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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2021

OR

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

Commission File Number: 001-39617

Aligos Therapeutics, Inc.
(Exact name of Registrant as specified in its Charter)

Delaware	82-4724808
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
One Corporate Drive, 2nd Floor South San Francisco, California	94080
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (800) 466-6059

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, par value, $0.0001 per share	ALGS	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

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

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

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

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

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 Act). YES ☐ NO ☒

The aggregate market value of common stock held by non-affiliates of the Registrant was 25,583,489 shares of common stock, $0.0001 par value per share, outstanding, comprised of 22,491,151 shares of voting common stock, $0.0001 par value per share and 3,092,338 shares of non-voting common stock, $0.0001 par value per share, as of June 30, 2021, the last business day of the Registrant's most recently completed second fiscal quarter (based on the closing sales price for the Registrant's common stock on the Nasdaq Global Select Market on such date).

As of March 4, 2022, the Registrant had 42,694,134 shares of common stock, $0.0001 par value per share, outstanding, comprised of 39,601,796 shares of voting common stock, $0.0001 par value per share and 3,092,338 shares of non-voting common stock, $0.0001 par value per share.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement relating to the 2022 Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the end of the Registrant's fiscal year ended December 31, 2021, are 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 contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business, operations and financial performance and condition. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the scope, progress, results and costs of developing our drug candidates or any other future drug candidates, and conducting nonclinical studies and clinical trials, including our ALG-020572, ALG-000184 and ALG-055009 clinical trials;
- the scope, progress, results and costs related to the research and development of our pipeline;
- the timing of, and costs involved in, obtaining and maintaining regulatory approval for any of our current or future drug candidates, and any related restrictions or limitations;
- the impact of developments related to COVID-19 on our business and operations, including clinical trials, manufacturing suppliers, collaborators, use of contract research organizations and employees;
- our expectations regarding the potential market size and size of the potential patient populations for ALG-020572, ALG-000184 and ALG-055009, our other drug candidates and any future drug candidates, if approved for commercial use;
- our ability to maintain existing, and establish new, collaborations, licensing or other arrangements and the financial terms of any such agreements;
- our commercialization, marketing and manufacturing capabilities and expectations;
- the rate and degree of market acceptance of our drug candidates, as well as the pricing and reimbursement of our drug candidates, if approved;
- the implementation of our business model and strategic plans for our business, drug candidates and technology, including additional indications for which we may pursue;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our drug candidates, including the projected term of patent protection;
- estimates of our expenses, future revenue, capital requirements, our needs for additional financing and our ability to obtain additional capital;
- developments and projections relating to our competitors and our industry, including competing therapies and procedures;
- regulatory and legal developments in the United States and foreign countries;
- the performance of our third-party suppliers and manufacturers;
- our ability to attract and retain key management, scientific and medical personnel;
- our expectations regarding the period during which we will qualify as an emerging growth company under the Jumpstart Our Business Startups Act of 2012;
- our expectations regarding our ability to obtain, maintain, enforce and defend our intellectual property protection for our drug candidates; and

- other risks and uncertainties, including those listed under the caption “Risk Factors.”

We have based these forward-looking statements largely on management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate and management’s beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. These forward-looking statements speak only as of the date of this Annual Report on Form 10-K and are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this Annual Report on Form 10-K. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein until after we distribute this Annual Report on Form 10-K, whether as a result of any new information, future events or otherwise.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this report, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements.

Investors and others should note that we may announce material business and financial information to our investors using our investor relations website, Securities and Exchange Commission, or SEC, filings, webcasts, press releases and conference calls. We use these mediums, including our website, to communicate with our stockholders and public about our company, our products and other issues. It is possible that the information that we make available may be deemed to be material information. We therefore encourage investors and others interested in our company to review the information that we make available on our website.

Summary of material risks associated with our business

The principal risks and uncertainties affecting our business include the following:

- We are a clinical-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred significant losses since inception. We expect to incur losses for at least the next several years and may never achieve or maintain profitability, which, together with our limited operating history, makes it difficult to assess our future viability.
- We have never generated revenue from product sales and may never be profitable.
- We will require substantial additional financing to achieve our goals, which may not be available on acceptable terms, or at all. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.
- We are early in our development efforts, and our business is dependent on the successful development of our current and future drug candidates. If we are unable to advance our current or future drug candidates through clinical trials, obtain marketing approval and ultimately commercialize any drug candidates we develop, or experience significant delays in doing so, our business will be materially harmed.
- Our current or future drug candidates may cause undesirable side effects or have other properties when used alone or in combination with other approved products or investigational new drugs that could delay or halt their clinical development, prevent their marketing approval, limit their commercial potential or result in significant negative consequences.
- We depend on collaborations with third parties for the development of certain of our potential drug candidates, and we may depend on additional collaborations in the future for the development and commercialization of these or other potential candidates. If our collaborations are not successful, we may not be able to capitalize on the market potential of these drug candidates.
- We intend to develop our current drug candidates, and expect to develop other future drug candidates, in combination with other therapies, which exposes us to additional risks.
- We face significant competition, and if our competitors develop and market products that are more effective, safer or less expensive than the drug candidates we develop, our commercial opportunities will be negatively impacted.
- If we and our collaborators are unable to obtain, maintain, protect and enforce sufficient patent and other intellectual property protection for our drug candidates and technology, our competitors could develop and commercialize products

and technology similar or identical to ours, and we may not be able to compete effectively in our market or successfully commercialize any drug candidates we may develop.

- Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or otherwise violating their intellectual property rights, the outcome of which would be uncertain and could negatively impact the success of our business.
- We have entered into licensing and collaboration agreements with third parties. If we fail to comply with our obligations in the agreements under which we license intellectual property rights to or from third parties, or these agreements are terminated, or we otherwise experience disruptions to our business relationships with our licensors or licensees, our competitive position, business, financial condition, results of operations and prospects could be harmed.
- We are highly dependent on our key personnel, and if we are not successful in attracting, motivating and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

The summary risk factors described above should be read together with the text of the full risk factors below in the section entitled “Risk Factors” and the other information set forth in this Annual Report on Form 10-K, including our consolidated financial statements and the related notes, as well as in other documents that we file with the SEC. The risks summarized above or described in full below are not the only risks that we face. Additional risks and uncertainties not precisely known to us or that we currently deem to be immaterial may also materially adversely affect our business, financial condition, results of operations, and future growth prospects.

PART I

Item 1. Business.

Overview

We are a clinical-stage biopharmaceutical company focused on developing novel therapeutics to address unmet medical needs in viral and liver diseases. We utilize our proprietary oligonucleotide and small molecule platforms to develop pharmacologically optimized drug candidates for use in combination regimens designed to achieve improved treatment outcomes. Our lead effort is to develop a functional cure for Chronic Hepatitis B (CHB), which often results in life-threatening conditions such as cirrhosis, end-stage liver disease (ESLD) and the most common form of liver cancer, hepatocellular carcinoma (HCC). The most widely used treatment for CHB, nucleos(t)ide analogs, suppresses viral replication but only achieves low rates of functional cure and often requires long-term administration. To address this issue, we have developed a portfolio of differentiated drug candidates for CHB, including a small molecule Capsid Assembly Modulator (CAM) and oligonucleotides (Antisense Oligonucleotides (ASO) and Small Interfering Ribonucleic Acids (siRNA)), each of which is designed against clinically validated targets in the Hepatitis B Virus (HBV) life cycle. We are also exploring approaches towards boosting immune response with the use of small molecule antagonists of the PD1/PD-L1 interaction. We believe that combination regimens utilizing our portfolio of CHB drug candidates may lead to higher rates of functional cure.

Initial Phase 1a studies in healthy volunteers (HVs) for our CAM and ASO drug candidates have been completed and Phase 1b dose range studies evaluating the safety, pharmacokinetics and antiviral activity of these drugs in CHB patients are ongoing. For the CAM drug candidate, ALG-000184, preliminary data as of January 28, 2022, in both HVs and CHB subjects indicate the drug has a predictable, dose proportional pharmacokinetic (PK) profile and was well tolerated after up to 28 days of oral daily dosing. Specifically, one unrelated serious adverse event (SAE) (hospitalization for management of pre-existing back pain) and no treatment emergent adverse events (TEAEs) leading to discontinuation have been reported and no concerning TEAEs, laboratory abnormalities, or other safety assessments have been identified by the study's safety committee. Preliminary antiviral activity data through completion of dosing (i.e., 28 days) are available in cohorts of Hepatitis B E-antigen (HBeAg) negative subjects (100 mg (Cohort 1) and 50 mg (Cohort 2)) and HBeAg positive subjects (100 mg (Cohort 4)). ALG-000184 was observed to have similar levels of activity at 50-100 mg doses in Cohorts 1-2, where both doses achieved HBV DNA and HBV RNA reductions of approximately 3-4 $\log_{10}$ IU/mL and approximately 1.5-2 $\log_{10}$ copies/mL, respectively. In both of these cohorts, HBV DNA and HBV RNA levels fell below the lower limit of quantitation (LLOQ) in ≥75% and 100% of subjects, respectively. In Cohort 4 (HBeAg positive subjects receiving 100 mg ALG-000184), HBV DNA and HBV RNA declined by >4 $\log_{10}$ IU/mL and >3 $\log_{10}$ copies/mL, respectively, with no plateauing of the antiviral effect throughout dosing. Enrollment in Cohorts 3 (10 mg for 28 days in HBeAg negative CHB) and 5 (300 mg for 28 days in HBeAg positive CHB) is ongoing with topline data planned to be presented at a scientific conference in mid-2022. In order to understand the effects of longer-term dosing with ALG-000184 on viral markers (e.g., HBV DNA, HBV RNA, HBsAg, and HBeAg) as well as safety, the Phase 1 protocol has been amended to add Part 4, which is planned to dose HBeAg positive subjects for 12 weeks at the 100 mg and 300 mg dose levels in combination with a nucleos(t)ide analog. Dosing in Part 4 is expected to be completed during the fourth quarter of 2022.

For the ASO drug candidate, ALG-020572, dosing in HVs is complete. After reviewing preliminary data through Cohort 4 (480 mg given subcutaneously (SC)), the highest dose evaluated, the study's safety committee identified no concerning findings. Based on the drug's acceptable safety and PK profile to date, dosing in Part 2, which is evaluating multiple SC doses (7 doses given over 29 days) in CHB patients, was initiated at the 210 mg dose level. Enrollment in the first cohort of CHB subjects is complete. Preliminary data, including antiviral activity, through multiple cohorts in Part 2 are anticipated to be shared at a scientific conference in the fourth quarter of 2022.

Our preclinical activities to advance our siRNA targeted against HBV are ongoing, with the clinical trial application (CTA) filing for ALG-125755 on-track for the first half of 2022 and dosing in HVs set to begin in the third quarter of 2022.

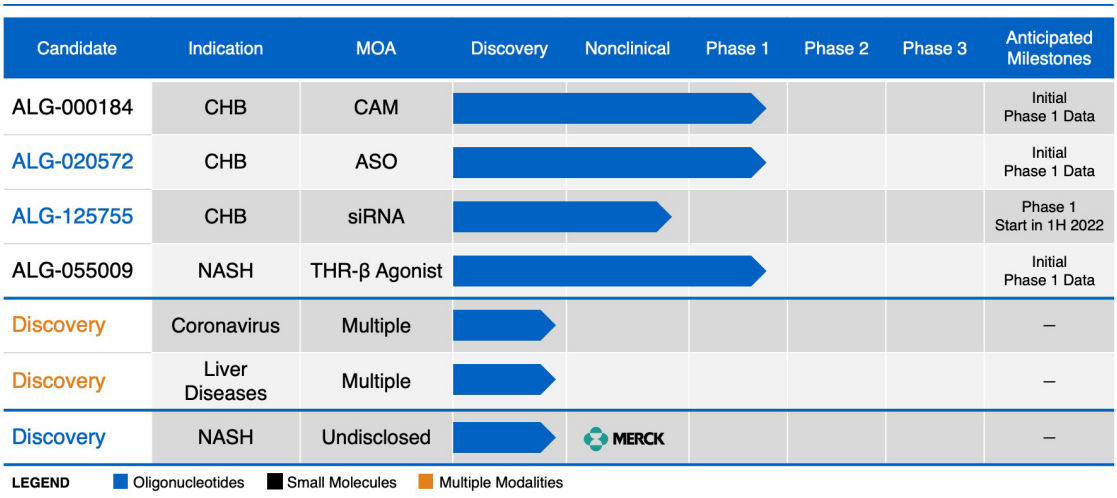
If our CHB drug candidates are advanced from Phase 1 into Phase 2 development, we plan in 2023 to initiate a Phase 2 platform study to evaluate the safety and efficacy of various combinations of our CAM, ASO, and siRNA drug candidates with or without additional drugs with alternative mechanisms of action.

Finally, note that our CHB portfolio previously included the drug candidate, ALG-010133, one of our proprietary S-antigen Transport-inhibiting Oligonucleotide Polymers (STOPS™) drug candidates that was in a Phase 1b dose range finding trial (NCT04485663) evaluating subjects with CHB. In January 2022, we announced that we halted further development of ALG-010133 based on data from the Phase 1b trial, which indicated there was insufficient antiviral activity to warrant further development.

Our second area of focus is in non-alcoholic steatohepatitis (NASH), a complex, chronic liver disease where combination regimens may likewise prove beneficial. Our most advanced drug candidate for NASH is ALG-055009, a small molecule THR-ß agonist. This drug candidate is being evaluated in a Phase 1a/1b study in HVs (oral single ascending doses) and subjects with hyperlipidemia (14 oral daily doses); dosing in both populations is currently underway. Topline data, including safety, PK, and anti-lipid effects in hyperlipidemic subjects are anticipated in the third quarter of 2022. Based on the previously demonstrated effects of other thyromimetics on liver fat, noninvasive markers of nonalcoholic fatty liver disease (NAFLD)/NASH, and liver histology in NASH patients, we believe ALG-055009 has the potential to become an integral component of future combination regimens for NASH.

