier of its obligations under policies required to be carried by Tenant pursuant to this Lease. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease with respect to any Claims occurring prior to such expiration or termination.

10.2 Tenant's Compliance with Landlord's Fire and Casualty Insurance. Tenant shall, at Tenant's expense, comply as to the Premises with all insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises causes any increase in the premium for any insurance policies carried by Landlord, then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body.

10.3 Tenant's Insurance. Tenant shall maintain the following coverages in the following amounts at all times following the date (the "Insurance Start Date") which is the earlier of (i) Tenant's entry into the Premises to perform any work therein, or (ii) the Possession Date, and continuing thereafter throughout the Lease Term:

10.3.1 Commercial General Liability Insurance covering the insured against claims of bodily injury, personal injury and property damage arising out of Tenant's operations, assumed liabilities or use of the Premises, including a Commercial General Liability endorsement covering the insuring provisions of this Lease and the performance by Tenant of the indemnity agreements set forth in Section 10.1 above (and with owned and non-owned automobile liability coverage, and liquor liability coverage if alcoholic beverages are served on the Premises), for limits of liability not less than: (i) Bodily Injury and Property Damage Liability – $3,000,000 each occurrence and $3,000,000 annual aggregate, and (ii) Personal Injury Liability - $3,000,000 each occurrence and $3,000,000 annual aggregate. Such insurance may be obtained through a combination of primary and/or umbrella/excess liability insurance.

10.3.2 Physical Damage Insurance covering (i) all office furniture, trade fixtures, office equipment, merchandise and all other items of Tenant's property on the Premises installed by, for, or at the expense of Tenant, and (ii) all tenant improvements, Alterations and other improvements and additions in and to the Premises, including any improvements, alterations or additions installed above the ceiling of the Premises or below the floor of the Premises. Such insurance shall be written on an "all-risks" physical loss or damage basis, for the full replacement cost value new without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include a vandalism and malicious mischief endorsement, sprinkler leakage coverage and earthquake sprinkler leakage coverage.

10.3.3 At all times during the Lease Term, Tenant shall procure and maintain Workers’ Compensation Insurance in accordance with the laws of the State of California, and Employer’s Liability insurance with a limit not less than One Million Dollars ($1,000,000) Bodily Injury Each Accident; One Million Dollars ($1,000,000) Bodily Injury By Disease - Each Person; and One Million Dollars ($1,000,000) Bodily Injury to Disease - Policy Limit.

10.3.4 Business interruption, loss-of-income and extra-expense insurance in such amounts as will reimburse Tenant for direct and indirect loss of earnings attributable to all perils commonly insured against by prudent tenants or attributable to prevention of access to the Premises or to the Building as a result of such perils.

10.3.5 Form of Policies. The minimum limits of policies of insurance required of Tenant under this Lease shall in no event limit the liability of Tenant under this Lease. Such insurance shall: (i) name Landlord, and any other party it so specifies, as loss payees or additional insureds, as their respective interests may appear (for the insurance to be provided under Sections 10.3.1 and 10.3.2(ii) above, only); (ii) specifically cover the liability assumed by Tenant under this Lease, including, but not limited to, Tenant's obligations under Section 10.1 above; (iii) be issued by an insurance company having a rating of not less than A-VIII in Best's Insurance Guide or which is otherwise acceptable to Landlord

and licensed to do business in California; (iv) be primary insurance as to all claims thereunder and provide that any insurance carried by Landlord is excess and is non-contributing with any insurance requirement of Tenant; (v) provide that said insurance shall not be canceled or coverage changed unless thirty (30) days' prior written notice shall have been given to Landlord and any mortgagee of Landlord; (vi) contain a cross- liability endorsement or severability of interest clause reasonably acceptable to Landlord; and (vii) except with respect to property damage insurance (which shall be governed by the provisions of Section 10.4 below), contain a waiver of subrogation in favor of Landlord and any other parties designated by Landlord from time to time as additional insured pursuant to clause (i) hereinabove. Tenant shall deliver such policies or certificates thereof to Landlord on or before the Insurance Start Date and at least thirty (30) days before the expiration dates thereof. If Tenant shall fail to procure such insurance, or to deliver such policies or certificate, within such time periods, Landlord may, at its option, in addition to all of its other rights and remedies under this Lease, and without regard to any notice and cure periods set forth in Section 19.1 below, procure such policies for the account of Tenant, and the cost thereof shall be paid by Tenant to Landlord as Additional Rent within ten (10) days after delivery of bills therefor. At Tenant's option, Tenant may provide the coverages required under this Article 10 through blanket policies of insurance covering Tenant's other properties so long as the coverage required under this Lease with respect to the Premises and Project is not reduced or impaired as a result thereof (including as a result of any claims made or aggregate limits with respect to such other properties).

10.4 Subrogation. Landlord and Tenant agree to have their respective insurance companies issuing property damage insurance waive any rights of subrogation that such companies may have against Landlord or Tenant, as the case may be. Landlord and Tenant hereby waive any right that either may have against the other on account of any loss or damage to their respective property to the extent such loss or damage is insured under property damage insurance policies carried by the waiving party under this Lease (or would have been covered had the waiving party maintained such insurance as so required under this Lease). If either party fails to carry the amounts and types of insurance required to be carried by it pursuant to this Article 10, in addition to any remedies the other party may have under this Lease, such failure shall be deemed to be a covenant and agreement by such party to self-insure with respect to the type and amount of insurance which such party so failed to carry, with full waiver of subrogation with respect thereto.

10.5 Additional Insurance Obligations. Tenant shall carry and maintain during the entire Lease Term, at Tenant's sole cost and expense, increased amounts of the insurance required to be carried by Tenant pursuant to this Article 10, and such other reasonable types of insurance coverage and in such reasonable amounts covering the Premises and Tenant's operations therein, as may be reasonably requested by Landlord; provided, however, that in no event shall (i) Tenant receive notice of an increased amount or new type of insurance more than once during the Lease Term, and (ii) such increased coverage be in excess of that required by landlords of Comparable Buildings (as defined in the Extension Option Rider attached to this Lease).

ARTICLE 11

DAMAGE AND DESTRUCTION

11.1 Repair of Damage to Premises by Landlord. Tenant shall promptly notify Landlord of any damage to the Premises resulting from fire or any other casualty ("Casualty") or any condition existing in the Premises as a result of a Casualty that would give rise to the terms of this Article 11. If the Premises or any common areas of the Building or Project serving or providing access to the Premises shall be damaged by Casualty or be subject to a condition existing as a result of a Casualty, Landlord shall promptly and diligently, subject to reasonable delays for insurance adjustment or other matters beyond Landlord's reasonable control, and subject to all other terms of this Article 11, restore the base, shell, and core of the Premises and such common areas to substantially the same condition as existed immediately prior to the Casualty, except for modifications required by applicable laws and/or by the holder of a mortgage on the Project (or any portion thereof), or any other modifications to the common areas deemed desirable by Landlord provided that access to the Premises and any common restrooms serving the Premises shall not be materially impaired. Upon the occurrence of any damage to the Premises, Tenant shall assign to Landlord (or to any party designated by Landlord) all insurance proceeds payable to Tenant under Tenant's insurance required under Section 10.3.2(ii) above, and Landlord shall repair any damage to the tenant improvements and Alterations installed in the Premises and shall return such tenant improvements and Alterations to their original condition; provided that if the costs of such repair of such tenant improvements and Alterations by Landlord exceeds the amount of insurance proceeds received by Landlord therefor from Tenant's insurance carrier, as assigned by Tenant, the excess costs of such repairs shall be paid by Tenant to Landlord prior to Landlord's repair of the damage. In connection with such repairs and replacements of any such tenant improvements and Alterations, Tenant shall, prior to Landlord's commencement of such improvement work, submit to Landlord, for Landlord's review and approval, all plans, specifications and working drawings relating thereto, and Landlord shall select the contractors to perform such improvement work. Landlord shall not be liable for any inconvenience or annoyance to Tenant or its visitors, or injury to Tenant's business resulting in any way from such damage

or the repair thereof; provided however, that if such Casualty shall have damaged the Premises or common areas necessary to Tenant's occupancy, and if such damage is not the result of the negligence or willful misconduct of Tenant or Tenant's agents, employees, contractors, licensees or invitees, Landlord shall allow Tenant a proportionate abatement of Base Rent, and Tenant's Share of Operating Expenses and Tax Expenses during the time and to the extent the Premises are unfit for occupancy for the purposes permitted under this Lease, and not occupied by Tenant as a result thereof. Notwithstanding any contrary provision of this Article 11, the parties hereby agree as follows: (i) the closure of the Project, the Building, the common areas, or any part thereof to protect public health shall not constitute a Casualty for purposes of this Lease; (ii) Casualty covered by this Article 11 shall require that the physical or structural integrity of the Premises, the Project, the Building, or the common areas is degraded as a direct result of such occurrence; and (iii) a Casualty under this Article 11 shall not be deemed to occur merely because Tenant is unable to productively use the Premises in the event that the physical and structural integrity of the Premises is undamaged.

11.2 Landlord's Option to Repair. Notwithstanding Section 11.1 above to the contrary, Landlord may elect not to rebuild and/or restore the Premises, the Building and/or any other portion of the Project and instead terminate this Lease by notifying Tenant in writing of such termination within sixty (60) days after the date Landlord becomes aware of such damage, such notice to include a termination date giving Tenant sixty (60) days to vacate the Premises, but Landlord may so elect only if the Building shall be damaged by Casualty or be subject to a condition existing as a result of such Casualty, whether or not the Premises are affected, and one or more of the following conditions is present: (i) repairs cannot reasonably be substantially completed in accordance with applicable laws within one hundred eighty (180) days after the date of such damage (when such repairs are made without the payment of overtime or other premiums); (ii) the holder of any mortgage on the Project or ground lessor with respect to the Project shall require that the insurance proceeds or any portion thereof be used to retire the mortgage debt, or shall terminate the ground lease, as the case may be; or (iii) the damage or condition arising as a result of such damage is not fully covered, except for deductible amounts, by Landlord's insurance policies. In addition, if the Premises, the Building or any portion of the Project is destroyed or damaged to any substantial extent during the last two (2) years of the Lease Term, then notwithstanding anything contained in this Article 11, Landlord shall have the option to terminate this Lease by giving written notice to Tenant of the exercise of such option within thirty (30) days after such damage, in which event this Lease shall cease and terminate as of the date of such notice. Upon such termination of this Lease pursuant to this Section 11.2, Tenant shall pay the Base Rent and Additional Rent, properly apportioned up to such date of damage (subject to any abatement as provided in Section 11.1 above), and both parties hereto shall thereafter be discharged of all further obligations under this Lease, except for those obligations which expressly survive the expiration or earlier termination of this Lease.

11.3 Waiver of Statutory Provisions. The provisions of this Lease, including this Article 11, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Project, and any statute or regulation of the State of California, including, without limitation, Sections 1932(2) and 1933(4) of the California Civil Code, with respect to any rights or obligations concerning damage or destruction in the absence of an express agreement between the parties, and any other statute or regulation, now or hereafter in effect, shall have no application to this Lease or any damage or destruction to all or any part of the Project.

ARTICLE 12

CONDEMNATION

If ten percent (10%) or more of the Premises, Building or Project shall be taken by power of eminent domain or condemned by any competent authority for any public or quasi-public use or purpose, or if Landlord shall grant a deed or other instrument in lieu of such taking by eminent domain or condemnation, Landlord shall have the option to terminate this Lease upon ninety (90) days' notice to Tenant, provided such notice is given no later than one hundred eighty (180) days after the date of such taking, condemnation, deed or other instrument. If more than twenty-five percent (25%) of the rentable square feet of the Premises is taken, or if access to the Premises is substantially impaired as a result of any taking of all or any portion of the Project, Tenant shall have the option to terminate this Lease upon ninety (90) days' notice to Landlord, provided such notice is given no later than one hundred eighty (180) days after the date of such taking. Landlord shall be entitled to receive the entire award or payment in connection therewith, except that Tenant shall have the right to file any separate claim available to Tenant for any taking of Tenant's personal property and fixtures belonging to Tenant and removable by Tenant upon expiration of the Lease Term pursuant to the terms of this Lease, and for moving expenses, so long as such claim does not diminish the award available to Landlord, or its ground lessor or mortgagee with respect to the Project, and such claim is payable separately to Tenant. All Rent shall be apportioned as of the date of such termination, or the date of such taking, whichever shall first occur. If any part of the Premises shall be taken, and this Lease shall not be so terminated, the Base Rent and Tenant's Share of Operating Expenses and Tax Expenses shall be proportionately abated. Tenant hereby waives any and all rights it might otherwise have pursuant to Section 1265.130 of the California Code of Civil Procedure.

Notwithstanding any contrary provision of this Lease, the following governmental actions shall not constitute a taking or condemnation, either permanent or temporary: (i) an action that requires Tenant's business or the Building or Project to close during the Lease Term; and (ii) an action taken for the purpose of protecting public safety (e.g., to protect against acts of war, the spread of communicable diseases, or an infestation), and no such governmental actions shall entitle Tenant to any compensation from Landlord or any authority, or Rent abatement or any other remedy under this Lease.

ARTICLE 13

COVENANT OF QUIET ENJOYMENT

Landlord covenants that Tenant, on paying the Rent, charges for services and other payments herein reserved and on keeping, observing and performing all the other terms, covenants, conditions, and agreements herein contained on the part of Tenant to be kept, observed and performed, shall, during the Lease Term, peaceably and quietly have, hold and enjoy the Premises subject to the terms, covenants, conditions, and agreements hereof without interference by any persons lawfully claiming by or through Landlord. The foregoing covenant is in lieu of any other covenant express or implied.

ARTICLE 14

ASSIGNMENT AND SUBLETTING

14.1 Transfers. Except as otherwise provided in Section 14.7 below, Tenant shall not, without the prior written consent of Landlord, assign, mortgage, pledge, hypothecate, encumber, or permit any lien to attach to, or otherwise transfer, this Lease or any interest hereunder, permit any assignment or other such foregoing transfer of this Lease or any interest hereunder by operation of law, sublet the Premises or any part thereof, or permit the use of the Premises by any persons other than Tenant and its employees (all of the foregoing are hereinafter sometimes referred to collectively as "Transfers" and any person to whom any Transfer is made or sought to be made is hereinafter sometimes referred to as a "Transferee"). If Tenant shall desire Landlord's consent to any Transfer, Tenant shall notify Landlord in writing, which notice (the "Transfer Notice") shall include (i) the proposed effective date of the Transfer, which shall not be less than twenty (20) days nor more than one hundred eighty (180) days after the date of delivery of the Transfer Notice, (ii) a description of the portion of the Premises to be transferred (the "Subject Space"), (iii) all of the terms of the proposed Transfer and the consideration therefor, including a calculation of the Transfer Premium (as defined below), in connection with such Transfer, the name and address of the proposed Transferee, and a copy of the proposed Transfer document effecting the proposed Transfer, (iv) current financial statements of the proposed Transferee certified by an officer, partner or owner thereof, and (v) such other information as Landlord may reasonably require. Except as otherwise provided in Section 14.7 below, any Transfer made without Landlord's prior written consent shall, at Landlord's option, be null, void and of no effect, and shall, at Landlord's option, constitute a default by Tenant under Section 19.1.2 below. Except as otherwise provided in Section 14.7 below, whether or not Landlord consents to any proposed Transfer, within thirty (30) days after written request by Landlord, as Additional Rent hereunder, Tenant shall pay to Landlord (A) One Thousand Dollars ($1,000.00) for Landlord's review and processing fees, and (B) any reasonable legal fees incurred by Landlord in connection with Tenant's proposed Transfer, which legal fees shall not exceed the amount of One Thousand Dollars ($1,000.00) per each proposed Transfer.