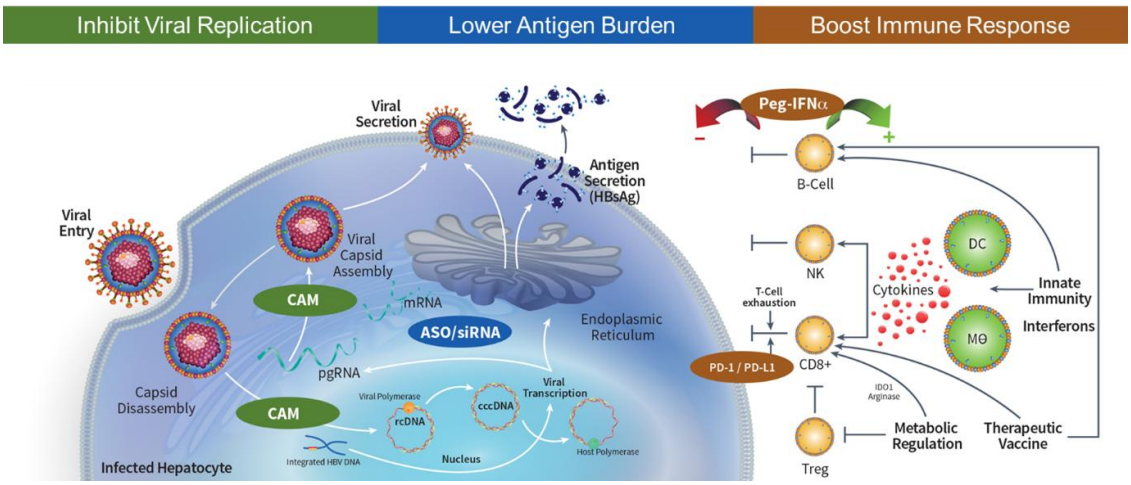
Our third area of focus is to develop drug candidates with pan-coronavirus activity, including against Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2), the virus responsible for COVID-19. Our efforts to identify a coronavirus therapeutic are focused on a small molecule approach, where we are exploring coronavirus protease inhibitors in collaboration with Katholieke Universiteit Leuven (KU Leuven), the Center for Innovation and Stimulation of Drug Discovery (CISTIM) and the Centre for Drug Design and Discovery (CD3).

Our team's collective experience and success in discovering and developing drugs targeting viruses and liver diseases, combined with our in-house expertise in oligonucleotide and small molecule drug discovery, gives us a differentiated set of capabilities, which has enabled us to rapidly establish a robust pipeline of multiple novel drug candidates, as summarized in the pipeline chart below.



Our most advanced drug candidates are for the treatment of CHB, a disease that affects more than 290 million people worldwide with approximately 30 million people becoming newly infected every year, despite the availability of an efficacious prophylactic vaccine. Approximately 900,000 people worldwide died from complications of CHB in 2015, according to the World Health Organization, and CHB is the primary cause of liver cancer worldwide. Currently approved therapies for CHB include pegylated forms of interferon-alfa (peg-IFNα) and nucleos(t)ide analogs, which are designed to boost the body's immune response to the virus or inhibit viral replication, respectively. While these therapies have improved treatment outcomes for some patients with CHB, they have not been able to achieve meaningful rates of functional cure, which is the consensus goal of treatment and defined as a sustained loss of Hepatitis B S-antigen (HBsAg) and HBV DNA with or without hepatitis B surface antibody seroconversion after a finite course of treatment. Functional cure has been shown to greatly reduce the risk of developing certain other more serious downstream liver conditions, such as cirrhosis and ESLD.

Our clinical development strategy involves evaluating both HBeAg positive and HBeAg negative CHB patient populations. HBeAg is typically present in earlier stages of the disease and is associated with higher rates of viral replication. During the natural course of the disease, HBeAg can be cleared, and antibodies develop, resulting in an HBeAg negative state where viral replication is often lower. Patients with HBeAg negative CHB are typically older and have more progressive disease-related complications (e.g., fibrosis of the liver). In addition, their immune system is likely to be more exhausted by chronic exposure to HBsAg, which makes viral clearance more difficult.



Multiple steps in the HBV life cycle, including those involving capsid assembly and production and secretion of HBsAg, are known to be essential to sustain HBV infection. We have built a portfolio of CHB drug candidates directed against clinically validated targets at several critical stages of the HBV life cycle. Our CHB portfolio includes:

- **CAMs** are small molecule antiviral agents that accelerate HBV capsid assembly and inhibit pregenomic RNA (pgRNA) encapsidation, which reduces production of new virions capable of infecting other cells. CAMs may also inhibit the de novo establishment of covalently closed circular DNA (cccDNA), a major factor for the persistence of HBV infection, when introduced at the onset of infection. In clinical trials, other CAM drug candidates have demonstrated significant reductions in HBV DNA and pgRNA. However, it is likely that CAMs will need to be combined with other modalities that affect HBsAg in order to achieve functional cure. Our most advanced CAM drug candidate is ALG-000184, a prodrug of ALG-001075, which in nonclinical studies has demonstrated ~10-300-fold enhanced potency compared to other CAMs in clinical development of which we are aware. ALG-000184 is currently being evaluated in CHB subjects in an ongoing Phase 1 clinical trial. We believe antiviral activity data, collected as of January 28, 2022, from this study continue to indicate best in class potential based on robust inhibition of viral replication with 50-100 mg doses given for 28 days achieving DNA and RNA levels <LLOQ in ≥75% and 100% of HBeAg negative subjects, respectively. Similarly robust activity has been observed in a cohort of HBeAg positive subjects, where 100 mg of ALG-000184 given for 28

days resulted in DNA and RNA reductions of >4 log_{10} IU/mL and >3 log_{10} copies/mL, respectively. We are continuing to assess the dose response for ALG-000184 in 2022 by evaluating dosing for 28 days at the 10 mg and 300 mg dose levels. Data from these cohorts are planned to be shared at a scientific conference mid-2022 and, if they prove sufficiently favorable, we also plan to evaluate longer (12 week) treatment durations with ALG-000184 this year. Preliminary data from the 12-week cohorts, if conducted, are planned to be shared at a scientific conference in the fourth quarter of 2022.

- **ASOs** are single-stranded DNA or RNA molecules that interfere with viral replication by binding to complementary messenger RNA (mRNA), allowing the combined ASO and mRNA to be degraded by the enzyme RNase H. Using our oligonucleotide discovery capabilities, we identified ALG-020572, an ASO that targets HBV mRNA and can reduce HBsAg production. In third-party clinical trials, ASOs targeting HBV mRNA have demonstrated significant reductions in HBsAg. Our ASO approach utilizes state of the art bioinformatics, proprietary stabilization chemistry and liver targeting technology that we believe provide a number of potential benefits compared to other ASO candidates of which we are aware, including increased potency, a higher barrier to resistance and broad genotype coverage. Unconjugated forms of ALG-020572 and our siRNA drug candidate (ALG-125755) were evaluated for any additive or synergistic effects with respect to HBsAg knockdown, both in vitro and in vivo. *In vitro*, in dual combinations with each other as well as with other anti-HBV agents such as nucleos(t)ide analogs and CAMs, the siRNA or ASO candidate each demonstrated a range of additive or synergistic effects, depending on the specific combination used. With one another, the unconjugated forms of the siRNA and ASO candidates exhibited synergy *in vitro*. These *in vitro* effects were confirmed in an in vivo adeno-associated virus (AAV)-HBV mouse model of HBV infection, where the ASO and siRNA exhibited additive effects with respect to HBsAg knockdown when combined. ALG-020572 is currently being evaluated in an ongoing Phase 1 study which will assess the safety, PK, and antiviral activity of single or multiple (7) SC doses of ALG-020572 in HVs and CHB subjects, respectively. Dosing in HVs is now complete and, to date, single doses of up to 480 mg of ALG-020572 have been well tolerated with an acceptable PK profile. Enrollment in the first CHB cohort is complete. Multiple dose levels will be evaluated in order to define the dose-response characteristics of ALG-020572 in CHB subjects; these data are planned to be presented at a scientific conference in the second half of 2022.

- **siRNAs** are a class of double-stranded, non-coding RNA that interfere with viral replication by silencing gene expression. Multiple siRNAs have demonstrated significant reductions in HBsAg levels in clinical trials. Our oligonucleotide discovery capabilities resulted in the identification of
ALG-125755, an siRNA drug candidate directed at HBsAg mRNA, which utilizes our proprietary liver targeting technology. In an AAV-HBV mouse study, ALG-125755 was shown to reduce HBsAg by
1.5 log_{10} IU/mL 28 days after a single SC dose of 5 mg/kg. This encouraging degree of HBsAg reduction *in vivo* is corroborated by its activity *in vitro* with mean EC_{50} values of 23.9 pM (n=3) and 28.8 pM (n=2) in two different cell culture assays. The compound also demonstrated a favorable pharmacological profile *in vitro* in multiple other cell culture systems. Phase 1 enabling nonclinical studies are ongoing and we plan to dose HVs with single SC doses of ALG-125755 in the third quarter of 2022. Multiple dosing in CHB subjects is projected to begin in the first quarter of 2023.

- **PD-L1 Inhibitors.** We are developing orally delivered, liver-targeted small molecule PD-L1 inhibitors in order to modulate host immune responses to HBV. This approach has been shown to have favorable effects on HBsAg lowering in patients with CHB. This program is currently in lead optimization and a lead compound, ALG-093453, has been shown to induce T cell activation in an in vitro Jurkat T cell-NFAT assay with similar activity to the PD-1 monoclonal antibody, nivolumab. In addition,
ALG-093453 induces HBV-antigen specific IFN-g secretion from T cells from patients infected with HBV.

We believe that a combination of drugs capable of inhibiting HBV DNA replication and RNA packaging (e.g., using CAMs) while simultaneously suppressing HBsAg production (e.g., using our ASO and/or siRNA) and modulating patients' immune responses to HBV infection (e.g., using our PD-L1 inhibitor and/or other immunomodulatory drugs) has the potential to act additively or synergistically and may lead to a higher rate of functional cure. Our clinical development strategy is designed to evaluate the safety and antiviral activity of drugs with these various therapeutic approaches as monotherapy prior to evaluating multiple combinations of our CHB assets with or without other currently available treatment modalities such as nucleos(t)ide analogs or peg-IFNα to identify optimized combination regimens.

Our second development activity is focused on the treatment of NASH. An estimated 1.5% to 6.5% of the global population, or up to about 450 million people, was believed to have NASH as of 2015, and this percentage is expected to increase significantly in the coming decade due to the continued adoption of Western dietary habits. In the absence of lifestyle modifications, the inflammation inherent in NASH persists and results in progressive fibrosis of the liver, which may lead to cirrhosis, HCC, the need for liver transplant, and death. We believe one of the most promising pharmacologic approaches in development for NASH is a selective agonist of the beta subtype of the thyroid hormone receptor (THR-ß), which, in clinical trials conducted by third parties, has demonstrated significant reduction in liver fat as well as histologic improvement. Other THR-ß drugs have also shown reductions in lipid levels in the serum, which may have important advantages in the NASH patient population that is at a high risk of cardiovascular co-morbidities. Utilizing our expertise in small molecule drug discovery, we identified ALG-055009, a once-daily oral THR-ß agonist. In nonclinical studies, ALG-055009 has been shown to be substantially more potent compared to other THR-ß agonists currently in development of which we are aware and may avoid some of their potential safety liabilities. It also appears to have the potential to achieve equal or better efficacy and improved pharmacokinetic properties compared to competitor drug candidates. As a result, we believe ALG-055009 has the potential to become an integral component of combination regimens to treat NASH. We recently initiated a Phase 1a/1b trial with ALG-055009 in December 2021; dosing in both HVs (SAD) and subjects with hyperlipidemia (multiple ascending doses; MAD) is ongoing and we expect to share topline safety, PK, and anti-lipid data from these populations in the third quarter of 2022. We also plan to share these data at a scientific conference in the fourth quarter of 2022.

Our third area of focus is to develop pan-coronavirus treatment regimens. SARS-CoV-2 is responsible for the COVID-19 pandemic, which has been identified as a cause of more than 5.9 million deaths worldwide, including approximately 950,000 in the United States, as of early March 2022. After MERS and SARS (SARS-CoV-1), SARS-CoV-2 is the third known coronavirus to have crossed over from animal species to humans in the past 20 years and cause significant morbidity and mortality. While multiple vaccines have become available, it is unlikely that vaccination will be sufficiently widely adopted or fully efficacious for all emerging variants, indicating that the need for effective therapeutics will likely remain. Two orally available therapeutics have been authorized for emergency use for the treatment of COVID-19, but both have important limitations related to sub-optimal efficacy (molnupiravir, a nucleoside analog; Merck) or the need for ritonavir boosting (PF-07321332/nirmatrelvir, a protease inhibitor; Pfizer). We have identified multiple protease inhibitors that are more potent in vitro than nirmatrelvir and don't require ritonavir boosting, which may offer important clinical advantages in the future treatment of COVID-19 or other coronaviruses. We anticipate initiating Phase 1 enabling nonclinical studies of one of our COVID-PIs in the third quarter of 2022, and it is planned to enter the clinic in the first quarter of 2023.

Our management team consists of a group of highly collaborative, culturally diverse executives with decades of drug discovery and development experience and a proven track record of success in the areas of viral infections and liver diseases. Most members of our management team have worked together across multiple companies, many for over a decade, and have been collectively involved in the discovery and/or development of a number of drugs that have been successfully commercialized, including Ganovo, Olysio, Sovaldi, Hepsera, Infergen, Valtrex, Sirturo, Neupogen, Andexxa and Esbriet, among others. In support of our management team, we also have assembled an industry-leading board of directors and a world-class group of scientific advisors with significant experience in drug development for viral and liver diseases.

Our strategy

Our strategy is to develop pharmacologically optimized drug candidates for use in combination regimens designed to achieve improved treatment outcomes. Our initial areas of focus are viral and liver diseases, where our team can leverage their in-depth knowledge and expertise to develop potentially best-in-class combination regimens addressing large areas of unmet medical need. The core elements of our business strategy include:

- ***Developing improved drug candidates against clinically validated targets.*** We leverage our oligonucleotide and small molecule platforms to identify drug candidates with pharmacologically optimized characteristics compared to other drug candidates, including the potential for improved efficacy, safety and/or route of administration. By initially focusing on clinically validated targets, we increase the likelihood of demonstrating clinical efficacy and delivering optimized combination regimens.
- ***Creating combination regimens designed to achieve better outcomes.*** We believe that most chronic and viral diseases require combination therapies for optimal treatment outcomes, and that combining

individual drugs which can act additively or synergistically provides the greatest potential for enhanced efficacy. For each of our drug candidates, our strategy in Phase 1 is to rapidly evaluate safety and demonstrate proof of activity for each individual drug. Subsequently, we plan to combine multiple drug candidates in Phase 2 trials to identify optimized combination regimens to be advanced into pivotal trials.