14.2 Landlord's Consent. Subject to Landlord's rights in Section 14.4 below, Landlord shall not unreasonably withhold its consent to any proposed Transfer on the terms specified in the Transfer Notice. The parties hereby agree that it shall be deemed to be reasonable under this Lease and under any applicable law for Landlord to withhold consent to any proposed Transfer where one or more of the following apply, without limitation as to other reasonable grounds for withholding consent:

(i) the Transferee is of a character or reputation or engaged in a business which is not consistent with the quality of the Project;

(ii) the Transferee's intended use of the Subject Space is not permitted under this Lease;

(iii) the Transferee is a governmental entity or agency, unless, and only to the extent, Landlord has leased space in the Building to, or approved subleases in the Building with, comparable (in terms of use, security issues, express or implied power of eminent domain, reputation, character and size of space in the Building) governmental entities or agencies;

(iv) with respect to an assignment of this Lease or the Premises, the Transferee is not a party of reasonable financial worth and/or financial stability in light of the responsibilities involved under the Lease on the date consent is requested;

(v) the proposed Transfer would cause Landlord to be in violation of another lease or agreement to which Landlord is a party, or would give an occupant of the Project a right to cancel its lease; or

(vi) either the proposed Transferee, or any person or entity which directly or indirectly, controls, is controlled by, or is under common control with, the proposed Transferee, (A) occupies space in the Project at the time of the request for consent and space of comparable size to the Subject Space is available for lease in the Project on a direct basis from Landlord, (B) is negotiating with Landlord to lease space in the Project at such time and space of comparable size to the Subject Space is available for lease in the Project on a direct basis from Landlord, or (C) has negotiated with Landlord during the six (6)-month period immediately preceding the Transfer Notice.

If Landlord consents to any Transfer pursuant to the terms of this Section 14.2 (and does not exercise any recapture rights Landlord may have under Section 14.4 below), Tenant may within six (6) months after Landlord's consent, enter into such Transfer of the Premises or portion thereof, upon substantially the same terms and conditions as are set forth in the Transfer Notice furnished by Tenant to Landlord pursuant to Section 14.1 above, provided that if there are any changes in the terms and conditions from those specified in the Transfer Notice (1) such that Landlord would initially have been entitled to refuse its consent to such Transfer under this Section 14.2, or (2) which would cause the proposed Transfer to be more favorable to the Transferee than the terms set forth in Tenant's original Transfer Notice, Tenant shall again submit the Transfer to Landlord for its approval and other action under this Article 14.

14.3 Transfer Premium. Except as otherwise provided in Section 14.7 below, if Landlord consents to a Transfer, as a condition thereto which the parties hereby agree is reasonable, Tenant shall pay to Landlord fifty percent (50%) of the Transfer Premium received by Tenant from such Transferee. "Transfer Premium" shall mean all rent, additional rent or other consideration (excluding any consideration for business assets) payable by such Transferee in connection with the Transfer which is in excess of the Rent payable by Tenant under this Lease during the term of the Transfer, on a per rentable square foot basis if less than all of the Premises is transferred, after deducting the reasonable expenses incurred by Tenant for (i) any reasonable changes, alterations and improvements to the Premises in connection with the Transfer (but only to the extent approved by Landlord), and (ii) any actual out-of-pocket brokerage commissions and attorneys' fees paid in connection with the Transfer. Notwithstanding the foregoing to the contrary, consideration for business assets shall not be excluded from the calculation of the Transfer Premium to the extent (A) their exclusion (1) is a subterfuge to avoid Tenant's obligations under this Section 14.3, and/or (2) such business assets were received by Tenant from such Transferee in lieu of any rent, additional rent or other consideration that would have been received by Tenant from such Transferee under this Section 14.3, and/or (B) Landlord determines, in its business judgment, that such consideration was for the leasehold value and not for general business assets. Transfer Premium shall also include, but not be limited to, key money and bonus money paid by Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to Transferee or for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to Transferee in connection with such Transfer.

14.4 Landlord's Option as to Subject Space. Notwithstanding anything to the contrary contained in this Article 14, but subject to the provisions of Section 14.7 below, if Tenant contemplates a Transfer to anyone other than an Affiliate pursuant to and in accordance with Section 14.7 below, then Tenant shall give Landlord notice (the "Intention to Transfer Notice") of such contemplated Transfer (whether or not the contemplated Transferee or the terms of such contemplated Transfer have been determined). The Intention to Transfer Notice shall specify the portion of and amount of rentable square feet of the Premises which Tenant intends to Transfer (the "Contemplated Transfer Space"), the contemplated date of commencement of the contemplated Transfer (the "Contemplated Effective Date"), and the contemplated length of the term of such contemplated Transfer, and shall specify that such Intention to Transfer Notice is delivered to Landlord pursuant to the terms of this Section 14.4 in order to allow Landlord to elect to recapture the Contemplated Transfer Space for the term set forth in the Intention to Transfer Notice. Thereafter, Landlord shall have the option, in connection with such contemplated Transfer and all subsequent transfers, by giving written notice to Tenant ("Landlord's Recapture Notice") within fifteen (15) days after receipt of the Intention to Transfer Notice, to recapture the Contemplated Transfer Space for a period to commence on the Contemplated Effective Date and to continue until the last day of the term of the contemplated Transfer as set forth in the Intention to Transfer Notice (the "Recapture Term"), and during the Recapture Term, this Lease shall terminate with respect to the Contemplated Transfer Space; provided, however, if Tenant notifies Landlord within ten (10) days after Landlord's receipt of Landlord's Recapture Notice that Tenant revokes Tenant's Intention to Transfer Notice, then such recapture and termination by Landlord in Landlord's Recapture Notice shall be ineffective, but Tenant shall not be entitled to proceed with the contemplated Transfer which was the subject of Tenant's original Intention to Transfer Notice, and Tenant shall again be required to submit a new Intention to Transfer Notice to Landlord with respect to any contemplated Transfer, as provided above in this Section 14.4. In the event of a recapture by Landlord, if this Lease shall be terminated with respect to less than the entire Premises, the Rent reserved herein shall be prorated on the basis of the

number of rentable square feet retained by Tenant in proportion to the number of rentable square feet contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon request of either party, the parties shall execute written confirmation of the same. If Landlord declines, or fails to elect in a timely manner to recapture the Contemplated Transfer Space under this Section 14.4 within such fifteen (15) day period, then, provided Landlord has consented to the proposed Transfer, Tenant shall be entitled to proceed to transfer the Contemplated Transfer Space to the proposed Transferee, and Landlord shall not have any right to recapture the Contemplated Transfer Space with respect to any Transfer thereof consummated during the six (6) month period of time (the "Six Month Period") which commences on the expiration of such fifteen (15) day period; provided, however, that any such Transfer shall be subject to all of the other terms of this Article 14. If such a Transfer is not so consummated within the Six Month Period (or if a Transfer is so consummated, then upon the expiration of the term of any Transfer of such Contemplated Transfer Space consummated within such Six Month Period), Tenant shall again be required to submit a new Intention to Transfer Notice to Landlord with respect to any contemplated Transfer, as provided above in this Section 14.4.

14.5 Effect of Transfer. If Landlord consents to a Transfer: (i) the terms and conditions of this Lease shall in no way be deemed to have been waived or modified; (ii) such consent shall not be deemed consent to any further Transfer by either Tenant or a Transferee; (iii) Tenant shall deliver to Landlord, promptly after execution, an original executed copy of all documentation pertaining to the Transfer in form reasonably acceptable to Landlord; and (iv) no Transfer relating to this Lease or agreement entered into with respect thereto, whether with or without Landlord's consent, shall relieve Tenant or any guarantor of the Lease from liability under this Lease. Landlord or its authorized representatives shall have the right at all reasonable times to audit the books, records and papers of Tenant relating to any Transfer, and shall have the right to make copies thereof. If the Transfer Premium with respect to any Transfer shall be found understated, Tenant shall, within thirty (30) days after demand, pay the deficiency and Landlord's costs of such audit.

14.6 Additional Transfers. Except as otherwise provided in Section 14.7 below, for purposes of this Lease, the term "Transfer" shall also include: (i) if Tenant is a partnership or limited liability company, the withdrawal or change, voluntary, involuntary or by operation of law, of more than fifty percent (50%) of the partners or members, or transfer of more than fifty percent (50%) of the partnership or membership interests, within a twelve (12)-month period, or the dissolution of the partnership without immediate reconstitution thereof; and (ii) if Tenant is a closely held corporation (i.e., whose stock is not publicly held and not traded through an exchange or over the counter), (A) the dissolution, merger, consolidation or other reorganization of Tenant, or (B) the sale or other transfer of more than an aggregate of fifty percent (50%) of the voting shares of Tenant (other than to immediate family members by reason of gift or death), within a twelve (12)-month period, or (C) the sale, mortgage, hypothecation or pledge of more than an aggregate of fifty percent (50%) of the value of the unencumbered assets of Tenant within a twelve (12) month period.

14.7 Permitted Transfers to Affiliates. Notwithstanding the foregoing provisions of this Article 14 to the contrary, the assignment or subletting by Tenant of all or any portion of this Lease or the Premises to (i) a parent or subsidiary of Tenant, or (ii) any person or entity which controls, is controlled by or under common control with Tenant, or (iii) any entity which purchases all or substantially all of the assets and/or stock of Tenant, or (iv) a successor to Tenant or any of the foregoing entities by purchase, merger, consolidation or reorganization (all such persons or entities described in (i), (ii), (iii) and (iv) being sometimes hereinafter referred to as "Affiliates") shall not be deemed a Transfer under this Article 14, and thus shall not be subject to the requirement of obtaining Landlord's consent thereto in Section 14.2 above, or Landlord's right to receive any Transfer Premium pursuant to Section 14.3 above or any fees described in the last sentence of Section 14.1 above, provided that:

14.7.1 any such Affiliate was not formed, and such transaction was not entered into, as a subterfuge to (i) avoid the obligations of this Article 14, or (ii) adversely affect the ability of Tenant to satisfy its obligations under this Lease;

14.7.2 Tenant gives Landlord at least five (5) business days' prior notice of any such assignment or sublease to an Affiliate, provided that if Tenant is prohibited from providing such prior notice by applicable laws or any applicable confidentiality agreement, then Tenant shall provide notice to Landlord as soon as reasonably practicable after the effective date of such assignment or sublease;

14.7.3 the successor of Tenant and Tenant have as of the effective date of any such assignment or sublease a tangible net worth and liquidity, in the aggregate, computed in accordance with generally accepted accounting principles (but excluding goodwill as an asset), which is sufficient to meet the obligations of Tenant under this Lease;

14.7.4 any such assignment or sublease shall be subject and subordinate to all of the terms and provisions of this Lease, and such assignee or sublessee shall assume, in a written document reasonably satisfactory to Landlord and delivered to Landlord upon or prior to the effective date of such

assignment or sublease, all the obligations of Tenant under this Lease with respect to the Subject Space which is the subject of such Transfer (other than the amount of Base Rent and Tenant's Share of Operating Expenses and Tax Expenses payable by Tenant with respect to a sublease); and

14.7.5 Tenant shall remain fully liable for all obligations to be performed by Tenant under this Lease.

"Control", as used in this Section 14.7, shall mean the possession, direct or indirect, of the power to cause the direction of the management and policies of a person or entity, or ownership of any sort, whether through the ownership of voting securities, by contract or otherwise.

ARTICLE 15

SURRENDER OF PREMISES; REMOVAL OF PERSONAL PROPERTY

15.1 Surrender of Premises. No act or thing done by Landlord or any agent or employee of Landlord during the Lease Term shall be deemed to constitute an acceptance by Landlord of a surrender of the Premises unless such intent is specifically acknowledged in a writing signed by Landlord. The delivery of keys to the Premises to Landlord or any agent or employee of Landlord shall not constitute a surrender of the Premises or effect a termination of this Lease, whether or not the keys are thereafter retained by Landlord, and notwithstanding such delivery Tenant shall be entitled to the return of such keys at any reasonable time upon request until this Lease shall have been terminated. The voluntary or other surrender of this Lease by Tenant, whether accepted by Landlord or not, or a mutual termination hereof, shall not work a merger, and at the option of Landlord shall operate as an assignment to Landlord of all subleases or subtenancies affecting the Premises.

15.2 Removal of Tenant Property by Tenant. All articles of personal property and all business and trade fixtures, machinery and equipment, furniture and movable partitions owned by Tenant or installed by Tenant at its expense in the Premises, which items are not a part of the tenant improvements or Alterations installed in the Premises, shall remain the property of Tenant, and may be removed by Tenant at any time during the Lease Term as long as (i) Tenant is not in default under this Lease with any applicable cure period having expired, and (ii) Tenant repairs, at its expense, all damage resulting from such removal. Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, subject to the provisions of this Article 15, quit and surrender possession of the Premises to Landlord in as good order and condition as when Tenant took possession and as thereafter improved by Landlord and/or Tenant, reasonable wear and tear and repairs which are specifically made the responsibility of Landlord hereunder excepted. Upon such expiration or termination, Tenant shall, without expense to Landlord, remove or cause to be removed from the Premises all Lines (as defined below) installed or caused to be installed by Tenant (including any Lines installed by or for Tenant above the ceiling of the Premises or below the floor of the Premises), all debris and rubbish, and such items of furniture, equipment, free-standing cabinet work, and other articles of personal property owned by Tenant or installed or placed by Tenant at its expense in the Premises, and such similar articles of any other persons claiming under Tenant, as Landlord may, in its sole discretion, require to be removed, and Tenant shall repair at its own expense all damage to the Premises and Building resulting from such removal.

ARTICLE 16

HOLDING OVER

If Tenant holds over after the expiration of the Lease Term, with or without the express or implied consent of Landlord, such tenancy shall be a tenancy at sufferance, and shall not constitute a renewal hereof or an extension for any further term, and in such case Base Rent shall be payable at a monthly rate equal to one hundred fifty percent (150%) of the Base Rent applicable during the last rental period of the Lease Term under this Lease. Such tenancy shall be subject to every other applicable term, covenant and agreement contained herein. Nothing contained in this Article 16 shall be construed as consent by Landlord to any holding over by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or other termination of this Lease. The provisions of this Article 16 shall not be deemed to limit or constitute a waiver of any other rights or remedies of Landlord provided herein or at law. If Tenant holds over without Landlord's consent, such holding over may compromise or otherwise affect Landlord's ability to enter into new leases with prospective tenants regarding the Premises. Therefore, if Tenant fails to surrender the Premises upon the termination or expiration of this Lease, in addition to any other liabilities to Landlord accruing therefrom, Tenant shall protect, defend, indemnify and hold Landlord harmless from and against all Claims resulting from such failure, including, without limiting the generality of the foregoing, any claims made by any succeeding tenant founded upon such failure to surrender, and any losses suffered by Landlord, including lost profits, resulting from such failure to surrender.

ARTICLE 17

ESTOPPEL CERTIFICATES

Within ten (10) business days following a request in writing by Landlord, or any Mortgagee (as defined below), Tenant shall execute and deliver to Landlord an estoppel certificate which, as submitted by Landlord, shall be substantially in the form of Exhibit D, attached hereto (or such other form as may be required by any prospective mortgagee or purchaser of the Project or any portion thereof), indicating therein any exceptions thereto that may exist at that time, and shall also contain any other information reasonably requested by Landlord or Landlord's Mortgagee or Landlord's prospective mortgagees or purchasers. Tenant shall execute and deliver whatever other instruments may be reasonably required for such purposes. If Tenant fails to execute and deliver such estoppel certificate (or other instruments) within ten (10) business days, it shall be deemed conclusively to have acknowledged the accuracy of the matter set forth in Landlord's estoppel certificate (or such other instruments). At any time during the Lease Term, Landlord may require Tenant to provide Landlord with a current financial statement and financial statements of the two (2) years prior to the current financial statement year; provided, however, that Tenant shall not be required to provide such financial statements to the extent the same are otherwise publicly available to Landlord. Such statements shall be prepared in accordance with generally accepted accounting principles and, if such is the normal practice of Tenant, shall be audited by an independent certified public accountant. Failure of Tenant to timely execute and deliver such estoppel certificate or other instruments shall constitute an acceptance of the Premises and an acknowledgment by Tenant that statements included in the estoppel certificate are true and correct, without exception.

ARTICLE 18

SUBORDINATION AND ATTORNMENT

18.1 Subordination. This Lease is and shall be subject and subordinate to each ground lease of the Project and to the lien of each mortgage or trust deed of trust now or hereafter in force against the Project (herein, a "Mortgage"), and to all renewals, extensions, modifications, consolidations and replacements thereof, and to all advances made or hereafter to be made upon the security of each such Mortgage, unless the holder of any such Mortgage (each, a "Mortgagee"), or the lessors under any such ground lease requires in writing that this Lease be superior thereto. Such subordination shall be effective automatically and without the need for further documentation, but, if requested by the Landlord and/or the Mortgagee of any such Mortgage or the lessor under any such ground lease, Tenant shall, within ten (10) business days after Tenant's receipt of such request, execute such further instruments or assurances as such Mortgagee or ground lessor shall reasonably require. If a Mortgagee of a Mortgage made prior to the execution of this Lease shall request that this Lease have priority over such Mortgage, this Lease shall have priority over such Mortgage and all renewals, modifications, replacements, consolidations and extensions thereof and all advances made thereunder and the interest thereon, and Tenant shall, within ten (10) days after Tenant's receipt of same, execute, acknowledge and deliver to such Mortgagee any and all documents and instruments required by such mortgagee to confirm the priority of this Lease. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of Tenant hereunder in the event of any foreclosure proceeding or sale.

18.2 Attornment. In the event of (i) the termination of any ground lease of the Project or (ii) the purchase of the Premises or Landlord’s interest therein in a foreclosure sale or by deed in lieu of foreclosure under any Mortgage or pursuant to a power of sale contained in any Mortgage, then in any of such events Tenant shall, at the request of such transferee or purchaser of Landlord’s interest, attorn to and recognize the transferee or purchaser of Landlord’s interest or ground lease, as the case may be, as “Landlord” under this Lease for the balance then remaining of the Term, and thereafter this Lease shall continue as a direct Lease between such party, as “Landlord”, and Tenant, as “Tenant”, subject, however, to the provisions of Section 18.3 below. Tenant shall send to each Mortgagee (after notification of the identity of such Mortgagee and the mailing address thereof) copies of all notices that Tenant sends to Landlord pursuant to this Lease; such notices to such Mortgagee shall be sent concurrently with the sending of the notices to Landlord and in the same manner as notices are required to be sent pursuant to Section 24.14 below. Tenant will accept performance of any provision of this Lease by such Mortgagee as performance by, and with the same force and effect as though performed by, Landlord. If any act or omission of Landlord would give Tenant the right, immediately or after lapse of a period of time, to cancel or terminate this Lease, or to claim a partial or total eviction, Tenant shall not exercise such right until (A) Tenant gives notice of such act or omission to Landlord and to each such Mortgagee, and (B) a reasonable period of time for remedying such act or omission elapses following the time when such Mortgagee becomes entitled under such Mortgage to remedy same (which reasonable period shall in no event be less than the period to which Landlord is entitled under this Lease or otherwise, after similar notice, to effect such remedy and which reasonable period shall take into account such time as shall be required to institute and complete any foreclosure proceedings).

18.3 Lender Protections. Notwithstanding anything to the contrary in this Lease, any party that becomes owner of the Building and/or Project ("Successor Landlord") as a result of (i) foreclosure under any Mortgage, (ii) any other exercise by Mortgagee of rights and remedies (whether under any Mortgage or under applicable law, including bankruptcy law) as holder of a Mortgage, or (iii) delivery by Landlord to a Mortgagee (or its designee or nominee) of a deed or other conveyance of Landlord's interest in the Building and/or Project in lieu of any of the foregoing, shall not be liable for or bound by any of the following matters:

(A) any right of Tenant to any offset, defense, claim, counterclaim, reduction, deduction, or abatement against Tenant's payment of rent or performance of Tenant's other obligations under this Lease, arising (whether under this Lease or under applicable law) from Landlord's breach or default under this Lease ("Offset Right") that Tenant may have against Landlord or any other party that was landlord under this Lease at any time before the occurrence of any attornment by Tenant to the Successor Landlord (each, a "Former Landlord") relating to any event or occurrence before the date of such attornment, including any claim for damages of any kind whatsoever as the result of any breach by Former Landlord that occurred before the date of such attornment. The foregoing shall not, however, limit either (1) Tenant's right to exercise against Successor Landlord any Offset Right otherwise available to Tenant because of events occurring after the date of such attornment, or (2) Successor Landlord's obligation to correct any conditions that existed as of the date of such attornment and violate Successor Landlord's obligations as successor landlord under this Lease;

(B) any obligation with respect to any security deposited with Former Landlord, unless such security was actually delivered to Successor Landlord;

(C) to commence or complete any initial construction of improvements in the Premises or any expansion or rehabilitation of existing improvements thereon;

(D) to reconstruct or repair improvements to the Premises, the Building and/or the Project following a Casualty or condemnation;

(E) any offset, defense, claim, counterclaim, reduction, deduction, or abatement arising from representations and warranties by or related to Former Landlord;

(F) any modification or amendment of this Lease, or any waiver of the terms of this Lease, made without Mortgagee's written consent;

(G) any consensual or negotiated surrender, cancellation, or termination of this Lease, in whole or in part, agreed upon between Landlord and Tenant, unless effected unilaterally by Tenant pursuant to the express terms of this Lease;

(H) any payment of rent that Tenant may have made to Former Landlord more than thirty (30) days before the date such rent was first due and payable under this Lease with respect to any period after the date of such attornment other than, and only to the extent that, this Lease expressly required such a prepayment; and

(I) to pay Tenant any sum(s) that any Former Landlord owed to Tenant unless such sums, if any, shall have been actually delivered to Successor Landlord by way of an assumption of escrow accounts or otherwise.

ARTICLE 19

DEFAULTS; REMEDIES

19.1 Defaults. All covenants and agreements to be kept or performed by Tenant under this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any reduction of Rent. The occurrence of any of the following shall constitute a default of this Lease by Tenant:

19.1.1 Any failure by Tenant to pay any Rent or any other charge required to be paid under this Lease, or any part thereof, within five (5) business days after receipt of written notice of delinquency therefor;

19.1.2 The failure by Tenant to observe or perform according to the provisions of Articles 5, 10, 14, 17 or 18 of this Lease, or any breach by Tenant of any representations and warranties set forth in this Lease, where, in each instance, such failure continues for more than five (5) days after notice from Landlord;

19.1.3 The making by Tenant of any Transfer, except as expressly permitted in Article 14 above;

19.1.4 If: (i) Tenant, or any guarantor of Tenant's obligations under this Lease ("Guarantor") admits in writing that it cannot meet its obligations as they become due; (ii) Tenant, or any Guarantor is declared insolvent according to any law; (iii) assignment of Tenant's or Guarantor's property is made for the benefit of creditors; (iv) a receiver or trustee is appointed for Tenant or Guarantor or its property; (v) the interest of Tenant or Guarantor under this Lease is levied on under execution or other legal process; (vi) any petition is filed by or against Tenant or Guarantor to declare Tenant and/or Guarantor bankrupt or to delay, reduce or modify Tenant's and/or Guarantor's debts or obligations; or (vii) any petition is filed or other action taken to reorganize or modify Tenant's or Guarantor's capital structure, if Tenant or Guarantor is a corporation or other entity; any such levy, execution, legal process or petition filed against Tenant or Guarantor shall not constitute a breach of this Lease provided Tenant or Guarantor shall vigorously contest the same by appropriate proceedings and shall remove or vacate the same within sixty (60) days from the date of its creation, service or filing; or

19.1.5 Any failure by Tenant to observe or perform any other provision, covenant or condition of this Lease to be observed or performed by Tenant where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant; provided however, that any such notice shall be in lieu of, and not in addition to, any notice required under California Code of Civil Procedure Section 1161 or any similar or successor law, and may be served on Tenant in the manner allowed for service of notices under this Lease; and provided further that if the nature of such default is such that the same cannot reasonably be cured within a thirty (30)) day period, Tenant shall not be deemed to be in default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure said default, as soon as possible.

19.2 Remedies Upon Default. Upon the occurrence of such default by Tenant, Landlord shall have, in addition to any other remedies available to Landlord at law or in equity, the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

19.2.1 Terminate this Lease, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim or damages therefor; and Landlord may recover from Tenant the following:

(i) the worth at the time of award of any unpaid rent which has been earned at the time of such termination; plus

(ii) the worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iii) the worth at the time of award of the amount by which the unpaid rent for the balance of the Lease Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iv) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; plus

(v) at Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

The term "rent" as used in this Section 19.2 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 19.2.1(i) and (ii), above, the "worth at the time of award" shall be computed by allowing interest at the Interest Rate set forth in Section 4.2.3 above, but in no case greater than the maximum amount of such interest permitted by law. As used in Section 19.2.1(iii) above, the "worth at the time of award" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%).

19.2.2 Landlord shall have the remedy described in California Civil Code Section 1951.4 (lessor may continue lease in effect after lessee's breach and abandonment and recover rent as it becomes due, if lessee has the right to sublet or assign, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease on account of any default by Tenant,

Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

19.2.3 Landlord may, but shall not be obligated to, make any such payment or perform or otherwise cure any such obligation, provision, covenant or condition on Tenant's part to be observed or performed (and may enter the Premises for such purposes). In the event of Tenant's failure to perform any of its obligations or covenants under this Lease, and such failure to perform poses a material risk of injury or harm to persons or damage to or loss of property, then Landlord shall have the right to cure or otherwise perform such covenant or obligation at any time after such failure to perform by Tenant, whether or not any such notice or cure period set forth in Section 19.1 above has expired. Any such actions undertaken by Landlord pursuant to the foregoing provisions of this Section 19.2.3 shall not be deemed a waiver of Landlord's rights and remedies as a result of Tenant's failure to perform and shall not release Tenant from any of its obligations under this Lease.

19.3 Payment by Tenant. Tenant shall pay to Landlord, within ten (10) days after delivery by Landlord to Tenant of statements therefor: (i) sums equal to expenditures reasonably made and obligations incurred by Landlord in connection with Landlord's performance or cure of any of Tenant's obligations pursuant to the provisions of Section 19.2.3 above; and (ii) sums equal to all expenditures made and obligations incurred by Landlord in collecting or attempting to collect the Rent or in enforcing or attempting to enforce any rights of Landlord under this Lease or pursuant to law, including, without limitation, all legal fees and other amounts so expended. Tenant's obligations under this Section 19.3 shall survive the expiration or sooner termination of the Lease Term.

19.4 Subleases of Tenant. Whether or not Landlord elects to terminate this Lease on account of any default by Tenant, as set forth in this Article 19, following any such default by Tenant, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. If Landlord elects to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

19.5 Waiver of Default. No waiver by Landlord of any violation or breach by Tenant of any of the terms, provisions and covenants herein contained shall be deemed or construed to constitute a waiver of any other or later violation or breach by Tenant of the same or any other of the terms, provisions, and covenants herein contained. Forbearance by Landlord in enforcement of one or more of the remedies herein provided upon a default by Tenant shall not be deemed or construed to constitute a waiver of such default. The acceptance of any Rent hereunder by Landlord following the occurrence of any default, whether or not known to Landlord, shall not be deemed a waiver of any such default, except only a default in the payment of the Rent so accepted.

19.6 Efforts to Relet. For the purposes of this Article 19, Tenant's right to possession shall not be deemed to have been terminated by efforts of Landlord to relet the Premises, by its acts of maintenance or preservation with respect to the Premises, or by appointment of a receiver to protect Landlord's interests hereunder. The foregoing enumeration is not exhaustive, but merely illustrative of acts which may be performed by Landlord without terminating Tenant's right to possession.

19.7 Landlord's Default. If Landlord shall fail to perform any term or provision under this Lease required to be performed by Landlord, Landlord shall not be deemed to be in default hereunder nor subject to any claims for damages of any kind, unless such failure shall have continued for a period of thirty (30) days after written notice thereof by Tenant; provided, if the nature of Landlord's failure is such that more than thirty (30) days are reasonably required in order to cure, Landlord shall not be in default if Landlord commences to cure such failure within such thirty (30) day period, and thereafter reasonably seeks to cure such failure to completion. Upon any such default by Landlord under this Lease, Tenant may, except as otherwise specifically provided in this Lease to the contrary, exercise any of its rights provided at law or in equity (but Tenant shall not be entitled to recover any lost profits, loss of business or other consequential damages and in any event, Landlord's liability or obligations with respect to any such remedy shall be limited as provided in Section 24.10); provided, however, in recognition that Landlord must receive timely payments of Rent and operate the Project, Tenant shall have no right of self-help to perform repairs or any other obligation of Landlord, and shall have no right to withhold, set-off, or abate Rent (except as otherwise expressly provided in this Lease).

ARTICLE 20

SECURITY DEPOSIT

Concurrent with Tenant's execution of this Lease, Tenant shall deposit with Landlord a security deposit (the "Security Deposit") in the amount set forth in Section 10 of the Summary. The Security

Deposit shall be held by Landlord as security for the faithful performance by Tenant of all the terms, covenants, and conditions of this Lease to be kept and performed by Tenant during the Lease Term. If Tenant defaults with respect to any provisions of this Lease, including, but not limited to, the provisions relating to the payment of Rent, Landlord may, but shall not be required to, use, apply or retain all or any part of the Security Deposit for the payment of any Rent or any other sum in default, or for the payment of any amount that Landlord may spend or become obligated to spend by reason of Tenant's default, or to compensate Landlord for any other loss or damage that Landlord may suffer by reason of Tenant's default. If any portion of the Security Deposit is so used or applied, Tenant shall, within ten (10) business days after written demand therefor, deposit cash with Landlord in an amount sufficient to restore the Security Deposit to its original amount, and Tenant's failure to do so shall be a default under this Lease. If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, the Security Deposit, or any balance thereof, shall be returned to Tenant, or, at Landlord's option, to the last assignee of Tenant's interest hereunder, within sixty (60) days following the expiration of the Lease Term. Landlord shall not be required to keep the Security Deposit in a separate account and Tenant shall not be entitled to any interest on the Security Deposit. Tenant hereby waives the provisions of Section 1950.7 of the California Civil Code, and all other provisions of law, now or hereafter in force, which provide that Landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by Tenant or to clean the Premises, it being agreed that Landlord may, in addition, claim those sums reasonably necessary to compensate Landlord for any other loss or damage, foreseeable or unforeseeable, caused by the act or omission of Tenant or any officer, employee, agent or invitee of Tenant.