- ***Developing a functional cure for CHB.*** We have a portfolio of differentiated drug candidates for CHB, including a small molecule CAM and oligonucleotides (ASO and siRNA), each of which is designed to inhibit clinically validated, distinct and critical points in the HBV life cycle. Our two most advanced drug candidates for CHB, ALG-000184, a CAM, and ALG-020572, an ASO, are currently in Phase 1b trials. Based on nonclinical studies, we believe that each of our CHB drug candidates has demonstrated strong potential relative to other drugs in development. We are also developing liver-targeted small molecule PD-L1 inhibitors to modulate host immune responses to HBV. This approach has also been shown to have favorable effects on HBsAg lowering. In combination, we believe our CHB drug candidates will provide greater viral suppression and enhanced immune responses to HBV infection, potentially leading to higher rates of functional cure.
- ***Expanding our development capabilities and pipeline.*** We are utilizing our in-house discovery expertise to continually improve upon our existing drug candidates by identifying promising backup candidates and exploring novel and emerging drug targets in viral and liver diseases. We are also evaluating novel mechanisms of action with the potential to complement our current pipeline. To further supplement our internal discovery and development efforts, we actively evaluate external technology platforms and assets for future development candidates for liver and viral diseases. To date, we have secured licenses for technology from Emory, Luxna and AM Chemicals, LLC (AM Chemicals), and have entered into collaborations with KU Leuven's Rega Institute for Medical Research, as well as its Centre for Drug Design and Discovery, and we have two collaborations with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc. (known outside of the United States and Canada as MSD) (which Merck Sharp & Dohme Corp., or Merck & Co., Inc., individually or together, are referred to herein as "Merck").
- ***Maximizing the value of our drug candidates.*** We currently hold worldwide development and commercialization rights, including through exclusive licenses, to all of our drug candidates. We intend to pursue independent development and commercialization in select indications and markets that we can address with a specialty sales and marketing organization. We may opportunistically explore additional licensing agreements, collaborations or partnerships to develop our drug candidates in larger market indications where we could accelerate development utilizing the resources of larger biopharmaceutical companies, or to commercialize them in specific geographies.

Our approach to research and development

Our oligonucleotide and small molecule platforms allow us to discover drug candidates that can be used to develop potentially best-in-class combination regimens. Oligonucleotide approaches enable specific inhibition of the translation of viral or host genes to affect a desired outcome that would be challenging to achieve with traditional small molecules. We believe the diversity of chemical matter we can generate with these complementary modalities broadens the range of therapeutic targets we can address with our platforms and provides us with a differentiated set of in-house capabilities to use in developing novel, optimized combination regimens across all of our current areas of focus.

Our approach of combining multiple mechanisms from these distinct modalities is based on the observation that most chronic diseases, whether extrinsic (e.g., HIV and Hepatitis C) or intrinsic (e.g., metabolic syndrome conditions such as hypertension and diabetes), often require combination therapy to achieve optimal outcomes. Combination approaches have the advantage of simultaneously targeting multiple pathways and can act broadly and potentially synergistically. Particularly in the case of viral diseases, the simultaneous use of multiple drugs in combination can increase the barrier to viral resistance. As part of our drug candidate screening paradigm, we perform in vitro combination studies to ensure that none of the combinations we plan to evaluate clinically demonstrate antagonistic interactions.

Our team has extensive end-to-end drug discovery and development experience across multiple therapeutic areas and disciplines. Our clinical development strategy leverages past experience to rapidly advance drug

candidates towards optimized combination regimens. We have strengthened our platforms by in-licensing select intellectual property, which, together with our in-house expertise, allows us to develop novel and proprietary drug candidates.

Oligonucleotide platform

We have multiple distinct modalities within our oligonucleotide platform, including ASOs and siRNAs. We have developed a portfolio of oligonucleotide drug candidates for the treatment of CHB, including: ALG-020572, an ASO drug candidate, and ALG-125755, an siRNA drug candidate. In addition, we are leveraging our oligonucleotide platform to develop drug candidates for other diseases, which includes entering into two collaborations with Merck to discover and develop oligonucleotides against two undisclosed targets for the treatment of NASH.

We have exclusively licensed proprietary technologies that enhance our oligonucleotide platform. These technologies include third generation bridged nucleic acid (BNA) and N-acetylgalactosamine (GalNAc) chemistries, which can improve liver targeting, increase potency and enhance pharmacokinetic properties.

Antisense oligonucleotides (ASOs)

ASOs are single-stranded DNA or RNA molecules that interfere with viral replication by binding to complementary messenger RNA (mRNA), allowing the combined ASO and mRNA to be degraded by the enzyme RNase H. This technology has been validated across multiple indications, including CHB, where significant reductions in viral markers have been observed. We have discovered potent, liver-targeted ASOs, including ALG-020572, which has demonstrated a promising profile in nonclinical CHB models.

Small interfering RNAs (siRNAs)

siRNAs are a class of double-stranded, non-coding RNA that interferes with viral replication by silencing gene expression. Multiple siRNAs have demonstrated significant reductions in HBsAg levels in clinical trials. Our novel and proprietary siRNA technology has resulted in the identification of molecules, including ALG-125755, that have demonstrated high potency and long-lasting durability in nonclinical CHB models.

Small molecule platform

Our team has the capability and experience to rapidly identify and optimize small molecules, including traditional small molecules, peptidomimetics and prodrugs. Our team has a strong track record of developing and commercializing small molecule drug candidates. We use state-of-the-art computational chemistry and crystallography to enable structure-guided drug design. We have applied this approach to the multidimensional optimization of potential drug candidates in multiple therapeutic areas, including for viral and liver diseases.

Traditional small molecules

To date, traditional small molecules represent the vast majority of approved drugs and are the primary chemistry approach used for drug discovery. CAMs are small molecules that have been shown to significantly reduce viral markers in CHB patients in clinical studies. Applying our small molecule platform, we have identified ALG-001075, which has demonstrated improved in vitro potency and increased efficacy in nonclinical animal models, as compared to other CAM candidates that have advanced into the clinic. ALG-001075 is currently being evaluated in a Phase 1 study as the prodrug ALG-000184, where it continues to show best in class properties. THR-b agonists are small molecules that have been shown to significantly reduce circulating lipid levels and improve liver histology in patients with NASH. We have discovered ALG-055009, a THR-b agonist that has demonstrated improved potency in vitro and increased efficacy in nonclinical animal models relative to other THR-b agonists in Phase 2 or later stages of development. We have recently advanced ALG-055009 into a Phase 1a/1b study and are currently dosing in both HVs and subjects with hyperlipidemia.

Peptidomimetics

Peptidomimetics are small molecules derived from short polypeptides that can be used as drug candidates against multiple targets. The peptidomimetic approach has been successfully used in the antiviral field to develop protease inhibitor drugs against Hepatitis C virus (HCV) and human immunodeficiency virus (HIV). Our team has discovered multiple potential nanomolar potency drug candidates targeting the 3C-like protease of coronaviruses, which have shown pan-coronavirus activity and do not require ritonavir boosting based on nonclinical studies. We plan to begin Phase 1 enabling nonclinical studies with one of our COVID PIs in the third quarter of 2022.

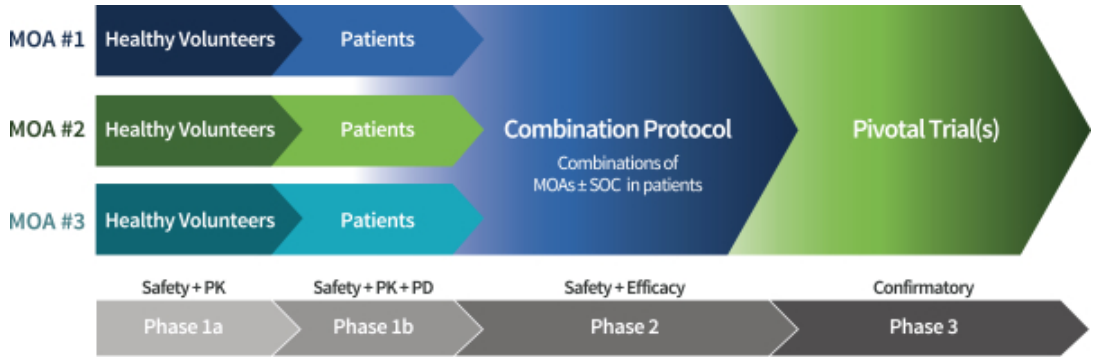
Small molecule prodrugs

A prodrug is a compound that, after administration, is metabolized into the pharmacologically active parent drug. We use small molecule prodrug chemistry to optimize the drug-like properties of drug candidates to improve their solubility and pharmacokinetics. We have successfully applied this approach to ALG-001075 to create ALG-000184, which is our lead CAM drug candidate, and which is currently being evaluated in the clinic for the treatment of CHB.

We are engaged in multiple other small molecule discovery efforts to identify additional potentially best-in-class drug candidates for the treatment of CHB, NASH and coronaviruses.

Our approach to developing potentially best-in-class therapeutic combinations

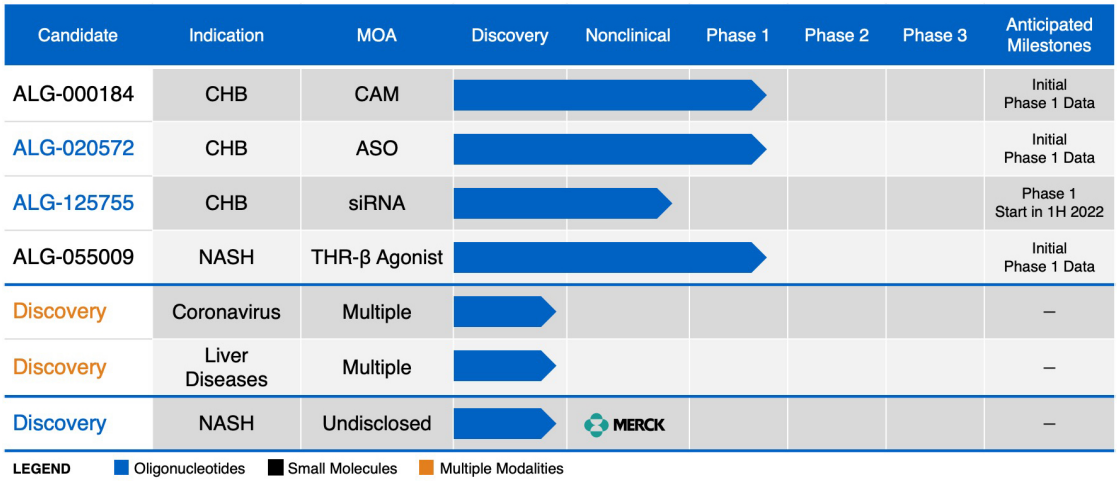
Our approach to developing potentially best-in-class regimens for our therapeutic areas of interest leverages the most promising modalities from our oligonucleotide and small molecule platforms to advance rapidly from monotherapy Phase 1 trials into Phase 2 combination trials. As a first step, we evaluate the safety and activity of each drug candidate in healthy volunteers and patients with the disease of interest. We intend to then efficiently evaluate drug candidates shown to have activity in Phase 1 in various combinations in Phase 2 platform protocols to enable us to identify optimized combination regimens that will then be evaluated in Phase 3 pivotal trials. The combinations we evaluate may include additional drug candidates or current standard of care. Throughout all phases of clinical development, pre-specified adaptive study rules allow real-time adjustment of trial conduct based on emerging clinical trial data. These practices allow us to gain a rapid understanding of the risk/benefit profile for our individual drug candidates and combination regimens, and iteratively refine our strategy based on emerging data. This approach is summarized in the figure below.



Our pipeline

We are focused on viral and liver diseases, areas in which our employees have expertise and decades of experience. Our most advanced drug candidates are designed for use in CHB to achieve higher rates of functional cure, which we believe will require the use of a combination of drugs with complementary mechanisms of action (MOA). Each of our CHB modalities plays an important role in disrupting the HBV life cycle and, in nonclinical studies, certain combinations have been shown to act additively or synergistically. We are also advancing a THR-ß agonist for NASH and a COVID-PI for the treatment of COVID-19. We also have a collaboration with Merck to discover and develop oligonucleotides against two undisclosed targets for the treatment of NASH. As with CHB, we

believe combination therapy will be critical for improved patient outcomes in these disease settings and intend to combine our drug candidates with others that have potentially complementary MOAs.

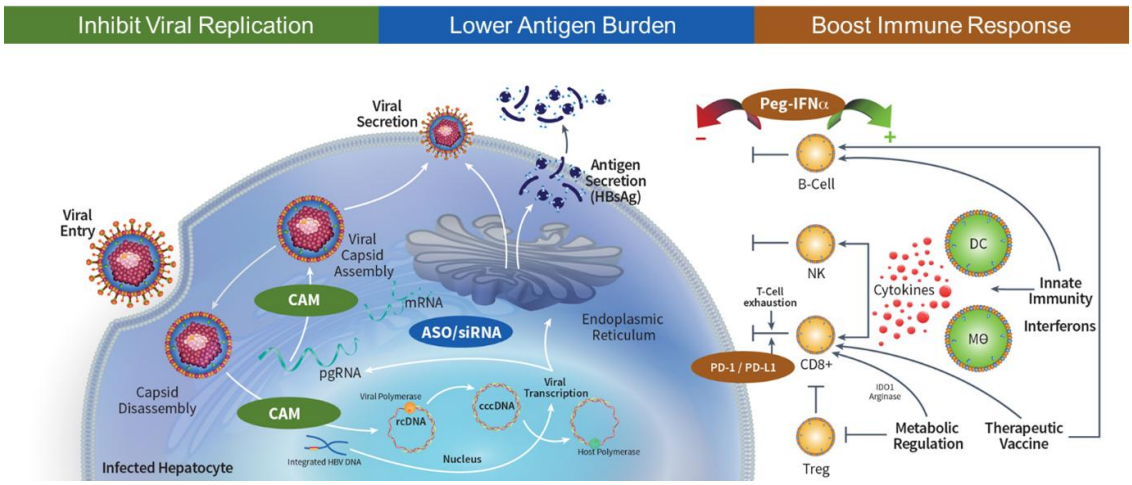


Functional cure for CHB

CHB is the most common viral infection in the world and an area of substantial unmet medical need. There are over 290 million chronic carriers worldwide and approximately 30 million individuals become newly infected every year despite the availability of an efficacious prophylactic vaccine. In 2015, there were more than 90 million cases of CHB in China alone, while the EU, United States and Japan accounted for nearly 8 million cases. Complications from CHB include cirrhosis, end-stage liver disease, and hepatocellular carcinoma, which collectively resulted in approximately 900,000 deaths in 2015, according to the World Health Organization. CHB is the primary cause of liver cancer worldwide, and the mortality associated with HBV-related liver cancer continues to increase.

Current therapy for CHB may entail life-long treatment and does not eliminate the virus in a meaningful number of patients. In the case of nucleos(t)ide analogs, long-term treatment can lower the amount of HBV DNA in circulation, resulting in improvements in long-term disease outcomes, but virological relapse is common after treatment cessation. Our goal is to achieve meaningful rates of functional cure, which is defined as a sustained loss of HBsAg and HBV DNA with or without hepatitis B surface antibody seroconversion after a finite treatment

course. Our team's years of experience in antiviral drug development suggest that only by developing a combination regimen targeting multiple mechanisms can meaningful functional cure rates for CHB be achieved.