ARTICLE 21

COMPLIANCE WITH LAW

21.1 Compliance with Law. Tenant shall not do anything or suffer anything to be done in or about the Premises which will in any way violate any law, statute, ordinance or other rule, directive, order, regulation, guideline, or requirement of any governmental entity or governmental agency now in force or which may hereafter be enacted or promulgated. At its sole cost and expense, Tenant shall promptly comply with all applicable laws that pertain to Tenant or its use of the Premises (including applicable laws pertaining to Hazardous Materials and applicable laws pertaining to Tenant's use of the Premises, whether or not Tenant’s compliance will necessitate expenditures or interfere with its use and enjoyment of the Premises, including ceasing or reducing Tenant's business operations in or Tenant's use of, the Premises), subject to Landlord's obligation as set forth hereinbelow to comply with applicable laws with respect to those items of the Building and Project that are Landlord's obligation to repair as set forth in Section 7.2 above. In addition, Tenant shall fully comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. The judgment of any court of competent jurisdiction or the admission of Tenant in any judicial action, regardless of whether Landlord is a party thereto, that Tenant has violated any of said governmental measures, shall be conclusive of that fact as between Landlord and Tenant. Landlord shall comply with all applicable laws relating to those items of the Building and Project that are Landlord's obligation to repair as set forth in Section 7.2 above. Notwithstanding the foregoing, to the extent Landlord's compliance obligations (including any obligations to correct violations of construction-related accessibility standards described in Section 21.2 below) in the immediately preceding sentence are triggered by any improvements or Alterations made to the Premises by or on behalf of Tenant, Tenant's particular manner of use of the Premises, and/or Tenant's installation of any trade fixtures, furniture, equipment or personal property in the Premises, Tenant shall reimburse Landlord for the reasonable cost of such compliance within ten (10) business days after Tenant's receipt of an invoice therefor from Landlord.

21.2 CASp. For purposes of Section 1938(a) of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that the Premises have not undergone inspection by a Certified Access Specialist (CASp). In addition, the following notice is hereby provided pursuant to Section 1938(e) of the California Civil Code: "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." In furtherance of and in connection with such notice: (i) Tenant, having read such notice and understanding Tenant's right to request and obtain a CASp inspection and with advice of counsel, hereby elects not to obtain such CASp inspection and forever waives its rights to obtain a CASp inspection with respect to the Premises, Building and/or Project to the extent permitted

by applicable laws now or hereafter in effect; and (ii) if the waiver set forth in clause (i) hereinabove is not enforceable pursuant to applicable laws now or hereafter in effect, then Landlord and Tenant hereby agree as follows (which constitute the mutual agreement of the parties as to the matters described in the last sentence of the foregoing notice): (A) Tenant shall have the one-time right to request for and obtain a CASp inspection, which request must be made, if at all, in a written notice delivered by Tenant to Landlord on or before the Lease Commencement Date; (B) any CASp inspection timely requested by Tenant shall be conducted (1) between the hours of 9:00 a.m. and 5:00 p.m. on any business day, (2) only after ten (10) days' prior written notice to Landlord of the date of such CASp inspection, (3) in a professional manner by a CASp designated by Landlord and without any testing that would damage the Premises, Building or Project in any way, and (4) at Tenant's sole cost and expense, including, without limitation, Tenant's payment of the fee for such CASp inspection, the fee for any reports prepared by the CASp in connection with such CASp inspection (collectively, the "CASp Reports") and all other costs and expenses in connection therewith; (C) Tenant shall deliver a copy of any CASp Reports to Landlord within two (2) business days after Tenant's receipt thereof; (D) Tenant, at its sole cost and expense, shall be responsible for making any improvements, alterations, modifications and/or repairs to or within the Premises to correct violations of construction-related accessibility standards including, without limitation, any violations disclosed by such CASp inspection; and (E) if such CASp inspection identifies any improvements, alterations, modifications and/or repairs necessary to correct violations of construction-related accessibility standards relating to those items of the Building and Project located outside the Premises that are Landlord's obligation to repair as set forth in Section 7.2 above, then Landlord shall perform such improvements, alterations, modifications and/or repairs as and to the extent required by applicable laws to correct such violations, and Tenant shall reimburse Landlord for the cost of such improvements, alterations, modifications and/or repairs within ten (10) business days after Tenant's receipt of an invoice therefor from Landlord.

ARTICLE 22

ENTRY BY LANDLORD

Landlord reserves the right at all reasonable times and upon at least twenty-four (24) hours' prior notice to Tenant (provided that no such notice shall be required in the event of an emergency or to provide regularly scheduled services) to enter the Premises to: (i) inspect them; (ii) show the Premises to prospective purchasers, mortgagees or ground lessors, or, during the last twelve (12) months of the Lease Term (as may be extended), prospective tenants; (iii) post notices of non-responsibility; or (iv) alter, improve or repair the Premises or the Building if necessary to comply with current building codes or other applicable laws, or for structural alterations, repairs or improvements to the Building, or as Landlord may otherwise reasonably desire or deem necessary. Notwithstanding anything to the contrary contained in this Article 22, Landlord may enter the Premises at any time, without notice to Tenant, in emergency situations and/or to perform janitorial and other services required of Landlord. Any such entries shall be without the abatement of Rent and shall include the right to take such reasonable steps as required to accomplish the stated purposes; provided, however, that any such entry shall be accomplished as expeditiously as reasonably possible and in a manner so as to cause as little interference to Tenant as reasonably possible. Tenant hereby waives any claims for damages or for any injuries or inconvenience to or interference with Tenant's business, lost profits, any loss of occupancy or quiet enjoyment of the Premises, and any other loss occasioned by Landlord's entry into the Premises. For each of the above purposes, Landlord shall at all times have a key with which to unlock all the doors in the Premises, excluding Tenant's vaults, safes and special security areas designated in advance by Tenant. In an emergency, Landlord shall have the right to use any means that Landlord may deem proper to open the doors in and to the Premises. Any entry into the Premises by Landlord in the manner hereinbefore described shall not be deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an actual or constructive eviction of Tenant from any portion of the Premises.

ARTICLE 23

TENANT PARKING

Tenant shall rent throughout the Lease Term the number of unreserved parking spaces set forth in Section 11 of the Summary, located in those portions of the Parking Facilities specified in Section 11 of the Summary. Such parking spaces shall be located in such areas of such Parking Facilities as shall be designated by Landlord from time to time for parking by tenants of the Building and/or Project. All of such parking privileges shall be provided by Landlord, or at the option of Landlord, through a parking operator designated by Landlord (the parking operator so designated by Landlord shall be referred to herein as the "Parking Operator"), and Landlord may delegate its responsibilities under this Article 23 to the Parking Operator in which case the Parking Operator shall have all rights of control attributed by this Article 23 to Landlord. Tenant shall not be obligated to pay any parking charges for the unreserved parking spaces rented by Tenant. Tenant's continued right to use the unreserved parking spaces is conditioned upon Tenant abiding by the Parking Rules and Regulations which are in effect on the date hereof, as set forth in the attached Exhibit B and all modifications and additions thereto which are

prescribed from time to time for the orderly operation and use of the Parking Facilities by Landlord and/or Landlord's Parking Operator and upon Tenant's cooperation in seeing that Tenant's employees and visitors also comply with the Parking Rules and Regulations (and all such modifications and additions thereto, as the case may be). In addition, Landlord (or the Parking Operator, if so designated by Landlord) may assign any parking spaces and/or make all or a portion of such spaces reserved or institute an attendant-assisted tandem parking program and/or valet parking program if Landlord (or the Parking Operator, if so designated by Landlord) determines in its sole discretion that such is necessary or desirable for orderly and efficient parking. Landlord (or the Parking Operator, if so designated by Landlord) specifically reserves the right, from time to time, to change the size, configuration, design, layout, location and all other aspects of the Parking Facilities, and Tenant acknowledges and agrees that Landlord (or the Parking Operator, if so designated by Landlord), from time to time, may, without incurring any liability to Tenant and without any abatement of Rent under this Lease temporarily close-off or restrict access to any of the Parking Facilities, or temporarily relocate Tenant's parking spaces to other parking facilities within a reasonable distance from the Parking Facilities, for purposes of permitting or facilitating any such construction, alteration or improvements or to accommodate or facilitate renovation, alteration, construction or other modification of other improvements or structures located on the Project. The parking spaces provided to Tenant pursuant to this Article 23 are provided solely for use by Tenant's own personnel and such spaces may not be transferred, assigned, subleased or otherwise alienated by Tenant without Landlord's prior approval.

ARTICLE 24

MISCELLANEOUS PROVISIONS

24.1 Binding Effect. Each of the provisions of this Lease shall extend to and shall, as the case may require, bind or inure to the benefit not only of Landlord and of Tenant, but also of their respective successors or assigns, provided this clause shall not permit any assignment by Tenant contrary to the provisions of Article 14 above.

24.2 Tenant's Signs.

24.2.1 Identification Signs. Tenant shall be entitled, at Landlord’s cost, to: (i) one (1) identification sign on or near the entry doors of the Premises; and (ii) one (1) identification or directional sign, as designated by Landlord, in the elevator lobby on the floor on which the Premises are located (collectively, the “Identification Signs”). The Identification Signs shall be installed by a signage contractor designated by Landlord. Landlord shall be responsible for the costs of the initial installation of the Identification Signs and any subsequent changes and modifications thereto shall be at Tenant’s cost and subject to Landlord’s prior written approval. The location, quality, design, style, lighting and size of the Identification Signs shall be consistent with the Landlord's Building standard signage program and shall be subject to Landlord's prior written approval. Upon the expiration or earlier termination of this Lease, Tenant shall be responsible, at its sole cost and expense, for the removal of the Identification Signs and the repair of all damage to the Building caused by such removal. Except for the Identification Signs and Tenant’s Monument Sign (as defined below), Tenant may not install any signs on the exterior or roof of the Building and/or the Additional Buildings or the common areas of the Building, the Additional Buildings or the Project. Any signs, window coverings, or blinds (even if the same are located behind the Landlord approved window coverings for the Building), or other items visible from the exterior of the Premises or Building are subject to the prior approval of Landlord, in its sole and absolute discretion.

24.2.2 Tenant’s Monument Sign. Subject to the approval of all applicable governmental authorities, and compliance with all applicable laws, Landlord's signage program for the Project and all recorded covenants, conditions and restrictions affecting the Project, and the terms of this Section 24.2.2, Tenant shall have the non-exclusive right to display Tenant's trade name "Sierra Oncology", but no other markings ("Tenant's Monument Sign"), displayed on one (1) strip of that certain existing monument sign located in front of the Building (the "Signage Monument"). The graphics, materials, color, design, lettering, size, specifications, lighting and manner of affixing Tenant’s Monument Sign shall be subject to Landlord's reasonable approval. Tenant shall pay for all costs and expenses related to Tenant’s Monument Sign, including, without limitation, the design, construction, installation, maintenance, insurance, utilities, repair and replacement of Tenant’s Monument Sign. In addition, Tenant shall pay to Landlord, within ten (10) days after demand, from time to time, all other actual out-of-pocket costs attributable to the fabrication, insurance, maintenance and repair of Tenant's Monument Sign on the Signage Monument plus a pro-rata share (determined by Landlord based upon the number of tenant signs on the Signage Monument) of the costs of maintenance, insurance, and repair of the Signage Monument. Landlord shall have the right to relocate, redesign and/or reconstruct the Signage Monument from time to time. Tenant shall install and maintain Tenant’s Monument Sign in compliance with all applicable laws and subject to the applicable provisions of Articles 7 and 8 above. Tenant shall be responsible for maintaining insurance on Tenant’s Monument Sign as part of the insurance required to be carried by Tenant pursuant to Section 10.3.2 above. If Tenant’s Monument Sign requires maintenance, repairs and/or replacement as determined in Landlord's reasonable judgment, Landlord shall have the right to provide written notice thereof to

Tenant and Tenant shall cause such repairs, replacement and/or maintenance to be performed within ten (10) days after receipt of such notice from Landlord, at Tenant's sole cost and expense; provided, however, if such repairs, replacement and/or maintenance are reasonably expected to require longer than ten (10) days to perform, Tenant shall commence such repairs, replacement and/or maintenance within such ten (10) day period and shall diligently prosecute such repairs, replacement and maintenance to completion. If Tenant fails to perform such maintenance, repairs and/or replacement within the periods described in the immediately preceding sentence, then Landlord shall have the right to cause such work to be performed and to charge Tenant as Additional Rent for the costs of such work, including interest at the Interest Rate. Upon the expiration or earlier termination of this Lease (or prior to such expiration or earlier termination, upon Tenant's loss of its rights to Tenant's Monument Sign pursuant to this Section 24.2.2 hereinbelow) Tenant shall, at Tenant's sole cost and expense, cause Tenant's Monument Sign to be removed from the Signage Monument, and Tenant shall repair all damage occasioned thereby and restore the affected areas to their original condition prior to the installation of Tenant's Monument Sign so required to be removed. If Tenant fails to timely remove Tenant's Monument Sign and repair and restore the affected areas as provided in the immediately preceding sentence, then Landlord may perform such work, and all costs and expenses incurred by Landlord in so performing such work shall be reimbursed by Tenant to Landlord within thirty (30) days after Tenant's receipt of invoice therefor including interest at the Interest Rate. The immediately preceding sentence shall survive the expiration or earlier termination of this Lease. The rights to Tenant's Monument Sign are personal to the original Tenant executing this Lease (the "Original Tenant") and may not be transferred by the Original Tenant or used by anyone else. In addition, following the Possession Date, the Original Tenant shall only have such rights to Tenant's Monument Sign when the Original Tenant is in actual and physical possession of the entire Premises.

24.3 Modification of Lease. If any current or prospective mortgagee or ground lessor for the Project requires any modifications to this Lease, which modifications will not cause an increased cost or expense to Tenant or in any other way materially and adversely change the rights and obligations of Tenant hereunder, then and in such event, Tenant agrees that this Lease may be so modified and agrees to execute whatever documents are required therefor and deliver the same to Landlord within ten (10) days following the request therefor, provided that Landlord shall reimburse Tenant for all actual -out-of-pocket legal fees incurred in connection with the same in an amount of up to, but not exceeding $2,500.00. If Landlord or any such current or prospective mortgagee or ground lessor require execution of a short form of Lease for recording, containing, among other customary provisions, the names of the parties, a description of the Premises and the Lease Term, Tenant shall execute such short form of Lease and to deliver the same to Landlord within ten (10) days following the request therefor, provided that Landlord shall reimburse Tenant for all actual -out-of-pocket legal fees incurred in connection with the same in an amount of up to, but not exceeding $2,500.00.