HBV is a small DNA virus consisting of a nucleocapsid in which the viral DNA is packaged together with the HBV polymerase by the hepatitis B core protein and a membranous envelope containing HBsAg. After infection of liver cells, HBV DNA is transformed in the nucleus into a stable viral mini-chromosome, which is composed of a cccDNA molecule, from which mRNAs encoding viral proteins are transcribed, and pgRNA, the template for the formation of new viral DNA genomes by reverse transcription. Parts of the viral genome can integrate into the host genome, which is thought to contribute to the production of HBsAg in chronically infected patients and play an important role in liver carcinogenesis, but the integrated viral genome does not produce infectious virus. HBsAg is known to prevent immune-mediated clearance of infected liver cells. HBsAg seroclearance correlates with significant decreases in cccDNA levels and implies immune control of HBV, indicating the need to reduce HBsAg to achieve functional cure.

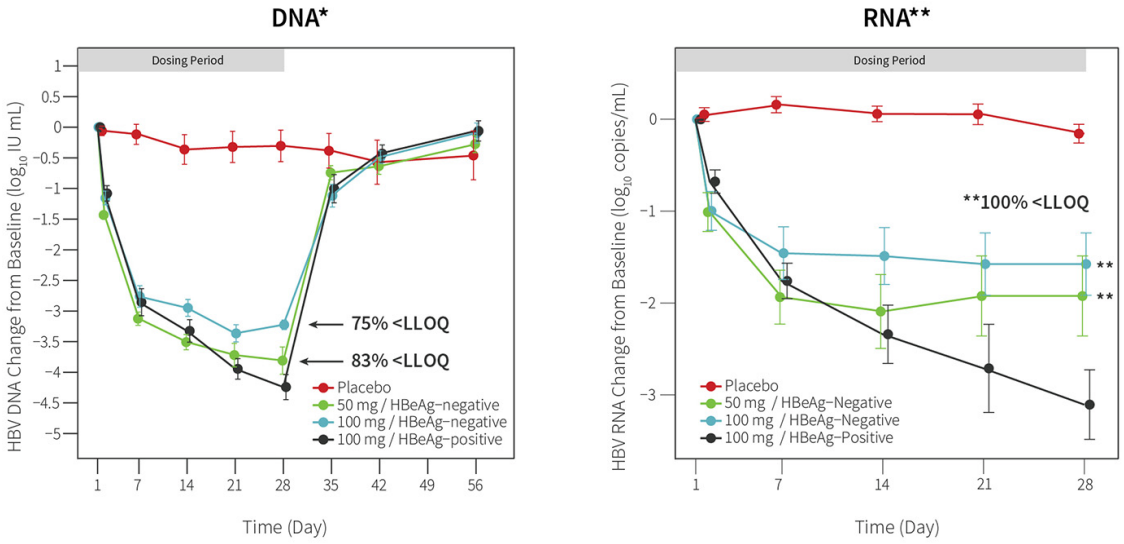
We have developed a portfolio of differentiated drug candidates for CHB, including a small molecule CAM and oligonucleotides (ASO and siRNA), each of which are designed to interfere with multiple clinically validated targets in the HBV life cycle and may lead to higher rates of functional cure when used in combination.

ALG-000184 (CAM) for CHB

CAMs are a class of small molecule antiviral agents that accelerate HBV capsid assembly and inhibit pgRNA encapsidation, resulting in lower circulating HBV pgRNA and DNA levels. CAMs are also believed to regulate the formation of cccDNA at the onset of infection, a major factor for the persistence of HBV infection. In clinical trials, CAMs have been shown to provide greater HBV DNA and RNA reduction when combined with nucleos(t)ide analogs than can be achieved with nucleos(t)ide analogs alone.

In 2018, we in-licensed a lead drug candidate (GLP-26) and the associated IP for a CAM from the laboratory of Professor Raymond Schinazi at Emory. Our scientists optimized this lead drug candidate to discover the potent CAM, ALG-001075, which was further optimized to the prodrug ALG-000184. Initial Phase 1a studies in healthy volunteers for ALG-000184 have been completed. A Phase 1b dose range finding study, evaluating the properties of ALG-000184 as monotherapy in CHB patients, is approved in many countries, including New Zealand, Hong Kong, the United Kingdom, South Korea, China and Moldova, and dosing in CHB patients is ongoing. Preliminary data, as of January 28, 2022, in both HVs and CHB subjects indicate ALG-000184 has a predictable, dose proportional PK profile and was well tolerated. Specifically, one unrelated SAE (hospitalization for management of pre-existing back pain) and no TEAEs leading to discontinuation or concerning trends or findings based on TEAEs, laboratories, or EKGs have been reported to date. Additionally, antiviral activity data, collected as of January 28, 2022, indicated that ALG-000184 resulted in robust inhibition of HBV DNA and RNA (see figure below), which appeared to have best in class potential when compared to competitor drug candidates with available antiviral activity data. Among HBeAg negative subjects receiving 100 mg (Cohort 1) or 50 mg (Cohort 2) ALG-000184 for 28 days, ~3-4 $\log_{10}$

IU/mL declines in HBV DNA and ~1.5-2 log_{10} copies/mL declines in RNA were observed with ≥75% and 100% of subjects reaching levels <LLOQ for DNA and RNA, respectively. Similarly robust antiviral activity has been observed in HBeAg positive subjects who received 100 mg ALG-000184 for 28 days, where >4 log10 IU/mL and >3 log10 IU/mL declines in DNA and RNA, respectively, were observed. Dosing in two additional cohorts, which are evaluating the 10 mg and 300 mg dose levels for 28 days, is ongoing and, if these data prove sufficiently favorable, we further plan to evaluate the safety and antiviral activity of ALG-000184 dosing in CHB patients for 12-week durations in the second half of 2022. In the future, we may also conduct clinical trials for ALG-000184 and other drug candidates in other countries and territories.

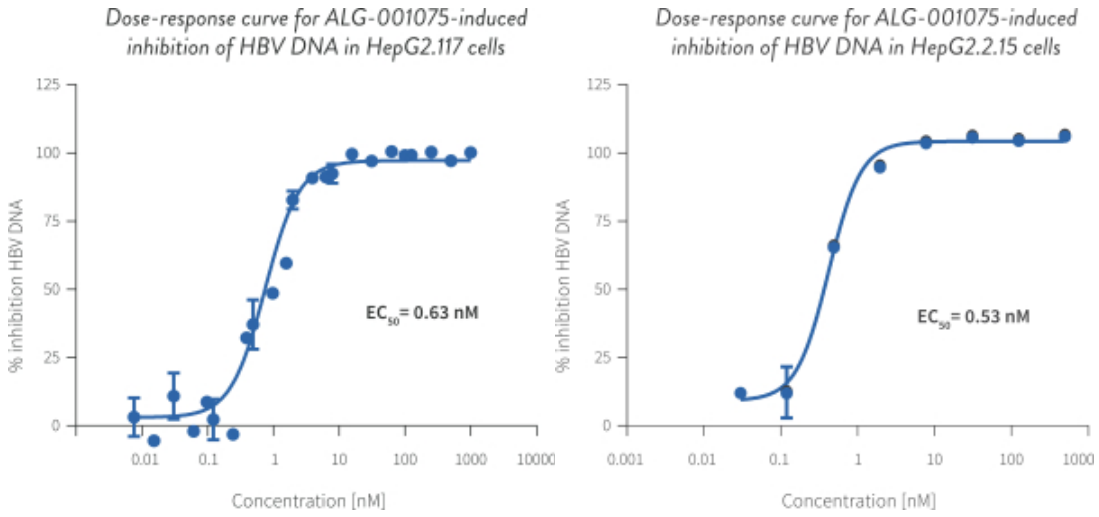


*Roche COBAS HBV DNA ASSAY (LLOQ = 10 IU/mL) and RNA assay (LLOQ = 10 copies/mL). The HBV RNA investigational assay is not approved in any market. All data are preliminary. Cohorts 1 and 2: Gane et. al., AASLD 2021.

Molecular characteristics and nonclinical data

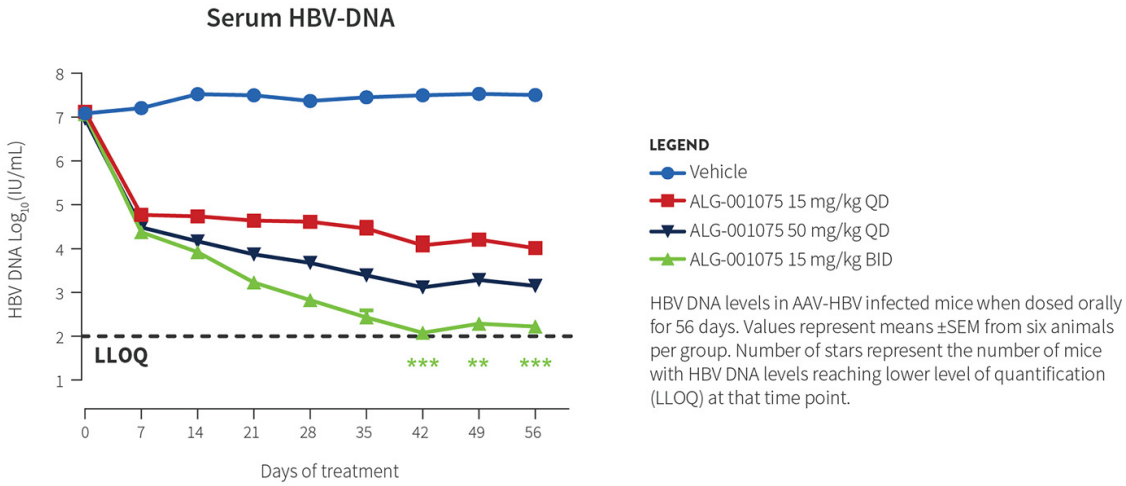
In biochemical assays, ALG-001075 was shown to induce the rapid assembly of core proteins into small, spherical capsids. Capsids assembled in the presence of ALG-001075 were highly stable with a compound residence time of more than 16 hours. In assays using genotype D HBV infected HepG2.2.15 cells, ALG-001075 demonstrated enhanced potency with an EC_{50} value of 0.53 nM compared to several CAM reference compounds. This finding was repeated in HepG2.117 cells where ALG-001075 had an EC_{50} value of 0.63 nM. This level of potency exceeds that of all other known CAMs that have entered clinical development.

Compound	Current Status	HBV DNA reduction (EC_{50} nM)	Cell Type
Assembly ABI-H0731	Phase 2	172	AD38
Assembly ABI-H3733	Phase 1	5	AD38
Janssen JNJ-6379	Phase 2	54	HepG2.117
Enanta EDP-514	Phase 1	17	HepG2.115
Arbutus AB-836	Phase 1	10	HepDE19
Aligos ALG-000184	**Phase 1**	**0.63** **0.53**	**HepG2.117** **HepG2.117**



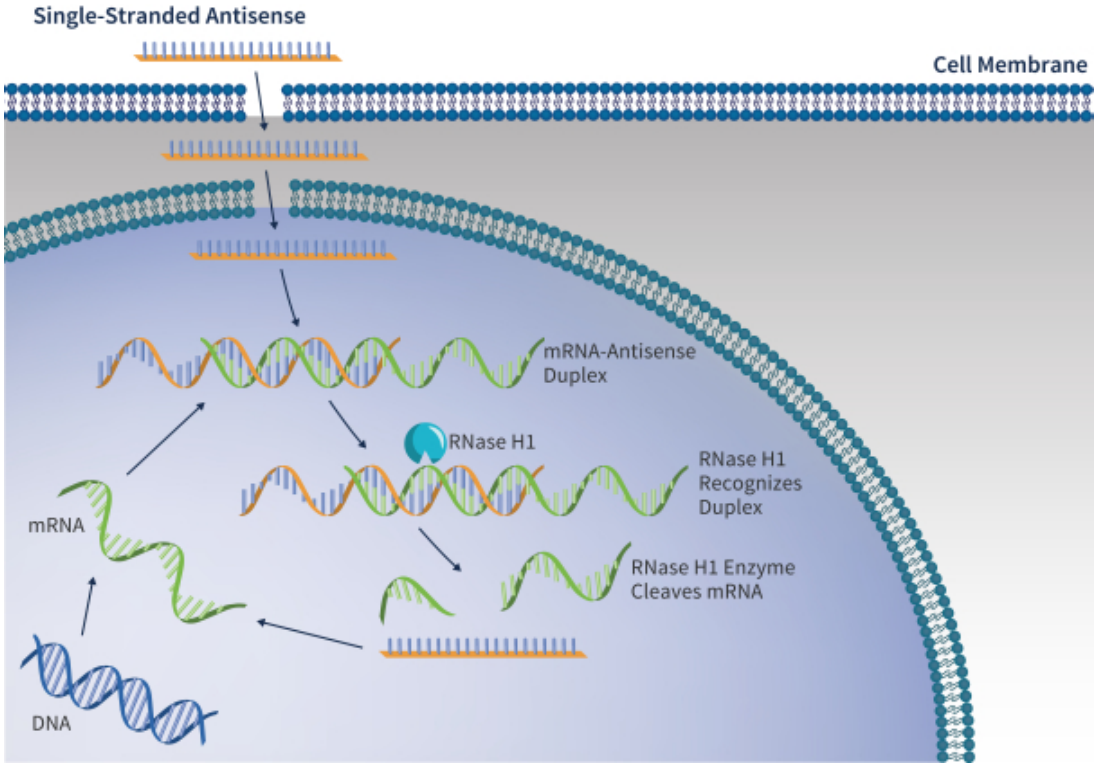
ALG-001075 was further tested in a transient HBV assay against a broad panel of HBV screens from genotypes A through J and was shown to maintain good activity against all genotypes tested except for certain genotypes with known CAM-resistant mutations.

In the AAV-HBV mouse efficacy model, ALG-001075 demonstrated a dose-dependent inhibition of viral replication with >5 log_{10} IU/mL reduction in HBV DNA at a dose of 15 mg/kg/dose given twice daily at 12-hour intervals (BID) as compared to a vehicle group.