24.4 Transfer of Landlord's Interest. Landlord has the right to transfer all or any portion of its interest in the Project and/or this Lease, and upon any such transfer and a transfer of the Security Deposit, Landlord shall automatically be released from all liability under this Lease and Tenant shall look solely to such transferee for the performance of Landlord's obligations hereunder after the date of transfer. Landlord may also assign its interest in this Lease to the holder of any mortgage or deed of trust as additional security, but such assignment shall not release Landlord from its obligations hereunder and Tenant shall continue to look to Landlord for the performance of its obligations hereunder.

24.5 Prohibition Against Recording. Except as provided in Section 24.3 above, neither this Lease, nor any memorandum, affidavit or other writing with respect thereto, shall be recorded by Tenant or by anyone acting through, under or on behalf of Tenant, and the recording thereof in violation of this provision shall, at Landlord's election, constitute a non-curable default by Tenant under this Lease, the occurrence of which shall, in addition to Landlord's other rights and remedies, entitle Landlord to terminate this Lease at Landlord's election (pursuant to and in accordance with Section 19.2 above).

24.6 Captions. The captions of Articles and Sections are for convenience only and shall not be deemed to limit, construe, affect or alter the meaning of such Articles and Sections.

24.7 Relationship of Parties. Nothing contained in this Lease shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent, partnership, joint venturer or any association between Landlord and Tenant, it being expressly understood and agreed that neither the method of computation of Rent nor any act of the parties hereto shall be deemed to create any relationship between Landlord and Tenant other than the relationship of landlord and tenant.

24.8 Time of Essence. Time is of the essence of this Lease and each of its provisions.

24.9 Partial Invalidity. If any term, provision or condition contained in this Lease shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, provision or condition to persons or circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and each and every other term, provision and condition of this Lease shall be valid and enforceable to the fullest extent possible permitted by law.

24.10 Landlord Exculpation. Notwithstanding anything in this Lease to the contrary, and notwithstanding any applicable law to the contrary, the liability of Landlord and the Landlord Parties under this Lease (including any successor landlord) and any recourse by Tenant against Landlord or the Landlord Parties (including any successor landlord) shall be limited solely and exclusively to an amount which is equal to the interest of Landlord in the Project, and neither Landlord, nor any of the Landlord Parties shall have any personal liability therefor, and Tenant hereby expressly waives and releases such personal liability on behalf of itself and all persons claiming by, through or under Tenant.

24.11 Entire Agreement. There are no oral agreements between the parties hereto affecting this Lease and this Lease supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by Landlord to Tenant with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. This Lease, the exhibits and schedules attached hereto, and any side letter or separate agreement executed by Landlord and Tenant in connection with this Lease and dated of even date herewith contain all of the terms, covenants, conditions, warranties and agreements of the parties relating in any manner to the rental, use and occupancy of the Premises, shall be considered to be the only agreement between the parties hereto and their representatives and agents, and none of the terms, covenants, conditions or provisions of this Lease can be modified, deleted or added to except in writing signed by the parties hereto.

24.12 Right to Lease. Landlord reserves the absolute right to effect such other tenancies in the Building and Additional Buildings as Landlord in the exercise of its sole business judgment shall determine to best promote the interests of the Project. Tenant does not rely on the fact, nor does Landlord represent, that any specific tenant or type or number of tenants shall, during the Lease Term, occupy any space in the Building, the Additional Buildings or the Project.

24.13 Force Majeure. Notwithstanding anything to the contrary contained in this Lease, any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, acts of war, terrorist acts, inability to obtain services, labor, or materials or reasonable substitutes therefor, governmental actions, governmental laws, regulations or restrictions, civil commotions, Casualty, actual or threatened public health emergency (including, without limitation, epidemic, pandemic, famine, disease, plague, quarantine, and other significant public health risk), governmental edicts, actions, orders, declarations or restrictions (including (i) any states of emergency and quarantines imposed by a governmental entity or agency, and (ii) any government imposed shelter-in-place orders, stay at home orders and/or restrictions on travel related thereto that preclude Tenant, or Landlord, their agents, contractors or employees from accessing the Premises, as applicable), breaches in cybersecurity, and other causes beyond the reasonable control of the party obligated to perform, regardless of whether such other causes are (A) foreseeable or unforeseeable or (B) related to the specifically enumerated events in this Section 24.13 (collectively, the "Force Majeure") shall excuse the performance of such party for a period equal to any such prevention, delay or stoppage. If this Lease specifies a time period for performance of an obligation of either party, that time period shall be extended by the period of any delay in such party's performance caused by a Force Majeure. Any party claiming Force Majeure shall notify the other party in writing of such Force Majeure event, and may not claim more than five (5) days of retroactive days of Force Majeure delay. Notwithstanding anything to the contrary in this Lease, no event of Force Majeure shall (1) excuse Tenant's obligations to pay Rent and other charges as and when due pursuant to this Lease, (2) be grounds for Tenant to abate any portion of Rent due pursuant to this Lease, or entitle either party to terminate this Lease, except as allowed pursuant to Articles 11 and 12 above, (3) excuse Tenant's obligations under Articles 5 and 21 above, (4) extend the time period for Tenant to vacate the Premises following the expiration of the Lease Term, or (5) excuse Tenant's obligations under Section 10.2 to maintain the required insurance. Tenant hereby waives any and all rights it might otherwise have pursuant to Section 1511 of the California Civil Code, and hereby agrees that this Section 24.13 is an express provision to the contrary.

24.14 Notices. All notices, demands, statements, approvals or communications (collectively, "Notices") given or required to be given by either party to the other pursuant to any provision of this Lease shall be in writing, and shall be sent by United States certified or registered mail, postage prepaid, return receipt requested, or Priority Mail Express (with waiver of signature) together with a courtesy electronic copy of the Notice, or by a nationally recognized overnight courier service (e.g., Federal Express), or delivered personally (i) to Tenant at the appropriate address set forth in Section 5 of the Summary, or to such other place as Tenant may from time to time designate in a Notice to Landlord; or (ii) to Landlord at the addresses set forth in Section 3 of the Summary, or to such other firm or to such other place as Landlord may from time to time designate in a Notice to Tenant. Any Notice is deemed given (A) on the date which is two (2) business days after it is mailed as provided in this Section 24.14, or (B) upon the date which is one (1) business day after it is sent by nationally recognized overnight courier, or (C) upon the date personal delivery is made to the address of the addressee (even if refused or rejected). If Tenant is notified of the identity and address of Landlord's mortgagee or ground lessor, Tenant shall give to such mortgagee or ground lessor written notice of any default by Landlord under the terms of this Lease pursuant to the provisions hereinabove, and such mortgagee or ground lessor shall be

given a reasonable opportunity to cure such default prior to Tenant's exercising any remedy available to Tenant.

24.15 Joint and Several. If there is more than one person or entity executing this Lease as Tenant, the obligations imposed upon such persons and entities under this Lease are and shall be joint and several.

24.16 Authority. Each individual executing this Lease on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in California and that Tenant has full right and authority to execute and deliver this Lease and that each person signing on behalf of Tenant is authorized to do so.

24.17 Governing Law. This Lease shall be construed and enforced in accordance with the laws of the State of California.

24.18 Submission of Lease. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of or an option for lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

24.19 Brokers. Landlord and Tenant each hereby represents and warrants to the other party that it (i) has had no dealings with any real estate broker or agent in connection with the negotiation of this Lease, excepting only the real estate brokers or agents specified in Section 12 of the Summary (collectively, the "Brokers"), and (ii) knows of no other real estate broker or agent who is entitled to a commission in connection with this Lease. Landlord shall pay the brokerage commissions owing to the Brokers in connection with this Lease pursuant to the terms of a separate written agreement between and/or among Landlord and the Brokers. Each party agrees to indemnify, defend, protect and hold the other party harmless from and against any and all Claims with respect to any leasing commission or equivalent compensation alleged to be owing on account of the indemnifying party's dealings with any real estate broker or agent in connection with this Lease other than the Brokers. The terms of this Section 24.19 shall survive the expiration or earlier termination of the Lease Term.

24.20 Independent Covenants. This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent and not dependent and Tenant hereby expressly waives the benefit of any statute to the contrary and agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to any setoff of the Rent or other amounts owing hereunder against Landlord; provided, however, that the foregoing shall in no way impair the right of Tenant to commence a separate action against Landlord for any violation by Landlord of the provisions hereof so long as notice is first given to Landlord and any holder of a mortgage or deed of trust covering the Building, Project or any portion thereof, of whose address Tenant has theretofore been notified, and an opportunity is granted to Landlord and such holder to correct such violations as provided above.

24.21 Project Name and Signage. Landlord shall have the right at any time to designate and/or change the name of the Project, the Building and/or the Additional Buildings, and to install, affix and maintain any and all signs on the exterior and on the interior of the Project, the Building and/or the Additional Buildings, as Landlord may, in Landlord's sole discretion, desire. Tenant shall not use the name of the Project, the Building and/or the Additional Buildings, or use pictures or illustrations of the Project, the Building and/or the Additional Buildings, in advertising or other publicity, without the prior written consent of Landlord.

24.22 Successors. Except as otherwise expressly provided herein, the obligations of this Lease shall bind and benefit the successors and assigns of the parties hereto; provided, however, that no assignment, sublease or other Transfer in violation of the provisions of Article 14 shall operate to vest any rights in any putative assignee, subtenant or transferee of Tenant.

24.23 Landlord Renovations. Except as specifically set forth in this Lease: (i) Landlord has no obligation to alter, remodel, improve, renovate, repair or decorate the Premises, Building, the Additional Buildings, Project or any part thereof; and (ii) no representations or warranties respecting the condition of the Premises, the Building, the Additional Buildings or the Project have been made by Landlord to Tenant. At Landlord's option, Landlord may at any time and from time to time, renovate, improve, alter, or modify (collectively, the "Renovations") the Building, the Premises, and/or the Project, including without limitation the Building Parking Facilities, common areas, systems and equipment, roof, and structural portions of the same, which Renovations may include, without limitation, (A) modifying the common areas and tenant spaces to comply with applicable laws and regulations, including regulations relating to the physically disabled, seismic conditions, and building safety and security, (B) installing new floor covering, lighting, and wall coverings in the common areas, and in connection with any Renovations, Landlord may, among other things, erect scaffolding or other necessary structures in the Building or Project, limit or eliminate access to portions of the Project, including portions of the common

areas, or perform work in the Building or Project, which work may create noise, dust or leave debris in the Project, (C) renovation of the main entry to the Building and the main Building lobby area, (D) renovation of the elevator, lobbies, elevator doors and frames, and (E) installations, repairs or maintenance of telephone risers. Tenant hereby agrees that such Renovations and Landlord's actions in connection with such Renovations shall in no way constitute a constructive eviction of Tenant nor entitle Tenant to any abatement of Rent. Landlord shall have no responsibility or for any reason be liable to Tenant for any direct or indirect injury to or interference with Tenant's business arising from the Renovations, nor shall Tenant be entitled to any compensation or damages from Landlord for loss of the use of the whole or any part of the Premises or of Tenant's personal property or improvements resulting from the Renovations or Landlord's actions in connection with such Renovations, or for any inconvenience or annoyance occasioned by such Renovations or Landlord's actions in connection with such Renovations.

24.24 Confidentiality. Tenant acknowledges that the contents of this Lease (specifically including, but not limited, to the Base Rent abatement provisions and the amount of the Abated Rent set forth in Section 3.2 above) are confidential information. Tenant shall keep such information confidential and shall not disclose such confidential information to any person or entity other than Tenant's legal, accounting, and space planning consultants, respectively, or as otherwise required by law (collectively, the "Authorized Parties"), and shall instruct the Authorized Parties to keep such information confidential. If Tenant discloses any such confidential information to anyone other than the Authorized Parties, then Tenant shall be in default under this Lease without the benefit of any notice and cure period, and, in addition to all of Landlord's other rights and remedies resulting from such default, (i) if such default occurs prior to the end of the Abatement Period, Tenant shall no longer be entitled to receive the Abated Rent not theretofore accrued, and Landlord shall be entitled to recover all of the Abated Rent theretofore provided to Tenant, and (ii) if such default occurs after the end of the Abatement Period, Landlord shall be entitled to recover all of the Abated Rent theretofore provided to Tenant.

24.25 Landlord's Title; Air Rights. Landlord's title is and always shall be paramount to the title of Tenant. Nothing herein contained shall empower Tenant to do any act which can, shall or may encumber the title of Landlord. No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease.

24.26 No Waiver. No waiver of any provision of this Lease shall be implied by any failure of a party to enforce any remedy on account of the violation of such provision, even if such violation shall continue or be repeated subsequently, any waiver by a party of any provision of this Lease may only be in writing, and no express waiver shall affect any provision other than the one specified in such waiver and that one only for the time and in the manner specifically stated. No receipt of monies by Landlord from Tenant after the termination of this Lease shall in any way alter the length of the Lease Term or of Tenant's right of possession hereunder or after the giving of any notice shall reinstate, continue or extend the Lease Term or affect any notice given Tenant prior to the receipt of such monies, it being agreed that after the service of notice or the commencement of a suit or after final judgment for possession of the Premises, Landlord may receive and collect any Rent due, and the payment of said Rent shall not waive or affect said notice, suit or judgment.

24.27 Jury Trial. IF EITHER PARTY COMMENCES LITIGATION AGAINST THE OTHER FOR THE SPECIFIC PERFORMANCE OF THIS LEASE, FOR DAMAGES FOR THE BREACH HEREOF OR OTHERWISE FOR ENFORCEMENT OF ANY REMEDY HEREUNDER, THE PARTIES HERETO AGREE TO AND HEREBY DO WAIVE ANY RIGHT TO A TRIAL BY JURY.

24.28 Attorneys' Fees. In the event of any such commencement of litigation, the prevailing party shall be entitled to recover from the other party such costs and reasonable attorneys' fees as may have been incurred, including any and all costs incurred in enforcing, perfecting and executing such judgment. In addition, Tenant shall reimburse Landlord, upon demand, for all reasonable attorneys' fees incurred in collecting Rent, resolving any actual default by Tenant, securing indemnification as provided in this Lease or otherwise seeking enforcement against Tenant, its sublessees and assigns, of Tenant's obligations under this Lease. Should Landlord be made a party to any litigation instituted by Tenant against a party other than Landlord, or by a third party against Tenant, Tenant shall indemnify, hold harmless and defend Landlord from any and all Claims in connection with the litigation.

24.29 Building Directory. At Landlord's cost, Landlord shall include Tenant's name and suite number on one (1) line on the Building lobby directory.

24.30 Application of Payments. Landlord shall have the right to apply payments received from Tenant pursuant to this Lease, regardless of Tenant's designation of such payments, to satisfy any obligations of Tenant hereunder, in such order and amounts as Landlord, in its sole discretion, may elect.