ALG-020572 (ASO) for HBV

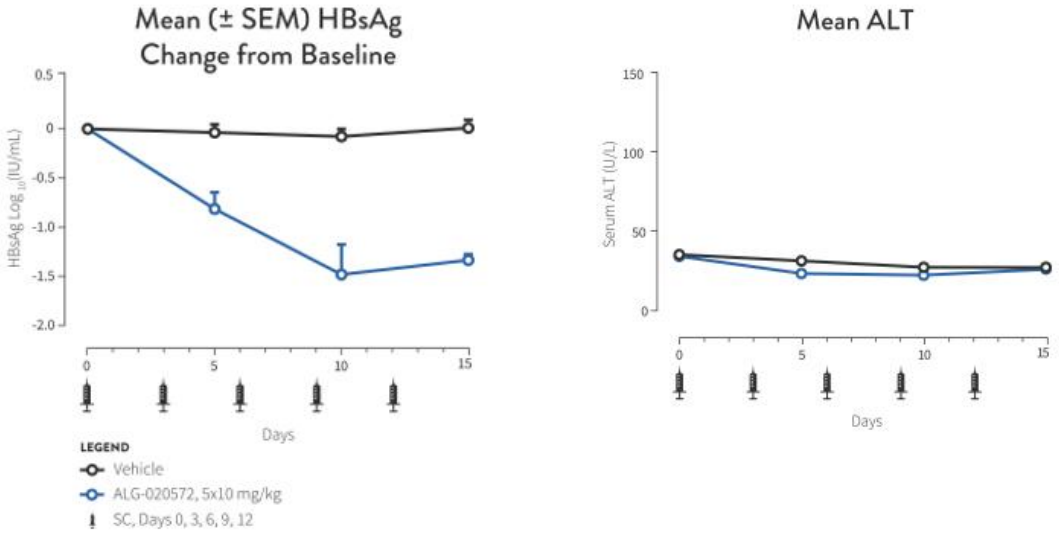
Anti-sense oligonucleotides (ASOs) are single-stranded DNA or RNA molecules that are complementary to a selected target sequence. ASO structures are typically composed of three sections, known as the wings and the gap. The wings are on each end of the oligonucleotide strand with the gap section bridging the wing sections. Wings are generally made up of BNAs, while the gap sections are typically made up of DNA or modified DNA nucleotides. ASOs interfere with viral replication by binding to complementary mRNA, a process known as hybridization. If binding occurs, this hybrid can be degraded by the enzyme RNase H, resulting in significant down-regulation of mRNA expression, and, in the case of our CHB ASOs, preventing subsequent HBsAg translation and secretion. This process is shown in the figure below. ASOs have been validated across multiple indications, including CHB, where rapid and significant reductions in HBsAg have been observed.



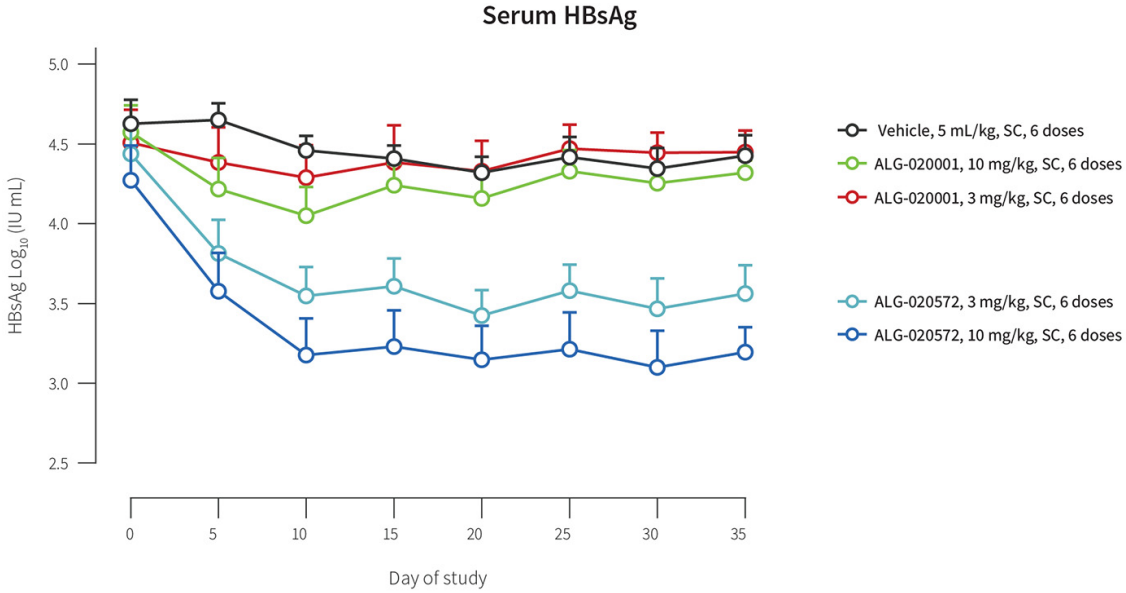
We have exclusively licensed Luxna's intellectual property for use of next-generation nucleotide monomers in our current focus areas, including CHB and SARS-CoV-2. This chemistry forms the basis of our ASO platform and has enabled us to design highly potent, stable ASOs that have an improved toxicology profile, including a reduction of hepatotoxicity, as compared to ASOs using earlier nucleotide monomer technology. The application of this technology, combined with our proprietary liver-targeting GalNAc conjugation, has led to our discovery of ALG-020572, a potentially best-in-class HBV ASO targeting the open reading frame of HBsAg. In an ongoing Phase 1 study, we recently completed SC dosing in HVs at doses up to 480 mg and enrollment in the first cohort of CHB subjects, who are receiving multiple doses, is also complete.

Molecular characteristics and nonclinical data

We explored the structure activity relationship of BNA wing and nucleobase gap modifications across a set of diverse locked nucleic acid ASOs. When conjugated to our proprietary GalNAc moiety and administered subcutaneously (5 doses total, 10 mg/kg given every 3 days over 12 days) to mice previously infected with an AAV-HBV construct, ALG-020572 demonstrated a 1.5 $\log_{10}$ IU/mL mean reduction in serum HBsAg. Vehicle-treated animals did not exhibit any significant changes in their serum HBsAg. Importantly, this intensive dosing regimen was not associated with any changes in alanine aminotransferase (ALT) levels, a marker of liver cell damage.



Additionally, we compared the antiviral activity of ALG-020572 vs. a competitor ASO (GSK-3228836) in the AAV-HBV mouse model to assess the effects our proprietary chemistries and liver targeting technologies might have on HBsAg lowering. In this experiment, we found that treatment with ALG-020572 resulted in deeper HBsAg reductions that were more sustained relative to GSK-3228836. The results from this experiment can be found in the figure below.



ALG-020572 is currently being evaluated in an ongoing Phase 1 study which will assess the safety, PK, and antiviral activity of single or multiple SC doses of ALG-020572 in HVs and CHB subjects, respectively. Dosing in HVs is now complete and, to date, single doses of up to 480 mg of ALG-020572 have been well tolerated with an acceptable PK profile. Enrollment of the first cohort of CHB subjects is also complete. Multiple dose levels will be

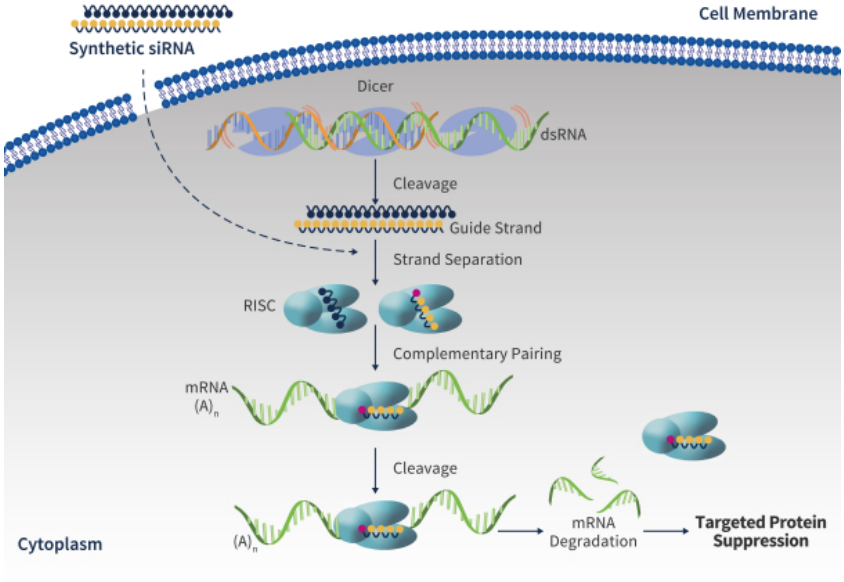
evaluated in order to define the dose-response characteristics of ALG-020572 in CHB subjects; these data are planned to be presented at a scientific conference in the second half of 2022.

In summary, we have discovered a potent, liver-targeted ASO, ALG-020572, which has demonstrated a promising profile in nonclinical CHB models and has advanced into dosing in CHB subjects. This ASO drug candidate may also be combined with other drug candidates against CHB.

siRNA

Small interfering RNA (siRNA), also known as short interfering RNA or silencing RNA or RNA interference (RNAi), are a class of double-stranded, non-coding RNA, typically 20-27 base pairs in length. siRNA interferes with viral replication by silencing gene expression and subsequent protein (e.g., HBsAg) translation and secretion. siRNAs have shown efficacy across multiple indications, including CHB, where significant, gradual and durable reductions in HBsAg have been observed in clinical trials.

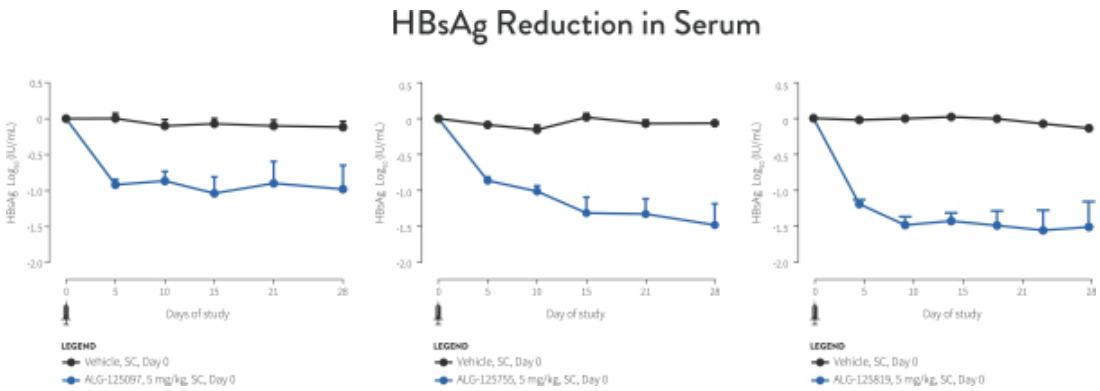
siRNA-induced gene silencing is initiated with the assembly of the RNA-induced silencing complex (RISC). One of the two siRNA strands, the guide strand or anti-sense strand, is loaded into the RISC while the other strand, the passenger strand or sense strand, is degraded. Dicer enzymes are responsible for loading the guide strand into RISC. The cleavage of the mRNA molecule is thought to be catalyzed by the Argonaute proteins of the RISC. The mRNA molecule is then cut by cleaving the phosphodiester bond between the target nucleotides which are paired to siRNA residues. This cleavage results in mRNA fragments that are further degraded by cellular exonucleases. The process of siRNA-mediated RNA degradation is shown in the figure below.

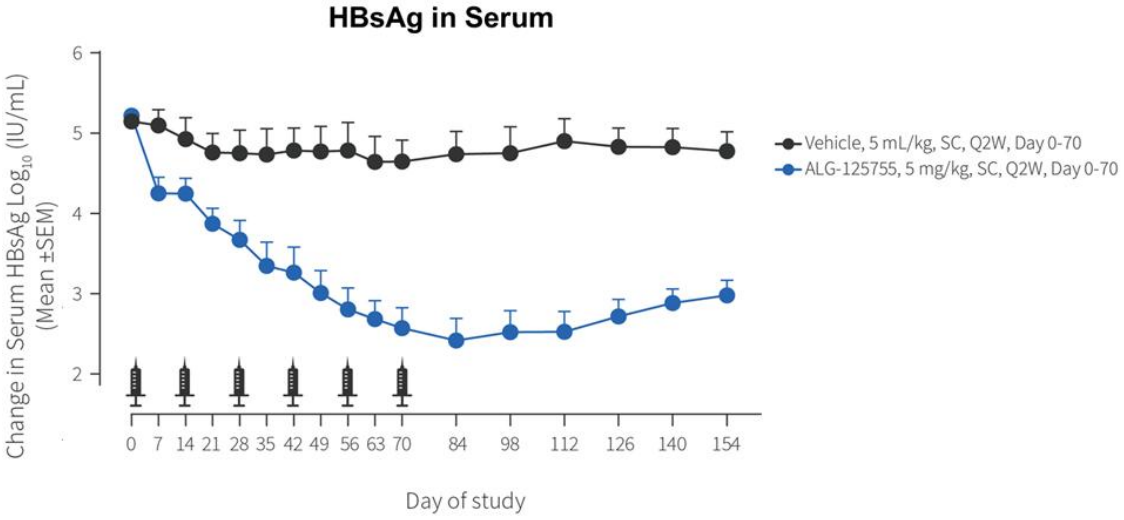


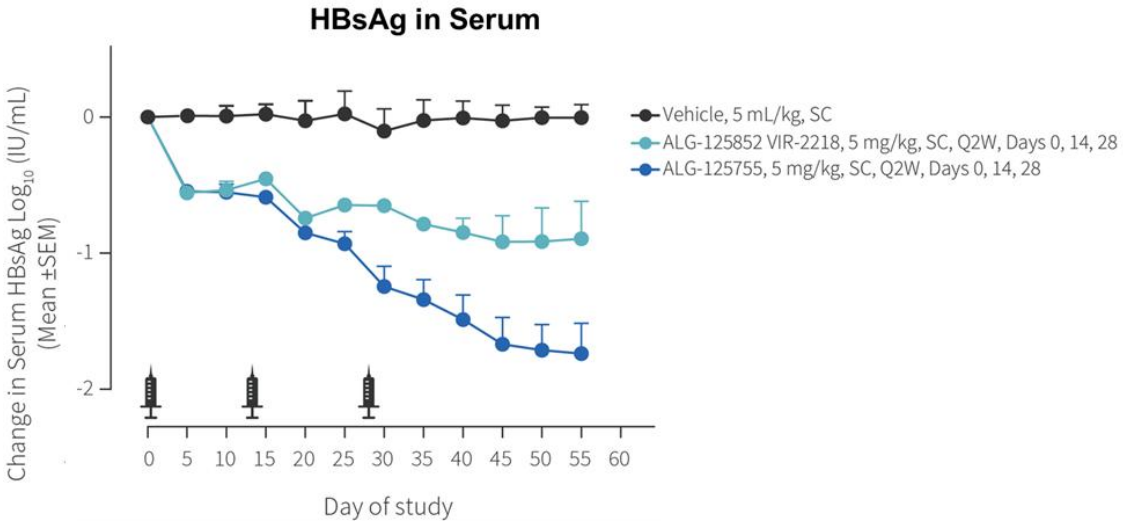
We started with our bioinformatics approach to identify regions of the HBV genome for targeting and used our proprietary technology to maximize potency and minimize the number of 2'-F nucleotides in our sequences. We applied this approach to our screening paradigm to identify our lead siRNA candidate, ALG-125755.

Molecular characteristics and nonclinical data

In cell-based assays measuring reduction in HBsAg in infected cells, our lead siRNA drug candidate, ALG-125755, as well as additional backup compounds ALG-125097 and ALG-125819, demonstrated potent inhibition of HBsAg release from HBV-infected cells. When dosed in vivo in the AAV-HBV mouse model of CHB infection, a single 5 mg/kg subcutaneous injection resulted in a sustained reduction of serum HBsAg of approximately 1-1.5 log_{10} IU/mL through the last measurement at 28 days. Similarly, multiple 5 mg/kg doses of ALG-125755 in the AAV-HBV mouse model resulted in sustained up to ~2.5 log_{10} IU/mL reductions in HBsAg levels. ALG-125755 also compared favorably to a competitor siRNA (e.g., VIR-2218) in a head-to-head AAV-HBV experiment. The results from these experiments are shown in the figures below.





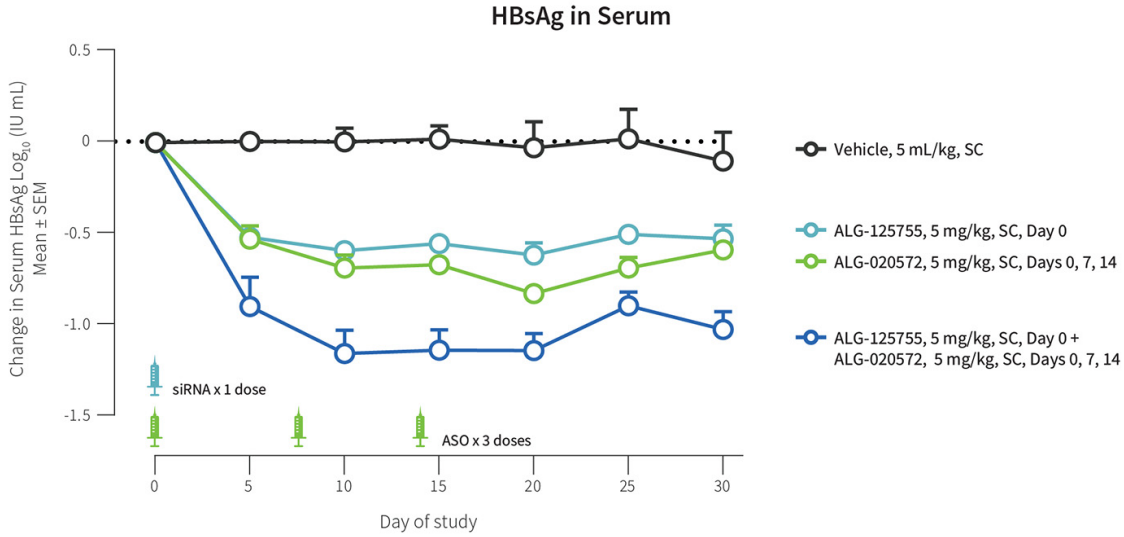


Our preclinical efforts to advance ALG-125755 are ongoing, with dosing in HVs on-track for the third quarter of 2022.

In conclusion, our proprietary siRNA technology is based on modifying chemistries and has resulted in the identification of drug candidates, including ALG-125755, that have promising profiles with long lasting durability in nonclinical CHB models.

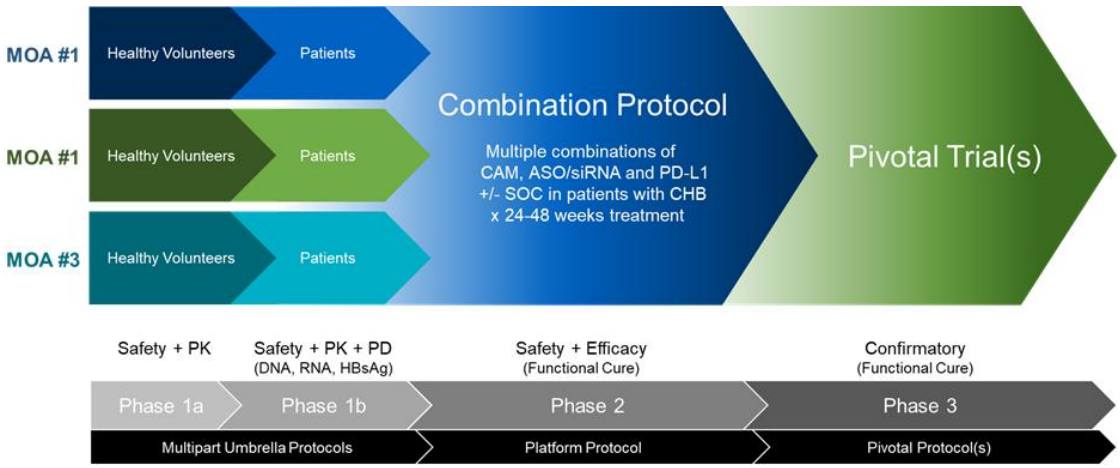
Nonclinical combination data

We performed in vitro studies in HepG2.2.15 cells to assess the potential for drug-drug interactions on HBsAg or HBV DNA reductions when combining our drug candidates, and the degree of synergy was quantified using MacSynergy II software. Combinations of our CAM drug candidate, ALG-000184, or our ASO drug candidate, ALG-020572, with other inhibitors of HBV replication generally demonstrated either additive or synergistic interactions. We also studied in vivo combinations in the AAV-HBV mouse model with ALG-020572. These studies indicate that our drug candidates could become part of an effective combination regimen for CHB, as shown below.



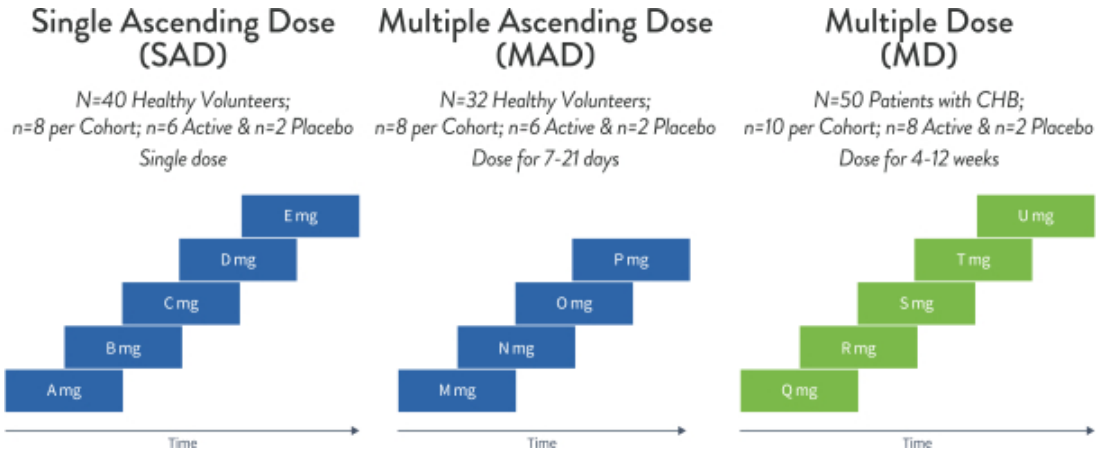
Clinical development plan for CHB

Our approach for developing a best-in-class CHB combination regimen is to discover and develop drug candidates initially targeting clinically validated MOAs, which are evaluated as monotherapy in Phase 1 and subsequently studied in Phase 2 and Phase 3 combination trials. This approach maximizes the chance of achieving higher rates of functional cure compared to current standard of care. Our CHB development strategy is depicted in the figure below.



Both our CAM molecule (ALG-000184) and ASO (ALG-020572) are currently being evaluated in Phase 1b clinical trials.

The figure below illustrates our planned general approach to Phase 1 trial design for each of our CHB drug candidates.



Although we expect the basic Phase 1 trial design to be the same across all of our CHB drug candidates, we anticipate there will be important differences, which include routes of administration, dose and dosing frequency, patient population, and key viral markers. In addition, it is likely that MAD evaluation in HV will not be required for the ALG-125755 or ALG-020572 programs. A summary table of the key Phase 1 design elements and how we expect them to differ across our drug candidates can be found in the table below.

Phase 1 Key Study Elements			
	CAM (ALG-000184)	ASO (ALG-020572)	siRNA (ALG-125755)
Primary Objective	Safety in healthy volunteers and CHB patients		
Key Secondary Objectives	Pharmacokinetics in healthy volunteers		
	Pharmacokinetics and antiviral activity in CHB patients		
Initial CHB Population	HBeAg-negative Currently Not Treated	HBeAg-negative Virally Suppressed	HBeAg-negative Virally Suppressed
Key HBV Biomarker Endpoint(s)	HBV DNA and HBV RNA	HBsAg	HBsAg
Route of Administration	Oral	Subcutaneous	Subcutaneous
Anticipated Dosing Frequency	Once daily	Once weekly	Once monthly
Clinical Status	Phase 1b Ongoing	Phase 1b Ongoing	CTA planned Q2 2022

Drug candidates that show favorable risk/benefit profiles as monotherapy in Phase 1 will be evaluated in combination in our Phase 2 platform trials. This platform approach allows us to evaluate many combinations of our drug candidates along with approved drugs and/or other drug candidates in development, as needed. This strategy allows us to identify combination regimens that could achieve a higher rate of functional cure compared to current standard of care. The optimized regimen(s) identified in Phase 2 will then be evaluated in Phase 3 registrational trials.

NASH

One of the effects of improper diet and insufficient exercise is the accumulation of fatty deposits in the liver, referred to as nonalcoholic fatty liver disease (NAFLD), which was estimated to occur in approximately 25% of the worldwide population as of 2015. At that time, an estimated 1.5% to 6.5% of the global population was estimated to have an ongoing inflammatory response to these excess fat deposits, which is referred to as NASH. Over the past several years, the prevalence of NASH has continued to rise. In the United States alone, the prevalence of NASH is projected to increase from approximately 16.5 million in 2015 to 27.0 million in 2030. In the absence of changes in diet and exercise, the inflammation inherent in NASH persists and may result in progressive fibrosis of the liver, which may result in cirrhosis. These fibrotic changes are associated with numerous morbidities including recurrent hospitalization for complications of cirrhosis, hepatocellular carcinoma, need for liver transplant, and death.

The only widely accepted treatment for NASH is weight loss through behavioral modifications such as diet and exercise, which is difficult to achieve at the broad population level. As there are currently no approved drugs to treat NASH, many development programs are underway to identify drugs to address this epidemic. One of the promising MOAs in the NASH space appears to be drugs which preferentially target the beta subtype of the THR receptor.

THR-ß background

The thyroid hormone triiodothyronine (T3) has many physiological effects throughout the body, ranging from increasing metabolism, including fat metabolism, to stimulating growth and development. T3 exerts its effects by binding to the thyroid hormone receptor (THR), which has two subtypes: alpha (THR-α) and beta (THR-). The distribution of the two THR subtypes varies by organ, with THR- predominantly expressed in the liver and THR-α predominantly expressed in other tissues (e.g., heart, skeletal muscles and bone). Drug candidates like resmetirom, which preferentially binds the THR- subtype, have been shown in clinical trials to lower lipid levels in serum and the liver, while avoiding the unwanted effects associated with THR-α stimulation. In addition to the intended effect

of lowering liver lipid levels in NASH patients, lowering serum lipid levels via THR- agonism may also have favorable consequences in this population, which has a high rate of underlying cardiovascular disease.

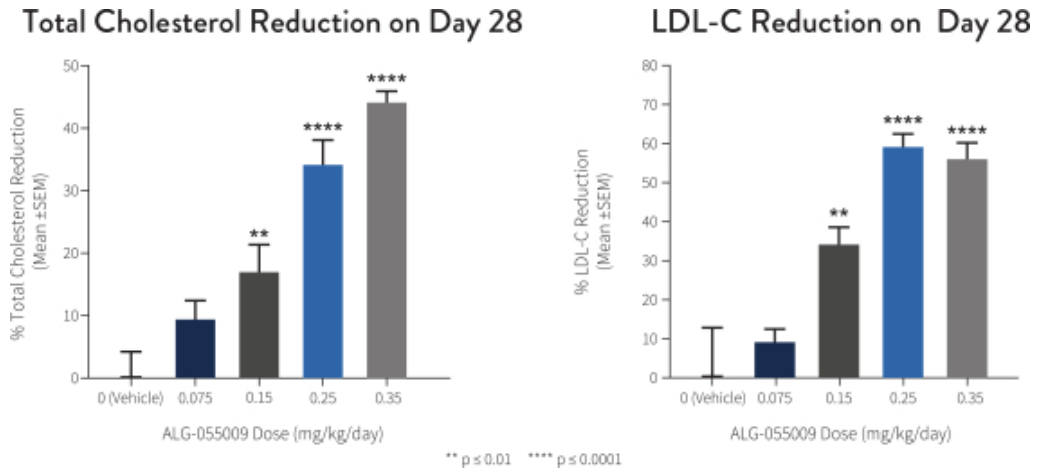
There are multiple other mechanisms being explored for the treatment of NASH, but none have yet to demonstrate a favorable risk/benefit profile, and many have important limitations. In some cases, mechanisms such as Farnesoid X Receptor (FXR) agonists, Fibroblast Growth Factor-19 analogs, and Acetyl-CoA Carboxylase inhibitors have been shown to increase serum lipid profiles, which may require additional pharmacologic therapy or put patients at additional risk of cardiovascular disease. In other cases, mechanisms such as FXR agonists and drugs targeting various subtypes of the Peroxisome Proliferator Activated Receptors are associated with dose limiting toxicities such as pruritus and edema, respectively, that might limit widespread uptake even if approved.

Small molecule approaches

The most advanced THR- agonists in clinical development are VK-2809 in Phase 2b and resmetirom in Phase 3. Both of these drugs have demonstrated significant reductions in lipid levels in the liver and serum and, to date, have an acceptable risk-benefit profile. In addition, resmetirom has demonstrated histologic evidence of NASH resolution in Phase 2 trials, which is one of two FDA approvable endpoints. Our lead THR-ß drug candidate ALG-055009 may have important advantages over these compounds. Side-by-side biochemical and cell-based experiments in HEK293T cells indicate that ALG-055009 is 5- to 47-fold more potent and 3- to 2-fold more selective for the receptor compared to VK-2809 and resmetirom, respectively, which may optimize the risk benefit-profile for ALG-055009. When studied in a diet induced obesity (DIO) mouse model, these potency advantages were shown to result in greater serum lipid reductions compared to what has been previously reported for VK-2809 and resmetirom at exposures being evaluated in the clinic. Specifically, ALG-055009 achieved a 34% reduction in serum total cholesterol levels with an acceptable safety profile (e.g., no clinically relevant changes in thyroid hormone levels) in mice, as shown in the figure below. An ALG-055009 dose-related decrease in serum LDL-C was also noted in mice. Further, nonclinical pharmacokinetic studies of ALG-055009 predict low, once-daily dosing in humans with a low risk of drug-drug interactions.