24.31 Substitution of Other Premises. Subject to the following provisions of this Section 24.31, Landlord shall have the one-time right to move Tenant to other space in the Building of at least the same

size as the Premises (the "Relocation Space") and located on the ground floor of the Building, and all terms hereof shall apply to the Relocation Space with equal force. In such event, Landlord shall give Tenant at least ninety (90) days' prior written notice (the "Relocation Notice") of Landlord's election to so relocate Tenant. Following Landlord's timely and proper delivery of a Relocation Notice to Tenant, Landlord shall move Tenant's effects from the Premises to the Relocation Space at Landlord's expense at such time and in such manner as to inconvenience Tenant as little as reasonably practicable, and only after Landlord has delivered the Relocation Space to Tenant with tenant improvements installed therein (including, without limitation, new Identification Signs, as applicable) at Landlord's cost that have been substantially completed and are substantially similar to or better in quality than those tenant improvements existing in the Premises at the time Landlord delivered the Relocation Notice to Tenant, provided that such Relocation Space shall have at least the same number of private offices and conferences rooms existing in the Premises as of the date of Landlord's delivery of the Relocation Notice. In addition, if Landlord elects to relocate the Premises to a qualified Relocation Space, then Landlord, within thirty (30) days after Landlord's receipt of invoices from Tenant accompanied by contracts, receipts and other back-up documentation reasonably requested by Landlord, shall reimburse Tenant for Tenant's actual, verifiable and reasonable out-of-pocket expenses for (i) moving Tenant's furniture, fixtures, equipment, and supplies from the Premises to the Relocation Space, and (ii) if Tenant's suite number for the Premises shall change, reprinting Tenant's business stationery in the same quality and quantity as Tenant's stationery supply on hand immediately prior to Tenant's receipt of the Relocation Notice. Such relocation shall not terminate or otherwise affect or modify this Lease except that from and after the date of such relocation, the "Premises" shall refer to the Relocation Space into which Tenant has been moved, rather than the original Premises as defined in this Lease. Prior to or concurrently with such relocation of the Premises, the parties shall execute an amendment to this Lease confirming such relocation. Such relocation shall take place in accordance with and subject to the following: (A) the physical relocation of the Premises shall be accomplished by Landlord at its expense over a weekend; and (B) if the rentable square feet of the Relocation Space is larger than the rentable square feet of the Premises immediately before the relocation, the Base Rent and Tenant's Share for the Relocation Space shall not increase but shall continue to be based on the rentable square feet of the Premises immediately before the relocation. Notwithstanding the foregoing to the contrary, if Landlord delivers a Relocation Notice to Tenant during the last twelve (12) months of the Lease Term, then Tenant may, within fifteen (15) days after receipt of such Relocation Notice, elect to terminate this Lease by delivering written notice of termination (the "Relocation Termination Notice") to Landlord specifying the date upon which Tenant desires to terminate this Lease (the "Relocation Termination Date"), which Relocation Termination Date must occur no earlier than fifteen (15) days after the date the Relocation Termination Notice is received by Landlord and no later than ninety (90) days after the date the Relocation Termination Notice is received by Landlord and prior to the Lease Expiration Date; provided, however, if Tenant delivers a Relocation Termination Notice to Landlord, then Landlord may rescind Landlord's Relocation Notice by delivering written notice of such rescission to Tenant within ten (10) days after Landlord's receipt of the Relocation Termination Notice, in which case, Landlord's Relocation Notice shall be deemed null and void and this Lease shall continue in full force and effect.

24.32 Electronic Services.

24.32.1 Tenant's Lines. Tenant may, in a manner consistent with the provisions and requirements of this Lease, install, maintain, replace, remove or use any communications or computer or other electronic service wires, cables and related devices (collectively the "Lines") at the Building in or serving the Premises, provided: (i) Tenant shall obtain Landlord's prior written consent, which consent may be conditioned as required by Landlord; (ii) Tenant shall cooperate with Landlord's riser management vendor(s) and consultant(s), as required by Landlord; (iii) if Tenant at any time uses any equipment that may create an electromagnetic field exceeding the normal insulation ratings of ordinary twisted pair riser cable or cause radiation higher than normal background radiation, the Lines therefor (including riser cables) shall be appropriately insulated to prevent such excessive electromagnetic fields or radiation; and (iv) Tenant shall pay all costs in connection therewith. Landlord reserves the right to require that Tenant remove any Lines which are installed in violation of these provisions. Tenant shall not, without the prior written consent of Landlord in each instance, grant to any third party a security interest or lien in or on the Lines, and any such security interest or lien granted without Landlord's written consent shall be null and void.

24.32.2 Definition of Electronic Services. As used herein, "Electronic Services Provider" means a business which provides telephone, telegraph, telex, video, other telecommunications or other services which permit Tenant to receive or transmit information by the use of electronics and which require the use of wires, cables, antennas or similar devices in or on the Building and/or Project. The services of Electronic Services Providers are sometimes referred to herein as "Electronic Services".

24.32.3 No Right to Specific Services. Landlord shall have no obligation to (i) install any Electronic Services equipment or facilities, (ii) make available to Tenant the services of any particular Electronic Services Provider, (iii) allow any particular Electronic Services Provider access to the Building and/or Project, and/or (iv) continue to grant access to an Electronic Services Provider once such provider

has been given access to the Building and/or Project. Landlord may (but shall not have the obligation to): (A) install new Lines at the property; (B) create additional space for Lines at the property; and (C) adopt reasonable and uniform rules and regulations with respect to Lines.

24.32.4 Limitation of Landlord's Responsibility. Tenant acknowledges and agrees that all Electronic Services desired by Tenant shall be ordered and utilized at the sole expense of Tenant. Unless Landlord otherwise requests or consents in writing, all of Tenant's Electronic Services equipment shall be and remain solely in the Premises and the telephone closet(s) on the floor(s) on which the Premises is located, in accordance with rules and regulations adopted by Landlord from time to time. Unless otherwise specifically agreed to in writing, Landlord shall have no responsibility for the maintenance of Tenant's Electronic Services equipment, including Lines; nor for any Lines or other infrastructure to which Tenant's Electronic Services equipment may be connected. Tenant agrees that, to the extent any Electronic Services are interrupted, curtailed or discontinued, Landlord shall have no obligation or liability with respect thereto and it shall be the sole obligation of Tenant at its own expense to obtain substitute service. Except to the extent arising from the negligence or willful misconduct of Landlord or Landlord's agents or employees and not insured or required to be insured by Tenant under this Lease, Landlord shall have no liability for damages arising from, and Landlord does not warrant that Tenant's use of any Lines will be free from the following (collectively called "Line Problems"): (i) any eavesdropping or wire-tapping by unauthorized parties; (ii) any failure of any Lines to satisfy Tenant's requirements; or (iii) any shortages, failures, variations, interruptions, disconnections, loss or damage caused by the installation, maintenance, replacement, use or removal of Lines by or for other tenants or occupants at the property. Under no circumstances shall any Line Problems be deemed an actual or constructive eviction of Tenant, render Landlord liable to Tenant for abatement of Rent, or relieve Tenant from performance of Tenant's obligations under this Lease. Landlord in no event shall be liable for damages by reason of loss of profits, business interruption or other consequential damage arising from any Line Problems.

24.32.5 Necessary Service Interruptions. Landlord shall have the right, upon reasonable prior notice to Tenant, to interrupt or turn off Electronic Services facilities in the event of emergency or as necessary in connection with maintenance, repairs or construction at the Building and/or Project or installation of Electronic Services equipment for other tenants of the Building and/or Project or on account of violation by the Electronic Services Provider or owner of the Electronic Services equipment of any obligation to Landlord or in the event that Tenant's use of the Electronic Services infrastructure of the Building and/or Project materially interferes with the Electronic Services of other tenants of the Building and/or Project.

24.32.6 Removal of Equipment, Wiring and Other Facilities. Any and all Electronic Services equipment installed in the Premises or elsewhere in the Building and/or Project by or on behalf of Tenant, including Lines, or other facilities for Electronic Services reception or transmittal, shall be removed prior to the expiration or earlier termination of the Lease term, by Tenant at its sole cost or, at Landlord's election, by Landlord at Tenant's sole cost, with the cost thereof to be paid as additional rent. Landlord shall have the right, however, upon written notice to Tenant given no later than thirty (30) days prior to the expiration or earlier termination of the Lease Term (except that the notice period shall extend to thirty (30) days beyond the date of termination of the Lease if it is terminated by either party due to a default by the other), to require Tenant to abandon and leave in place, without additional payment to Tenant or credit against Rent, any and all Electronic Services Lines and related infrastructure, or selected components thereof, whether located in the Premises or elsewhere in the Building and/or Project.

24.32.7 New Provider Installations. If Tenant wishes at any time to utilize the services of an Electronic Services Provider whose equipment is not then servicing the Building and/or Project, no such Electronic Services Provider shall be permitted to install its Lines or other equipment within the Building and/or Project without first securing the prior written approval of Landlord. Landlord's approval shall not be deemed any kind of warranty or representation by Landlord, including, without limitation, any warranty or representation as to the suitability, competence, or financial strength of the Electronic Services Provider. Without limitation of the foregoing standard, unless all of the following conditions are satisfied to Landlord's satisfaction, it shall be reasonable for Landlord to refuse to give its approval: (i) Landlord shall incur no current expense or risk or future expense whatsoever with respect to any aspect of the Electronic Services Provider's provision of its Electronic Services, including without limitation, the costs of installation, materials and services; (ii) prior to commencement of any work in or about the Building and/or Project by the Electronic Services Provider, the Electronic Services Provider shall supply Landlord with such written indemnities, insurance, financial statements, and such other items as Landlord reasonably determines to be necessary to protect its financial interests and the interests of the Building and Project relating to the proposed activities of the Electronic Services Provider; (iii) the Electronic Services Provider agrees to abide by such rules and regulations, Building and other codes, job site rules and such other requirements as are reasonably determined by Landlord to be necessary to protect the interests of the Building and/or Project, the tenants in the Building and Landlord, in the same or similar manner as Landlord has the right to protect itself and the Building and/or Project with respect to proposed alterations as described in Section 8 above; (iv) Landlord reasonably determines that, considering other

potential uses for space in the Building and/or Project, there is sufficient space in the Building and/or Project for the placement of all of the provider's equipment, conduit, Lines and other materials; (v) the Electronic Services Provider agrees to abide by Landlord's requirements, if any, that providers use existing Building conduits and pipes or use Building contractors (or other contractors approved by Landlord); (vi) Landlord receives from the Electronic Services Provider such compensation as is reasonably determined by Landlord to compensate it for space used in the Building and/or Project for the storage and maintenance of the Electronic Services Provider's equipment, for the fair market value of an Electronic Services Provider's access to the Building and Project, for the use of common or core space within the Building and/or Project and the costs which may reasonably be expected to be incurred by Landlord; (vii) the provider agrees to deliver to Landlord plans prior to the installation of the provider's equipment and detailed "as built" plans immediately after the installation of the provider's equipment is complete; and (viii) all of the foregoing matters are documented in a written license agreement between Landlord and the provider, the form and content of which is reasonably satisfactory to Landlord.

24.32.8 Limit of Default or Breach. Notwithstanding anything in this Section 24.32 to the contrary, the refusal of Landlord to grant its approval to any prospective Electronic Services Provider shall not be deemed a default or breach by Landlord of its obligation under this Lease unless and until Landlord is adjudicated to have acted recklessly or maliciously with respect to Tenant's request for approval, and in that event, Tenant shall still have no right to terminate this Lease or claim an entitlement to Rent abatement, but may as Tenant's sole and exclusive recourse seek a judicial order of specific performance compelling Landlord to grant its approval as to the prospective provider in question. The provisions of this Section 24.32.8 may be enforced solely by Tenant and Landlord, are not for the benefit of any other party, and specifically but without limitation, no telephone or other Electronic Services Provider shall be deemed a third party beneficiary of this Lease.

24.32.9 Installation and Use of Wireless Technologies. Tenant shall not utilize any wireless Electronic Services equipment (other than usual and customary cellular telephones), including antennae and satellite receiver dishes, within the Tenant's premises, within the Building and/or Project or attached to the outside walls or roof of the Building, without Landlord's prior written consent. Such consent may be conditioned in such a manner so as to protect Landlord's financial interests and the interests of the Building and Project, and the other tenants therein, in a manner similar to the arrangements described in the immediately preceding paragraphs.

24.32.10 Limitation of Liability For Equipment Interference. If Electronic Services equipment, Lines and facilities or satellite and antennae equipment of any type installed by or at the request of Tenant within the Premises, on the roof, or elsewhere within or on the Building and/or Project causes interference to equipment used by another party, Tenant shall cease using such equipment, Lines and facilities or satellite and antennae equipment until the source of the interference is identified and eliminated and Tenant shall assume all liability related to such interference. Tenant shall cooperate with Landlord and other parties, to eliminate such interference promptly. If Tenant is unable to do so, Tenant will substitute alternative equipment which remedies the situation. If such interference persists, Tenant shall, at Landlord's sole discretion, remove such equipment.

24.33 Waiver of Claims. As a material inducement to Landlord to enter into this Lease, Tenant hereby releases Landlord from, and hereby waives, any and all losses, costs, damages, expenses, liabilities, claims and causes of action (including, without limitation, attorneys' fees) (collectively, the "Released Claims") arising from or related to Tenant's inability or limitation to conduct operations from the Premises as a result of any "shelter in place" and/or "safer at home" orders, eviction moratoria or similar governmental directives, including, without limitation, any claims for, and/or rights of, termination of this Lease and/or abatement, offset and/or deferral of Rent under this Lease, at law and/or in equity (including without limitation, any claims for frustration of purpose, impossibility and impracticability) related to the inability of Tenant to conduct operations from the Premises whether from any "shelter in place" and/or "safer at home" orders, eviction moratoria or similar governmental directives related thereto or otherwise and/or any economic or other effects on Tenant's business and/or financial wherewithal as a result therefrom. With respect to the Released Claims, Tenant acknowledges that Tenant has either been advised by legal counsel or has made itself familiar with the provisions of California Civil Code section 1542, which provides as follows: A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY. Tenant, being aware of the foregoing code section, hereby expressly waives any rights Tenant may have thereunder, as well as under any other statutes or common-law principles of similar effect, pertaining to the Released Claims.

24.34 Counterparts. This Lease may be executed in any number of counterparts, each of which shall be deemed an original, but all of which when taken together will constitute one and the same instrument.

24.35 Electronic Signatures. Each of the parties to this Lease (i) has agreed to permit the use from time to time, where appropriate, of telecopy or other electronic signatures (including, without limitation, DocuSign) in order to expedite the transaction contemplated by this Lease, (ii) intends to be bound by its respective telecopy or other electronic signature, (iii) is aware that the other will rely on the telecopied or other electronically transmitted signature, and (iv) acknowledges such reliance and waives any defenses to the enforcement of this Lease and the documents affecting the transaction contemplated by this Lease based on the fact that a signature was sent by telecopy or electronic transmission only.