Relative THR-α and THR-β Activity in Cell-Based Assays

	EC_{50} α (nM)	EC_{50} β (nM)	Relative THR-β Selectivity (α/β)
T3	14.3	11.5	1.2
MGL-3196	5927	2366	2.5
VK-2809 parent	366	269	1.4
ALG-055009	**191**	**50**	**3.8**



ALG-055009 development plans

We recently initiated a Phase 1a/1b umbrella study assessing orally administered single ascending doses of ALG-055009 in healthy volunteers as well as multiple ascending doses (MAD) administered orally once-daily (QD) in subjects with mild hyperlipidemia. Dosing is ongoing in both the SAD and MAD portions of this study. The data from this study will establish proof of activity and help identify doses that may be evaluated in larger studies involving patients with NASH. Topline data, including safety, PK, and pharmacodynamic data, in hyperlipidemic subjects are anticipated to be released in the third quarter of 2022. With this proof of activity in hand, we would have several options for further development, including continuing the development of the drug candidate into a Phase 2 clinical trial that we would sponsor. Alternatively, we may explore partnering ALG-055009 with a third-party that has an existing drug candidate for the treatment of NASH with a complementary MOA, either in a clinical collaboration or as an out-license opportunity. We believe this may be an ideal time to seek a partnership for ALG-055009, as we expect enthusiasm for the THR-β MOA to be high after the expected Phase 3 resmetirom and Phase 2b VK-2809 readouts, which are anticipated in the second half of 2022.

Oligonucleotide approaches to NASH

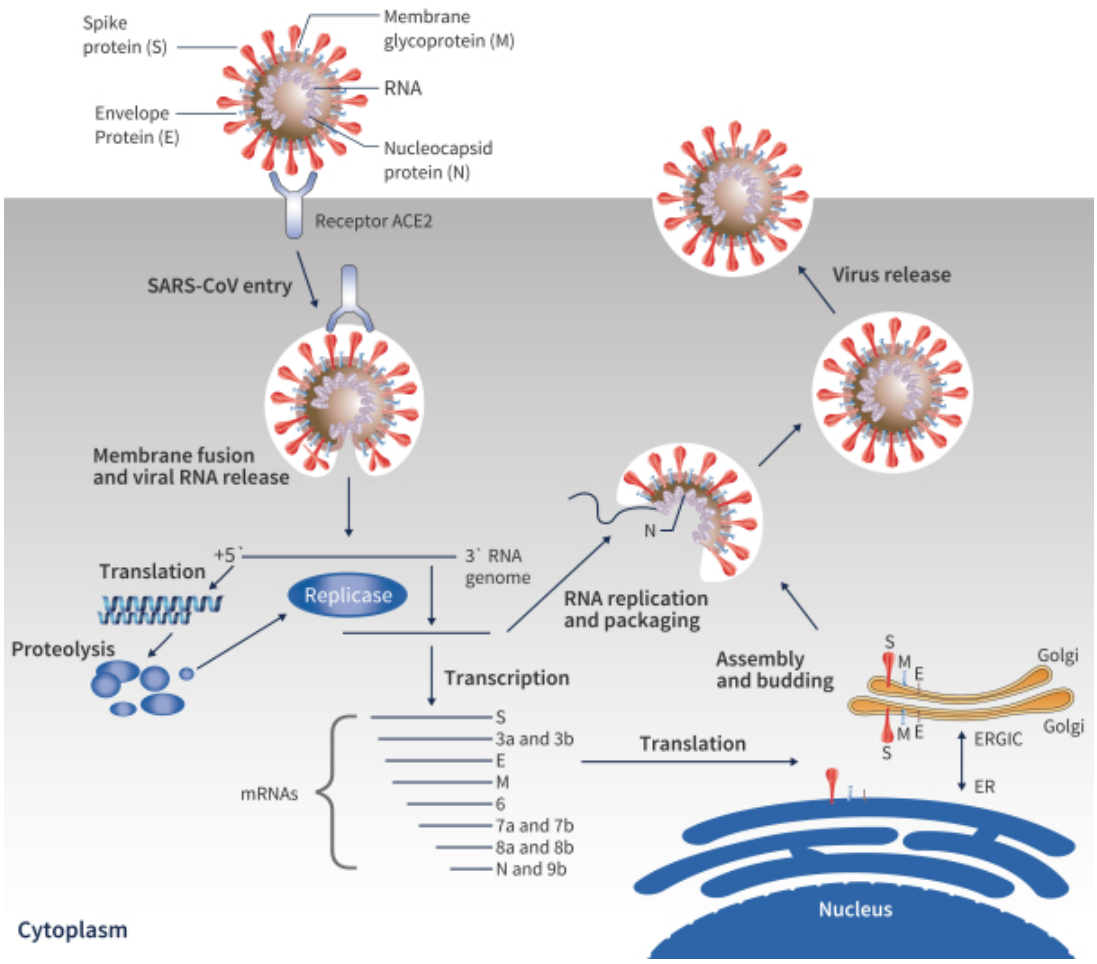
Recently, genome-wide association and large candidate gene studies have enriched our understanding of the genetic basis of NASH. Variants in multiple human genome sequences have been identified as major common genetic determinants of this disease. We are collaborating with Merck to apply our oligonucleotide platform technology to discover, research, optimize and develop oligonucleotides directed against two NASH targets. In addition, we continue to evaluate additional targets for their utility in developing an oligonucleotide-based treatment for NASH.

Coronaviruses

SARS-CoV-2 is responsible for the COVID-19 pandemic, which has infected more than 274 million individuals and is responsible for the death of more than 5.3 million individuals worldwide, including approximately 950,000 in the US, as of early March 2022. After MERS and SARS (SARS-CoV-1), SARS-CoV-2 is the third known coronavirus to cross over from animal species to humans and cause significant morbidity and mortality in the past 20 years. Due to the ongoing COVID-19 pandemic and the risk of additional novel coronaviruses emerging in the future, there is a need to develop novel therapeutics with pan-coronavirus activity that have a high barrier to resistance. While multiple vaccines have recently become available, it is unlikely that vaccination will be fully efficacious against all emerging variants and/or widely adopted, indicating that the need for effective therapeutic treatments will remain. Two orally available therapeutics have been authorized for emergency use for the treatment of COVID-19, but both have important limitations related to sub-optimal efficacy (molnupiravir, a nucleoside analog; Merck) or the need for ritonavir boosting (PF-07321332/nirmatrelvir, a protease inhibitor; Pfizer). We have identified multiple protease inhibitors that are more potent than nirmatrelvir and don’t require ritonavir boosting, which may offer important clinical advantages in the future treatment of COVID-19 and other coronaviruses. We anticipate initiating Phase 1 enabling nonclinical studies of one of our SARS-CoV-2 protease inhibitors in the third quarter of 2022 with subsequent initiation of clinical studies in the first quarter of 2023.

Disease overview and biology

The life cycle of SARS-CoV-2 is illustrated in the figure below. The spike (S) protein binds to the angiotensin-converting enzyme 2 cellular receptor, leading to a fusion of the viral envelope with the cell membrane through the endosomal pathway. SARS-CoV-2 RNA is then released into the host cell and is subsequently translated into viral replicase polyproteins pp1a and 1ab, which are then cleaved into small products by viral protease to form the RNA replicase–transcriptase complex. The polymerase produces a series of subgenomic mRNAs by transcription, which are eventually translated into relevant viral proteins. Viral proteins and genome RNA are subsequently assembled into virions in the endoplasmic reticulum and Golgi and then transported via vesicles and released out of the infected cells through exocytosis.



Clinical development plan

We plan to advance our coronavirus drug candidate(s) individually in Phase 1 studies designed to evaluate the safety and pharmacokinetics of single and multiple ascending doses in healthy volunteers. Following this, we plan to conduct dose range finding Phase 2 studies in subjects infected with COVID-19 to evaluate proof of activity and identify a dosing regimen(s) to advance into larger confirmatory studies that could support drug registration. Following the initial Phase 2 study, we may evaluate combinations of our drug candidates, with or without the then-prevailing standard of care. We may assess a range of patient populations, including community and hospital-based subjects, as well as various degrees of disease severity, following the establishment of proof of activity. In addition

to evaluating our drug candidates as treatment options after infection, we may also evaluate them as potential prophylactic or post-exposure therapies.

Early-stage discovery efforts

For all of our drug candidates, we are pursuing backup candidates in order to create a robust portfolio of assets which we can draw upon to create an optimized combination regimen for treatment in all of our disease areas of interest. We are also targeting additional novel viral and host targets with our oligonucleotide and small molecule platforms.

Sales and marketing

All of our assets are currently pre-commercial, and as such we have not yet established a sales and marketing organization or distribution capabilities. We intend to pursue independent development and commercialization in select indications and markets, and plan to build a commercial infrastructure to support a specialty sales and marketing organization, as well as distribution capabilities. Similar to our research, clinical and manufacturing operations, we expect to manage sales, marketing and distribution through dedicated staff and third-party contractors and consultants. We may opportunistically explore licensing agreements, collaborations or partnerships with one or more pharmaceutical companies to enhance our commercial capabilities.

Manufacturing

We are currently developing drug candidates in two primary modalities: oligonucleotides and small molecules. We have internal oligonucleotide and small molecule chemistry teams that are able to produce drug candidates at sufficient scale to support discovery activities. In addition, we have a dedicated internal chemistry, manufacturing and control (CMC) team that works with contract development and manufacturing organizations to produce drug candidates in larger quantities, including to support nonclinical and clinical studies. We have built the teams and infrastructure needed to conduct and manage process development, analytical development, quality, manufacturing and supply chain activities.

Oligonucleotides

Oligonucleotide manufacturing technology has matured significantly over the last several decades, with advanced oligonucleotide synthesizers commercially available to support smaller-scale synthesis, and a network of oligonucleotide contract manufacturers available to support larger-scale syntheses. Our internal CMC team supports our contract manufacturers with process development and optimization, or, where needed, we may collaborate with external consultants and contractors to optimize synthesis and scale-up.

Small molecules

Small molecule manufacturing is a mature industry and is well supported by an extensive network of contract manufacturers. Like our approach for oligonucleotides, our internal CMC team conducts process development and optimization, and supports our contract manufacturers with technology transfer.

Competition

The life sciences industry is highly competitive and subject to rapid and significant technological change. Our competitors include multinational pharmaceutical companies, established biotechnology companies, universities and other research institutions. Many of our competitors have significantly greater financial, technical, human and other resources than we do and may be better equipped to develop, manufacture and market technologically superior products. In addition, many of these competitors may have significantly greater experience than we have in undertaking nonclinical studies and human clinical trials of new pharmaceutical drug candidates and in obtaining regulatory approvals of human therapeutic candidates. Accordingly, our competitors may develop superior drug candidates and may succeed in obtaining FDA approval for such candidates. Many of our competitors have established distribution channels for the commercialization of their products, whereas we have no such channel or capabilities. In addition, many competitors have greater name recognition and more extensive collaborative relationships.

Any drug candidates that we successfully develop and commercialize may compete with existing therapies and/or new therapies that may become available in the future. Our competitors may obtain regulatory approval of their candidates more rapidly than we do or may obtain patent protection or other intellectual property rights that limit our ability to develop or commercialize our drug candidates or any future drug candidates. Our competitors

may also develop drugs that are more effective, more convenient, more widely used and less costly or that have a better safety profile than our drugs (if any) and these competitors may also be more successful than we are in manufacturing and marketing their products. If we are unable to compete effectively against our competitors, we may not be able to commercialize our drug candidates or any future drug candidates or achieve a competitive position in the market. This would adversely affect our ability to generate revenue. It is likely that our competitors, either working alone or in collaboration with others, will have significantly greater financial resources, an established presence in target markets, expertise in research and development, manufacturing, nonclinical and clinical testing, and experience obtaining regulatory approvals and reimbursement and marketing approved products than we do. We are also in competition for the limited qualified scientific, sales, marketing and management personnel, space at clinical trial sites, for patient registration for clinical trials and technologies complementary to, or necessary for, our programs. New competitors may emerge, smaller or early-stage companies may grow, either on their own or through collaborative arrangements with large and established companies and competitors may concentrate through mergers and acquisitions.

Chronic Hepatitis B (CHB)

Current FDA-approved treatments for chronic HBV infection include peg-IFNα, marketed by Roche Holding AG (Roche), and oral antiviral agents such as nucleoside analogs, marketed by Gilead Sciences, Inc. (Gilead) and Bristol-Myers Squibb Company. These treatments do not lead to either a functional or a complete cure in the vast majority of patients, and in the case of nucleoside analogs, may require life-long treatment. Several large and small pharmaceutical companies are developing programs with various mechanisms of action, to be used alone or in combination, with the goal of achieving higher rates of functional or complete cure in patients with CHB. Companies with oligonucleotide agents in clinical development include Arbutus Biopharma Corporation, Dicerna Pharmaceuticals, Inc. (together with Roche), Ionis Pharmaceuticals, Inc. (together with GlaxoSmithKline plc (GSK)), Arrowhead Pharmaceuticals, Inc. (together with Janssen Pharmaceuticals, Inc. (Janssen)), and Vir Biotechnology, Inc. (together with Alnylam Pharmaceuticals, Inc.). Several companies are developing CAMs, including Johnson & Johnson, Assembly Biosciences Inc., Arbutus Biopharma Corporation, Roche and Enanta Pharmaceuticals. Several companies, including Altimmune, Inc., GSK, Janssen and Transgene SA, are developing therapeutic vaccines for HBV, and several others have approved HBV vaccines, including Dynavax Technologies, Inc., GSK, Johnson & Johnson, and Merck. Replicor, Inc. is developing nucleic acid polymers (NAPs) for use in CHB patients.