24.36 Conference Center; Gym.

24.36.1 Conference Center; Gym. Subject to the following terms of this Section 24.36, Tenant and its individual employees shall have the non-exclusive right, throughout the Lease Term, but from 5:00 a.m. to 8:00 p.m., Monday through Friday (excluding holidays) (the "Conference Center/Gym Hours"), only, to use the Building's (i) existing conference center (the "Conference Center") located in the Building for the limited purpose of conducting business meetings, presentations, trainings and/or other functions directly related to Tenant's permitted use under Section 5.1 above, and (ii) existing gym (the "Gym") located in the Building for fitness related activities; provided, however, that (A) Tenant's employees shall be required to sign Landlord's form of "Release and Acknowledgment" prior to using the Gym, and (B) the use of the Conference Center and the Gym and the Conference Center/Gym Hours are subject to permanent closure, change, restriction and other limitations as determined by Landlord, in Landlord's sole discretion, for any reason (including, without limitation, for issues relating to the COVID- 19 pandemic, and/or other "shelter in place," "stay at home" and similar governmental directives and/or any other Force Majeure events) or no reason at all.

24.36.2 Reservation of Conference Center. Tenant shall reserve the Conference Center by delivering to Landlord no less than seven (7) days' prior written notice, provided that: (i) all reservations shall be on a "first come, first served" basis; and (ii) Landlord may, at Landlord's sole discretion, modify such reservation procedures at any time prior to or during the Lease Term. Tenant will be charged an hourly administrative fee at the Building's then-prevailing rate (each, a "Reservation Fee") for use of the Conference Center, which current prevailing rate is currently $15.00 per hour, plus any applicable cleaning fee. Tenant shall pay the Reservation Fee to Landlord within thirty (30) days after Tenant's receipt of an invoice therefor. Tenant shall be permitted to use the Gym on a "first come, first served basis" without the payment of any additional fee.

24.36.3 Use of Conference Center and Gym. Tenant shall not do or permit anything to be done in or about the Conference Center or Gym that would in any way unreasonably obstruct or interfere with the rights of other tenants or occupants of the Building; nor shall Tenant use or allow the Conference Center or Gym to be used for any unlawful or objectionable purpose; nor shall Tenant cause, maintain or permit any nuisance or offensive sound, smell or light in, on or about the Conference Center or Gym. Additionally, Tenant shall not use or permit the Conference Center or Gym to be used for any parties, social functions, or fundraisers or permit any live music, comedy acts, dancing, stage shows, or any other form of "live entertainment" without Landlord's prior written consent, which may be withheld by Landlord in its sole and absolute discretion.

24.36.4 Maintenance. Tenant will be responsible for any damage done to the Conference Center, Gym and the Building arising out of or in any way pertaining to Tenant's use of the Conference Center or Gym, as applicable.

24.36.5 Indemnification. Tenant shall indemnify, defend and hold Landlord and the Landlord Parties harmless from and against any and all Claims to the extent arising out of or in any way pertaining to Tenant's use of the Conference Center and Gym, including, without limitation, as a result of any failure of Tenant to maintain the Conference Center and Gym in a safe condition during its occupancy thereof or otherwise. None of Landlord or the Landlord Parties shall be responsible for any loss or theft whatsoever of any property or anything placed by Tenant in the Conference Center or Gym. Tenant, as a material part of the consideration of this Lease, waives all claims or demands against Landlord and the Landlord Parties for any such loss, damage or injury of Tenant or Tenant's property, and agrees to so indemnify and hold Landlord and the Landlord Parties harmless therefrom.

24.36.6 Rights Personal. Tenant's rights under this Section 24.36 are personal to the Original Tenant and may only be utilized by the Original Tenant (and may not be exercised or utilized by any other person or entity, including any sublessee or other transferee of the Original Tenant's interest in the Lease or the Premises) when the Original Tenant is in actual and physical possession of the entire Premises.

24.36.7 Relocation. Landlord, in its reasonable discretion, may, at any time, relocate the Conference Center and/or Gym to different locations in the Project.

[SIGNATURES APPEAR ON FOLLOWING PAGE]

IN WITNESS WHEREOF, Landlord and Tenant have caused their duly authorized representatives to execute this Lease as of the day and date first above written.

"Landlord"

KW FUND VI-SAN MATEO, LLC,
a Delaware limited liability company

By: /s/ Kent Mouton
Name: Kent Mouton
Its: President

"Tenant"

SIERRA ONCOLOGY, INC.,
a Delaware corporation

By: /s/ Stephen Dilly
Name: Stephen Dilly
Its: President & CEO

Since Tenant is a corporation, the authorized officers must sign on behalf of the corporation and indicate the capacity in which they are signing. This Lease must be executed by the president or vice president and the secretary or assistant secretary, unless the bylaws or a resolution of the board of directors shall otherwise provide, in which event the bylaws or a certified copy of the resolution, as the case may be, must be attached to this Lease. In addition, a certificate by the secretary of the corporation must be attached to this Lease stating that the signatories are authorized to sign on behalf of the corporation.

EXHIBIT A

FLOOR PLAN OF PREMISES

This Exhibit A is provided for informational purposes only and is intended to be only an approximation of the layout of the Premises and shall not be deemed to constitute any representation by Landlord as to the exact layout or configuration of the Premises.

EXHIBIT B

RULES AND REGULATIONS

Tenant shall faithfully observe and comply with the following Rules and Regulations. Landlord shall not be responsible to Tenant for the nonperformance of any of said Rules and Regulations by or otherwise with respect to the acts or omissions of any other tenants or occupants of the Project.

1. Tenant shall not alter any lock or install any new or additional locks or bolts on any doors or windows of the Premises without obtaining Landlord's prior written consent. Tenant shall bear the cost of any lock changes or repairs required by Tenant. Two (2) keys will be furnished by Landlord for the Premises, and any additional keys required by Tenant must be obtained from Landlord at a reasonable cost to be established by Landlord. Upon the expiration or earlier termination of the Lease, Tenant shall restore to Landlord all keys of stores, offices, and toilet rooms, either furnished to, or otherwise procured by, Tenant, and in the event of the loss of any keys so furnished, Tenant shall pay to Landlord the cost of replacing the same or of changing the lock or locks opened by such lost key if Landlord shall deem it necessary to make such change.

2. All doors opening to public corridors shall be kept closed at all times except for normal ingress and egress to the Premises, unless electrical hold backs have been installed.

3. Landlord reserves the right to close and keep locked all entrance and exit doors of the Building and to exclude from the Building between the hours of 6:00 p.m. and 7:00 a.m. and at all hours on Saturday, Sunday and Holidays (as defined in the Lease) all persons who do not present a pass or card key to the Building approved by Landlord. Tenant, its employees and agents must be sure that the doors to the Building are securely closed and locked when leaving the Premises if it is after the normal hours of business for the Building. Any tenant, its employees, agents or any other persons entering or leaving the Building at any time when it is so locked, or any time when it is considered to be after normal business hours for the Building may be required to sign the Building register when so doing. After-hours access by Tenant's authorized employees may be provided by card-key access or other procedures adopted by Landlord from time to time; Tenant shall pay for the costs of all access cards provided to Tenant's employees and all replacements thereof for lost, stolen or damaged cards. Access to the Building may be refused unless the person seeking access has proper identification or has a previously arranged pass for access. Tenant and its employees shall not go upon the roof of the Building and/or the Additional Buildings without the written consent of Landlord. Landlord and its agents shall in no case be liable for damages for any error with regard to the admission to or exclusion from the Building or Project of any person. In case of invasion, mob, riot, public excitement, or other commotion, Landlord reserves the right to prevent access to the Building and/or Project during the continuance of same by any means it deems appropriate for the safety and protection of life and property.

4. Landlord shall have the right to prescribe the weight, size and position of all safes and other heavy property brought into the Building. Safes and other heavy objects shall, if considered necessary by Landlord, stand on supports of such thickness as is necessary to properly distribute the weight. Landlord will not be responsible for loss of or damage to any such safe or property in any case. All damage done to any part of the Building and/or Project, its contents, occupants or visitors by moving or maintaining any such safe or other property shall be the sole responsibility of Tenant and any expense of said damage or injury shall be borne by Tenant.

5. No furniture, freight, packages, supplies, equipment or merchandise will be brought into or removed from the Building or carried up or down in the elevators, except upon prior notice to Landlord, and in such manner, in such specific elevator, and between such hours as shall be designated by Landlord. Tenant shall provide Landlord with not less than twenty-four (24) hours' prior notice of the need to utilize an elevator for any such purpose, so as to provide Landlord with a reasonable period to schedule such use and to install such padding or take such other actions or prescribe such procedures as are appropriate to protect against damage to the elevators or other parts of the Building.

6. Landlord shall have the right to control and operate the public portions of the Building and Project, the public facilities, the HVAC, and any other facilities furnished for the common use of tenants, in such manner as is customary for Comparable Buildings.

7. The requirements of Tenant will be attended to only upon application at the management office of the Building or at such office location designated by Landlord. Employees of Landlord shall not perform any work or do anything outside their regular duties unless under special instructions from Landlord.

8. Tenant shall not disturb, solicit, or canvass any occupant of the Project and shall cooperate with Landlord or Landlord's agents to prevent same.

9. The toilet rooms, urinals, wash bowls and other apparatus shall not be used for any purpose other than that for which they were constructed, and no foreign substance of any kind whatsoever shall be thrown therein. The expense of any breakage, stoppage or damage resulting from the violation of this rule shall be borne by the tenant who, or whose employees or agents, shall have caused it.

10. Tenant shall not overload the floor of the Premises, nor mark, drive nails or screws, or drill into the partitions, woodwork or plaster or in any way deface the Premises or any part thereof without Landlord's consent first had and obtained; provided, however, Landlord's prior consent shall not be required with respect to Tenant's placement of pictures and other normal office wall hangings on the interior walls of the Premises (but at the end of the Lease Term, Tenant shall repair any holes and other damage to the Premises resulting therefrom).

11. Except for vending machines intended for the sole use of Tenant's employees and invitees, no vending machine or machines of any description other than fractional horsepower office machines shall be installed, maintained or operated upon the Premises without the written consent of Landlord.

12. Tenant shall not use any method of HVAC other than that which may be supplied by Landlord, without the prior written consent of Landlord.

13. Tenant shall not use or keep in or on the Premises or the Project any kerosene, gasoline or other inflammable or combustible fluid or material. Tenant shall not use, keep or permit to be used or kept, any foul or noxious gas or substance in or on the Premises, or permit or allow the Premises to be occupied or used in a manner offensive or objectionable to Landlord or other occupants of the Project by reason of noise, odors, or vibrations, or interfere in any way with other tenants or those having business therein.

14. Tenant shall not bring into or keep within the Project or the Premises any animals, birds, bicycles or other vehicles.

15. No cooking shall be done or permitted by any tenant on the Premises, nor shall the Premises be used for the storage of merchandise, for lodging or for any improper, objectionable or immoral purposes. Notwithstanding the foregoing, Underwriters' laboratory-approved equipment and microwave ovens may be used in the Premises for heating food and brewing coffee, tea, hot chocolate and similar beverages, provided that such use is in accordance with all applicable federal, state and city laws, codes, ordinances, rules and regulations, and does not cause odors which are objectionable to Landlord and other tenants.

16. Landlord will approve where and how telephone and telegraph wires are to be introduced to the Premises. No boring, cutting or stringing of wires or laying of linoleum or other similar floor coverings shall be allowed without the consent of Landlord. The location of telephone, call boxes and other office equipment affixed to the Premises shall be subject to the approval of Landlord.

17. Landlord reserves the right to exclude or expel from the Building and/or Project any person who, in the judgment of Landlord, is intoxicated or under the influence of liquor or drugs, or who shall in any manner do any act in violation of any of these Rules and Regulations.

18. Tenant, its employees and agents shall not loiter in the entrances or corridors, nor in any way obstruct the sidewalks, lobby, halls, stairways or elevators, and shall use the same only as a means of ingress and egress for the Premises.

19. Tenant shall not waste electricity, water or air conditioning and agrees to cooperate fully with Landlord to ensure the most effective operation of the Building's HVAC system, and shall refrain from attempting to adjust any controls. Tenant shall comply with and participate in any program for metering or otherwise measuring the use of utilities and services, including, without limitation, programs requiring the disclosure or reporting of the use of any utilities or services. Tenant shall also cooperate and comply with, participate in, and assist in the implementation of (and take no action that is inconsistent with, or which would result in Landlord, the Building and/or the Project failing to comply with the requirements of) any conservation, sustainability, recycling, energy efficiency, and waste reduction programs, environmental protection efforts and/or other programs that are in place and/or implemented from time to time at the Building and/or the Project, including, without limitation, any required reporting, disclosure, rating or compliance system or program (including, but not limited to, any LEED [Leadership in Energy and Environmental Design] rating or compliance system, including those currently coordinated through the U.S. Green Building Council).

20. Tenant shall not use any method of heating or air conditioning other than that which may be supplied by Landlord, without the prior written consent of Landlord. Tenant shall not furnish cooling

or heating to the Premises, including, without limitation, the use of electronic or gas heating devices, portable coolers (such as "move n cools") or space heaters, without Landlord's prior written consent, and any such approval will be for devices that meet federal, state and local code.

21. Tenant shall store all its trash and garbage within the interior of the Premises. No material shall be placed in the trash boxes or receptacles if such material is of such nature that it may not be disposed of in the ordinary and customary manner of removing and disposing of trash and garbage in the city in which the Project is located without violation of any law or ordinance governing such disposal. All trash, garbage and refuse disposal shall be made only through entry-ways and elevators provided for such purposes at such times as Landlord shall designate.

22. Tenant shall comply with all safety, fire protection and evacuation procedures and regulations established by Landlord or any governmental agency.

23. Tenant shall assume any and all responsibility for protecting the Premises from theft, robbery and pilferage, which includes keeping doors locked and other means of entry to the Premises closed, when the Premises are not occupied.

24. No awnings or other projection shall be attached to the outside walls of the Building and/or the Additional Buildings without the prior written consent of Landlord. No curtains, blinds, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Premises without the prior written consent of Landlord. The sashes, sash doors, skylights, windows, and doors that reflect or admit light and air into the halls, passageways or other public places in the Building shall not be covered or obstructed by Tenant, nor shall any bottles, parcels or other articles be placed on the windowsills. All electrical ceiling fixtures hung in offices or spaces along the perimeter of the Building must be fluorescent and/or of a quality, type, design and bulb color approved by Landlord.

25. The washing and/or detailing of or, the installation of windshields, radios, telephones in or general work on, automobiles shall not be allowed on the Project.

26. The term "personal goods or services vendors" as used herein means persons who periodically enter the Building of which the Premises are a part for the purpose of selling goods or services to a tenant, other than goods or services which are used by the Tenant only for the purpose of conducting its business in the Premises. "Personal goods or services" include, but are not limited to, drinking water and other beverages, food, barbering services and shoeshining services. Landlord reserves the right to prohibit personal goods and services vendors from access to the Building except upon Landlord's prior written consent and upon such reasonable terms and conditions, including, but not limited to, the payment of a reasonable fee and provision for insurance coverage, as are related to the safety, care and cleanliness of the Building, the preservation of good order thereon, and the relief of any financial or other burden on Landlord or other tenants occasioned by the presence of such vendors or the sale by them of personal goods or services to Tenant or its employees. Under no circumstance shall the personal goods or services vendors display their products in a public or common area, including corridors and elevator lobbies. If necessary for the accomplishment of these purposes, Landlord may exclude a particular vendor entirely or limit the number of vendors who may be present at any one time in the Building. No such personal goods or services vendors shall be allowed to transport or carry beverages, food, food containers, etc., on any passenger elevators. The transportation of such items shall be via the service elevators in such manner as prescribed by Landlord.

27. Tenant must comply with requests by the Landlord concerning the informing of their employees of items of importance to the Landlord.

28. Tenant shall comply with any non-smoking ordinance adopted by any applicable governmental authority. Neither Tenant nor its agents, employees, contractors, guests or invitees shall smoke or permit smoking in the Premises and/or the common areas, unless the common areas have been declared a designated smoking area by Landlord, nor shall the above parties allow smoke from the Premises to emanate into the common areas or any other part of the Project. Landlord shall have the right to designate the Building (including the Premises) as a non-smoking building.

29. The Premises shall not be used for manufacturing. Tenant shall not engage or pay any employees on the Premises except those actually working for Tenant on the Premises nor advertise for laborers giving an address at the Premises.

30. Tenant shall not maintain armed security in or about the Premises nor possess any weapons, explosives, combustibles or other hazardous devices in or about the Premises, Building and/or Project.

EXHIBIT B

31. Landlord shall have the right to prohibit any advertising by Tenant which, in Landlord's opinion, tends to impair the reputation of the Building and/or Project or its desirability as an office building project and upon written notice from Landlord, Tenant shall refrain from or discontinue such advertising.

32. Any outside contractor employed by Tenant, shall, while in the Building and/or Project, be subject to the prior written approval of Landlord and subject to the Rules and Regulations. Tenant shall be responsible for all acts of such persons and Landlord shall not be responsible for any loss or damage to property in the Premises, Building and/or Project, however occurring.

PARKING RULES AND REGULATIONS

1. Landlord reserves the right to establish and reasonably change the hours for the Parking Facilities, on a non-discriminatory basis, from time to time. Tenant shall not store or permit its employees to store any automobiles in the Parking Facilities without the prior written consent of Landlord (and/or the Parking Operator, as the case may be). Except for emergency repairs, Tenant and its employees shall not perform any work on any automobiles while located in the Parking Facilities or on the Project. The Parking Facilities may not be used by Tenant or its agents for overnight parking of vehicles. If it is necessary for Tenant or its employees to leave an automobile in the Parking Facilities overnight, Tenant shall provide Landlord (or the Parking Operator as the case may be) with prior notice thereof designating the license plate number and model of such automobile.

2. Tenant (including Tenant's employees and agents) will use the parking spaces solely for the purpose of parking passenger model cars, small vans and small trucks and will comply in all respects with any rules and regulations that may be promulgated by Landlord and/or the Parking Operator from time to time with respect to the Parking Facilities.

3. Vehicles must be parked entirely within the stall lines painted on the floor, and only small cars may be parked in areas reserved for small cars.

4. All directional signs and arrows must be observed.

5. The speed limit shall be 5 miles per hour.

6. Parking spaces reserved for handicapped persons must be used only by vehicles properly designated.

7. Parking is prohibited in all areas not expressly designated for parking, including without limitation:

(a) areas not striped for parking;

(b) aisles;

(c) where "no parking" signs are posted;

(d) ramps; and

(e) loading zones.

8. Parking stickers, key cards and any other devices or forms of identification or entry supplied by Landlord or the Parking Operator shall remain the property of Landlord (or the Parking Operator as the case may be). Such device must be displayed as requested and may not be mutilated in any manner. The serial number of the parking identification device may not be obliterated. Parking spaces and devices are not transferable and any pass or device in the possession of an unauthorized holder will be void.

9. Parking managers or attendants are not authorized to make or allow any exceptions to these Parking Rules and Regulations.

10. Every parker is required to park and lock his/her own car.

11. Loss or theft of identification, key cards or other such devices must be reported to Landlord (and/or to the Parking Operator as the case may be) immediately. Any parking devices reported lost or stolen found on any authorized car will be confiscated and the illegal holder will be subject to prosecution. Lost or stolen devices found by Tenant or its employees must be reported to Landlord (and to the Parking Operator, as the case may be) immediately.

12. Washing, waxing, cleaning or servicing of any vehicle by the customer and/or its agents is prohibited.

13. Tenant agrees to acquaint all persons to whom Tenant assigns a parking space with these Parking Rules and Regulations.

14. Neither Landlord nor the Parking Operator (as the case may be), from time to time will be liable for loss of or damage to any vehicle or any contents of such vehicle or accessories to any such vehicle, or any property left in any of the Parking Facilities, resulting from fire, theft, vandalism, accident, conduct of other users of the Parking Facilities and other persons, or any other Casualty or cause. Further, Tenant understands and agrees that: (i) Landlord will not be obligated to provide any traffic control, security protection or Parking Operator for the Parking Facilities; (ii) Tenant uses the Parking Facilities at its own risk; and (iii) Landlord will not be liable for personal injury or death, or theft, loss of or damage to property. Tenant indemnifies and agrees to hold Landlord, any Parking Operator and their respective agents and employees harmless from and against any and all claims, demands, and actions arising out of the use of the Parking Facilities by Tenant and its employees and agents, whether brought by any of such persons or any other person.

15. Tenant will ensure that any vehicle parked in any of the parking spaces will be kept in proper repair and will not leak excessive amounts of oil or grease or any amount of gasoline. If any of the parking spaces are at any time used (i) for any purpose other than parking as provided above, (ii) in any way or manner reasonably objectionable to Landlord, or (iii) by Tenant after default by Tenant under the Lease, Landlord, in addition to any other rights otherwise available to Landlord, may consider such default an event of default under the Lease.

16. Tenant's right to use the Parking Facilities will be in common with other tenants of the Project and with other parties permitted by Landlord to use the Parking Facilities. Landlord reserves the right to assign and reassign, from time to time, particular parking spaces for use by persons selected by Landlord, provided that Tenant's rights under the Lease are preserved. Landlord will not be liable to Tenant for any unavailability of Tenant's designated spaces, if any, nor will any unavailability entitle Tenant to any refund, deduction, or allowance. Tenant will not park in any numbered space or any space designated as: RESERVED, HANDICAPPED, VISITORS ONLY, or LIMITED TIME PARKING (or similar designation).

17. If the Parking Facilities are damaged or destroyed, or if the use of the Parking Facilities is limited or prohibited by any governmental authority, or the use or operation of the Parking Facilities is limited or prevented by strikes or other labor difficulties or other causes beyond Landlord's reasonable control, Tenant's inability to use the parking spaces will not subject Landlord (and/or the Parking Operator, as the case may be) to any liability to Tenant and will not relieve Tenant of any of its obligations under the Lease and the Lease will remain in full force and effect. Tenant will pay to Landlord upon demand, and Tenant indemnifies Landlord against, any and all loss or damage to the Parking Facilities, or any equipment, fixtures, or signs used in connection with the Parking Facilities and any adjoining buildings or structures caused by Tenant or any of its employees and agents.

18. Tenant has no right to assign or sublicense any of its rights in the parking spaces, except as part of a permitted assignment or sublease of the Lease; however, Tenant may allocate the parking spaces among its employees.

Landlord may waive any one or more of these Rules and Regulations and Parking Rules and Regulations for the benefit of any particular tenant or tenants, but no such waiver by Landlord shall be construed as a waiver of such Rules and Regulations and/or Parking Rules and Regulations in favor of any other tenant or tenants, nor prevent Landlord from thereafter enforcing any such Rules or Regulations and/or Parking Rules and Regulations against any or all tenants of the Project. Landlord reserves the right at any time to change or rescind any one or more of these Rules and Regulations and/or Parking Rules and Regulations, or to make such other and further reasonable Rules and Regulations and/or Parking Rules and Regulations as in Landlord's judgment may from time to time be necessary for the management, safety, care and cleanliness of the Premises, Building and Project, and for the preservation of good order therein, as well as for the convenience of other occupants and tenants therein. Landlord shall not be responsible to Tenant or to any other person for the nonobservance of the Rules and Regulations and/or Parking Rules and Regulations by another tenant or other person. Tenant shall be deemed to have read these Rules and Regulations and Parking Rules and Regulations and to have agreed to abide by them as a condition of its occupancy of the Premises.

EXHIBIT C

AMENDMENT TO OFFICE LEASE

This AMENDMENT TO OFFICE LEASE ("Amendment") is made and entered into effective as of _____, _____, by and between KW FUND VI-SAN MATEO, LLC, a Delaware limited liability company ("Landlord"), and SIERRA ONCOLOGY, INC., a Delaware corporation ("Tenant").

R E C I T A L S

A. Landlord and Tenant entered into that certain Office Lease dated as of December 10, 2020 (the "Lease") pursuant to which Landlord leased to Tenant, and Tenant leased from Landlord, certain "Premises", as described in the Lease, known as Suite 110 of the Building located at 1820 Gateway Drive, San Mateo, California 94404.

B. Except as otherwise set forth herein, all capitalized terms used in this Amendment shall have the same meaning given such terms in the Lease.

C. Landlord and Tenant desire to amend the Lease to confirm, among other things, the commencement and expiration dates of the Lease Term, as hereinafter provided.

NOW, THEREFORE, in consideration of the foregoing Recitals and the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Premises. The Premises contains approximately 3,792 rentable square feet.

2. Confirmation of Dates. The parties hereby confirm that (a) Landlord's Work is Substantially Completed, (b) the Lease Term for the Lease commenced as of _____ (the "Lease Commencement Date") for a term of forty-eight (48) months ending on _____ (unless sooner terminated or extended as provided in the Lease), and (c) in accordance with the Lease, Rent commenced to accrue on _____.

3. Base Rent. During the Lease Term, the Base Rent payable by Tenant for the Premises shall be set forth in the following schedule subject, however, to Section 3.2 of the Lease:

Period	Annual Base Rent	Monthly Installment of Base Rent
/ / - / /	$211,593.60	$17,632.80
/ / - / /	$217,941.36	$18,161.78
/ / - / /	$224,479.68	$18,706.64
/ / - / /	$231,214.08	$19,267.84

4. Tenant's Share. During the Lease Term, Tenant's Share of Operating Expenses and Tax Expenses shall be 5.11% (3,792 rentable square feet within the Premises/74,176 rentable square feet within the Building).

5. No Further Modification. Except as set forth in this Amendment, all of the terms and provisions of the Lease shall remain unmodified and in full force and effect.

[SIGNATURES APPEAR ON FOLLOWING PAGE]

IN WITNESS WHEREOF, this Amendment has been executed as of the day and year first above written.

"Landlord"

KW FUND VI-SAN MATEO, LLC,
a Delaware limited liability company

By: _____
Name: _____
Its: _____

"Tenant"

SIERRA ONCOLOGY, INC.,
a Delaware corporation

By: _____
Name: _____
Its: _____

By: _____
Name: _____
Its: _____

EXHIBIT C

EXHIBIT D

FORM OF TENANT'S ESTOPPEL CERTIFICATE

The undersigned, as Tenant under that certain Office Lease (the "Lease") made and entered into as of December 10, 2020 and between KW FUND VI-SAN MATEO, LLC, a Delaware limited liability company, as Landlord, and the undersigned as Tenant, for Premises on the first (1st) floor of the Building located at 1820 Gateway Drive, San Mateo, California, hereby certifies as follows:

1. Attached hereto as Exhibit A is a true and correct copy of the Lease and all amendments and modifications thereto. The documents contained in Exhibit A represent the entire agreement between the parties as to the Premises.

2. The undersigned has commenced occupancy of the Premises described in the Lease, currently occupies the Premises, and the Lease Term commenced on _____.

3. The Lease is in full force and effect and has not been modified, supplemented or amended in any way except as provided in Exhibit A.

4. Tenant has not transferred, assigned, or sublet any portion of the Premises nor entered into any license or concession agreements with respect thereto except as follows:

5. Tenant shall not modify the documents contained in Exhibit A or prepay any amounts owing under the Lease to Landlord in excess of thirty (30) days without the prior written consent of Landlord's mortgagee.

6. Base Rent became payable on _____.

7. The Lease Term expires on _____.

8. To the undersigned's knowledge, all conditions of the Lease to be performed by Landlord necessary to the enforceability of the Lease have been satisfied and Landlord is not in default thereunder.

9. No rental has been paid in advance and no security has been deposited with Landlord except as provided in the Lease.

10. To the undersigned's knowledge, as of the date hereof, there are no existing defenses or offsets that the undersigned has, which preclude enforcement of the Lease by Landlord.

11. All monthly installments of Base Rent, all Additional Rent and all monthly installments of estimated Additional Rent have been paid when due through _____. The current monthly installment of Base Rent is $_____.

12. There are no unfinished tenant improvements required to be completed by Landlord as of the date hereof or any outstanding and unpaid tenant improvement allowances owing to Tenant as of the date hereof except: [If left blank, then *"None"*]

13. The undersigned acknowledges that this Estoppel Certificate may be delivered to Landlord's prospective mortgagee, or a prospective purchaser, and acknowledges that it recognizes that if same is done, said mortgagee, prospective mortgagee, or prospective purchaser will be relying upon the statements contained herein in making the loan or acquiring the property of which the Premises are a part, and in accepting an assignment of the Lease as collateral security, and that receipt by it of this certificate is a condition of making of the loan or acquisition of such property.

14. If Tenant is a corporation or partnership, each individual executing this Estoppel Certificate on behalf of Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in California and that Tenant has full right and authority to execute and deliver this Estoppel Certificate and that each person signing on behalf of Tenant is authorized to do so.

Executed at _____ on the _____ day of _____, 20__.

"Tenant"

SIERRA ONCOLOGY, INC.,
a Delaware corporation

By: _____
Name: _____
Its: _____

EXHIBIT 21.1

LIST OF SUBSIDIARIES OF SIERRA ONCOLOGY, INC.

Subsidiary	Jurisdiction of Incorporation or Organization
Sierra Oncology Canada ULC	Canada, British Columbia

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-205693, 333-209897, 333-216392, 333-223253, 333-228263, 333-229933, 333-236854 and 333-241414 on Form S-8, and Registration Statement Nos. 333-225650, 333-234554 and 333-241443 on Form S-3 of our report dated March 11, 2021, relating to the consolidated financial statements of Sierra Oncology, Inc. and subsidiaries (the "Company") appearing in this Annual Report on Form 10-K of the Company for the year ended December 31, 2020.

/s/ Deloitte & Touche LLP

Grand Rapids, Michigan
March 11, 2021

EXHIBIT 31.1

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen Dilly, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sierra Oncology, 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: March 11, 2021

/s/ Stephen Dilly
Dr. Stephen Dilly
Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sukhi Jagpal, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sierra Oncology, 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: March 11, 2021

/s/ Sukhi Jagpal
Sukhi Jagpal
Chief Financial Officer
(Principal Financial 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

I, Stephen Dilly, Chief Executive Officer of Sierra Oncology, Inc. (Company), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the year ended December 31, 2020 (Report), as filed with the Securities and Exchange Commission, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented therein.

Date: March 11, 2021

/s/ Stephen Dilly
Dr. Stephen Dilly
Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

I, Sukhi Jagpal, Chief Financial Officer of Sierra Oncology, Inc. (Company), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the year ended December 31, 2020 (Report), as filed with the Securities and Exchange Commission, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented therein.

Date: March 11, 2021

/s/ Sukhi Jagpal
Sukhi Jagpal
Chief Financial Officer
(Principal Financial Officer)