Nonalcoholic Steatohepatitis (NASH)

There currently are no FDA-approved treatments for NASH. A number of pharmaceutical companies, including AbbVie, Inc., AstraZeneca PLC/MedImmune LLC, Bristol-Myers Squibb Company, Eli Lilly and Company, Janssen, Merck, Novartis Pharmaceuticals Corporation (together with Pfizer, Inc.), Novo Nordisk A/S, Pfizer Inc., Roche, Sanofi S.A. and Takeda Pharmaceutical Company Limited (together with HemoShear Therapeutics, LLC), as well as large and small biotechnology companies such as 89bio, Inc., Akero Therapeutics, Inc., Blade Therapeutics, Inc., Cirius Therapeutics, Inc., Enanta Pharmaceuticals, Inc., FronThera US Pharmaceuticals LLC, Galectin Therapeutics Inc., Galmed Pharmaceuticals Ltd., Genfit SA, Gilead, Intercept Pharmaceuticals, Inc., Inventiva Pharma SA, Madrigal Pharmaceuticals, Inc., MediciNova, Inc., NGM Biopharmaceuticals, Inc., Pliant Therapeutics, Inc. (together with Novartis), Terns Pharmaceuticals, Inc. and Viking Therapeutics, Inc. are pursuing the development or marketing of pharmaceuticals that target NASH. It is also probable that the number of companies seeking to develop products and therapies for the treatment of serious metabolic diseases, such as NASH, will increase.

Coronaviruses

In addition to remdesivir, which is FDA-approved, on December 22, 2021, Pfizer, Inc. received an emergency use authorization from the FDA for Paxlovid, an orally administered SARS-CoV-2 protease inhibitor co-administered with ritonavir. Similarly, Merck (together with Ridgeback Bio), is developing the drug molnupiravir, an oral antiviral drug which has been issued an emergency use authorization by the FDA on December 23, 2021. Several drugs are likely being used off-label for treatment, such as dexamethasone. Several approved drugs are being studied for their utility in reducing the severity of SARS-CoV-2 infections, including Soliris by Alexion Pharmaceuticals Inc., Atea Pharmaceuticals, Inc., Jakafi by Incyte Corporation, and Kevzara by Sanofi S.A./Regeneron Pharmaceuticals, Inc. There are significant efforts globally to develop both therapeutic and prophylactic drug candidates. Enanta Pharmaceuticals had announced nomination of clinical candidate EDP-235 which is its lead oral protease inhibitor specifically designed for the treatment of COVID-19 and which is planned to

enter the clinic in early 2022. Pardes Biosciences protease inhibitor, PBI-0451, is currently in Phase 1 clinical study with top-line results expected to be reported in the first quarter of 2022 and where early results showing potential for an unboosted oral regimen against COVID-19. In addition, Novartis is working on a once a day, pan-coronavirus, main protease inhibitor pill and plans to start human testing in 2022, and Shionogi has filed for manufacture and sales approval in Japan for its oral therapeutic drug for COVID-19, S-217622, a 3CL protease inhibitor for which Shiongoi has completed the analysis of primary endpoints in its Phase 2b part of a Phase 2/3 clinical trial. Several companies are focused on antibody treatments, including Amgen Inc. (together with Adaptive Biotechnologies Corporation), AbCellera Biologics, Inc. (together with Eli Lilly and Company), Regeneron Pharmaceuticals, Inc. and Vir Biotechnology, Inc. (together with GSK, Biogen Inc. and WuXi Biologics Ltd.). Numerous efforts are underway to develop vaccines against SARS-CoV-2, including by Altimmune, Inc., AstraZeneca PLC (together with Oxford University), BioNTech SE (together with Pfizer Inc.), GSK (together with Sanofi S.A.), Heat Biologics, Inc., Inovio Pharmaceuticals, Inc., Johnson & Johnson, Moderna, Inc., Novavax, Inc., and Vaxart, Inc.

For example, BioNTech SE (together with Pfizer Inc.), Janssen Pharmaceutical Companies of Johnson & Johnson and Moderna Inc. have each developed COVID-19 vaccines that have received FDA approval and/or authorization for emergency use and are being widely administered. In addition, on December 22, 2021, Pfizer, Inc. received an emergency use authorization from the FDA for Paxlovid, an orally administered COVID-19 protease inhibitor co-administered with ritonavir. Similarly, Merck (together with Ridgeback Bio), is developing the drug molnupiravir, an oral antiviral drug which also has been issued an emergency use authorization by the FDA on December 23, 2021.

License agreements and collaborations

License agreement with Emory University

In June 2018, we entered into the Emory License Agreement. In June 2020, we amended the Emory License Agreement (the Emory Amendment). Under the Emory License Agreement, Emory granted us a worldwide, sublicensable license under certain of its intellectual property rights to make, have made, develop, use, offer to sell, sell, import and export products containing certain compounds relating to Emory's hepatitis B virus capsid assembly modulator technology, for all therapeutic and prophylactic uses. Such license is initially exclusive with respect to specified licensed patents owned by Emory and non-exclusive with respect to certain of Emory's specified know-how. Beginning in June 2022, the license to such patents will become non-exclusive with respect to all fields except for the treatment and prevention of HBV; however, we may select up to six compounds which will maintain exclusivity with respect to all therapeutic and prophylactic uses. With respect to all other compounds that are enabled by the licensed patents, those which are jointly invented by Aligos and Emory or inventors in the Schinazi laboratory, or which are disclosed in a specified licensed patent, are licensed to us exclusively including as to Emory, whereas all other such compounds are licensed to us non-exclusively. We have the right to sublicense rights licensed under the Emory License Agreement, provided that the sublicense agreement must be in compliance and consistent with the terms of the Emory License Agreement.

Emory reserves the right for itself to practice, and have practiced by other entities solely for purposes of collaborative research with Emory, under the licensed patents for educational purposes, Emory's internal purposes, and for non-commercial research, patient care and treatment. Emory can further grant licenses to not-for-profit and governmental institutions for their internal non-commercial research and scholarly use.

Ownership of any new inventions arising out of our activities under the Emory License Agreement follows the inventorship laws of the United States. With respect to the licensed patents owned by Emory, we are required to prepare documents and filings for the prosecution and maintenance of such licensed patents, while Emory retains the option to provide final edits and approval of such documents and is responsible for the actual filing of such documents. We are responsible for the cost of the prosecution and maintenance of the licensed patents, and we have the first right, but not the obligation, to enforce such patents. We are solely responsible for the costs of any lawsuits we elect to initiate to enforce the licensed patents and cannot enter into a settlement in respect of such lawsuits without the prior written consent of Emory. Any sums recovered in such lawsuits will be shared equally between us and Emory after reimbursement of our costs for such litigation, except that for any award based on lost profits, Emory shall recover the greater of fifty percent of the award or the royalty Emory would have received had the infringing sales been made by us.

The technology claimed by the licensed patents under the Emory License Agreement may have been developed using U.S. government funding and the licenses therefore may be subject to a non-exclusive license held by the U.S. government, certain requirements that licensed products be manufactured substantially in the United States and U.S. government march-in rights. For more information on risks related to technology developed using government funding see the section titled "Risk Factors—Risks related to intellectual property."

Under the terms of the Emory License Agreement, we are obligated to use commercially reasonable efforts to bring licensed products to market in accordance with a mutually agreed upon development plan.

Pursuant to the Emory License Agreement, we paid an upfront fee of $290,000 to Emory, reimbursed Emory for past patent expenses, and issued a convertible promissory note with a principal amount of $600,000 to Emory. In August 2018, the convertible promissory note was cancelled and converted into 64,980 shares of Series A convertible preferred stock. We paid Emory an additional $150,000 in connection with the Emory Amendment entered into in June 2020, with an additional obligation to pay up to a maximum of $35,000. On the same date, the Company entered into a collaboration agreement with Emory, with the initial research plan pertaining to the synthesis and evaluation of the compounds licensed through the additional patent rights granted in the amended license agreement. The research plan terminates one year from the effective date, with the Company having an option to extend for a second year. In connection with the research plan, the Company will provide Emory funding up to $270,000 per year.

Additionally, we agreed to pay Emory up to an aggregate of $125 million upon the achievement of specified development, regulatory, and commercial milestones, and all ongoing patent costs. We also agreed to pay Emory tiered single-digit royalties on worldwide annual net sales of licensed products, on a quarterly basis and calculated on a product-by-product basis. With respect to licensed products containing any of a specified subset of the licensed compounds, such royalties range from a mid-single digit to a high-single digit percentage rate. With respect to licensed products which do not contain such compounds, the royalties span a range of percentage rates within the mid-single digits if a Phase 1 clinical trial is initiated for the product within three years of the effective date of the Emory License Agreement, and range from a low-single digit to a mid-single digit rate if a Phase 1 clinical trial is initiated more than three years after the effective date. Our obligation to pay royalties expires on a product-by-product and country-by-country basis upon the later of ten years after the date of first commercial sale of such product in such country and the expiration of the last-to-expire licensed patent right covering such product in such country. Lastly, if we sublicense any of the licensed patent rights, we are required to pay Emory a percentage of any license issuance or upfront fees we might receive, with the percent decreasing if we sublicense after the first anniversary and third anniversary of the effective date of the Emory License Agreement from a mid-double digit to a mid-single digit percentage rate. To date we have not granted any sublicense.

The Emory License Agreement will expire upon expiration of the last-to-expire patent licensed to us thereunder. We may terminate the Emory License Agreement at any time in its entirety or with respect to specific patents for convenience by providing Emory with 90 days' written notice and are required to terminate the Emory License Agreement if we make a final decision to cease research, development or commercialization of any licensed products. Either party may terminate the Emory License Agreement if the other party materially breaches such

agreement and fails to timely cure such breach. Emory may terminate the Emory License Agreement if we fail to reach a milestone at an agreed date and fail to timely provide commercially reasonable evidence of a reasonable, good-faith business or technical justification for such failure. Upon termination of the Emory License Agreement for our material breach, we will, upon Emory's request, grant to Emory a non-exclusive, royalty-free license to all of our rights in patents owned by, licensed or controlled by us to the extent they relate to our exercise of the licensed rights under the Emory License Agreement and include claims covering the manufacture, use or sale of any licensed products containing the licensed compounds. The Emory License Agreement will automatically terminate if we become bankrupt or insolvent or if we challenge the validity or enforceability of any patent licensed to us under the Emory License Agreement.

We have agreed to indemnify Emory and certain others under the Emory License Agreement for losses they may suffer arising out of the rights licensed thereunder or the manufacturing, testing, design, use, sale or labeling of any product containing a licensed compound, unless caused by such potential indemnitee's negligence.

License agreement with Luxna Biotech Co., Ltd.

In December 2018, we entered into the Luxna Agreement. Under the Luxna Agreement, Luxna granted us an exclusive, worldwide, sublicenseable license under certain of Luxna's intellectual property rights to research, develop, make, have made, and commercialize for all therapeutic and prophylactic uses, (i) products containing oligonucleotides targeting the hepatitis B virus genome, (ii) products containing certain oligonucleotides targeting up to three genes which contribute to NASH, which we may select at any time during the first eight years of the term, to the extent not licensed to a third party, and (iii) products containing oligonucleotides targeting up to three genes which contribute to HCC, which we may select at any time during the first three years of the term. During the first three years of the term, Luxna will not grant rights to any third parties under the licensed patents to research or develop any compounds or products targeting an HCC gene target. As of June 30, 2020, we have identified two HCC gene targets and two NASH gene targets for the exclusive license. In addition, we have a right of first refusal for any additional xeno-nucleic acid (XNA) and/or gapmer modifications that are not claimed by the licensed patents that Luxna controls. If we exercise this right, we and Luxna will use good faith, diligent efforts to negotiate additional commercially reasonable financial terms for such additional modifications. We are obligated to use commercially reasonable efforts to pursue the research, development and commercialization of the licensed products throughout the term. We have the right to sublicense our licensed rights provided that the sublicense agreement must be in compliance and consistent with the terms of the Luxna Agreement.

Additionally, pursuant to an April 2020 amendment to the Luxna Agreement (the Luxna Amendment), we obtained an exclusive, worldwide license under the licensed patents to research, develop, make, have made, and commercialize products containing oligonucleotides targeting three families of viruses: orthomyxoviridae, paramyxoviridae, and coronaviridae (a family which includes SARS-CoV-2).

Pursuant to the Luxna Agreement, we paid Luxna an upfront license fee of $600,000 and pursuant to the Luxna Amendment, we paid Luxna an additional one-time non-refundable fee of $200,000. Additionally, we agreed to pay Luxna up to an aggregate of $55.5 million upon achievement of specified development, regulatory, and commercial milestones. During the year ended December 31, 2021, the Company recognized $500,000 related to milestone payments relating to ALG-020572. We also agreed to pay Luxna tiered royalties on worldwide annual net sales of licensed products, on a product-by-product basis, spanning a range of rates within low-single digit percentages, on a quarterly basis. With respect to each licensed product, our obligation to pay royalties will continue until the expiration of the last-to-expire licensed patent covering such licensed product in any country.

Luxna's rights to the intellectual property subject to the Luxna Agreement stem from an exclusive license (the Luxna-Osaka Agreement) from Osaka University (Osaka) for certain rights pertaining to modifications of XNA and other gapmer technologies covered by the licensed patents. Separately, Osaka granted rights to certain third parties in connection with the licensed patents, such as rights to amido-bridged nucleic acid (AmNA) for specific indications including NASH, rights to manufacture reagents containing the modifications of AmNA and rights to use specified genes. Such rights are not included in the scope of rights granted to us under the Luxna Agreement and the Luxna Agreement does not prevent Osaka from using any of the licensed rights under the Luxna Agreement for its non-commercial research purposes relating to the modifications of XNA.

Ownership of any new inventions arising out of our activities under the Luxna Agreement will follow the inventorship laws of the United States. Luxna retains the responsibility for the prosecution and maintenance of the licensed patents, provided that Luxna consider our comments and suggestions in connection therewith. We retain

step-in rights should Luxna decide to no longer prosecute or maintain any licensed patents under the Luxna Agreement. We have the first right, but not the obligation, at our sole expense to enforce the licensed patents. In connection with any infringement suit, neither party can enter into a settlement without the prior written consent of the other.

The Luxna Agreement will expire upon expiration of the last-to-expire patent licensed to us under the agreement. We may terminate the Luxna Agreement at any time for convenience by providing Luxna with 90 days' written notice. In addition, we have agreed to terminate the Luxna Agreement if we make a final decision to cease research, development or commercialization of the licensed products. Either party may terminate the Luxna Agreement if the other party materially breaches the Luxna Agreement and fails to timely cure such breach. The Luxna Agreement will automatically terminate if we become bankrupt or insolvent.

We have agreed to indemnify Luxna and certain others under the Luxna Agreement for losses they may suffer arising out of the rights licensed thereunder or the manufacturing, testing, design, use, sale or labeling of any product containing a licensed product, unless caused by such potential indemnitee's negligence.

Agreement with Katholieke Universiteit Leuven (KU Leuven)

On June 25, 2020, we entered into a Research, Licensing and Commercialization Agreement (KU Leuven Agreement) with KU Leuven, under which we are collaborating with KU Leuven's Rega Institute for Medical Research, as well as its Centre for Drug Design and Discovery, to research and develop potential protease inhibitors for the treatment, diagnosis or prevention of coronaviruses, including of SARS-CoV-2. Unless terminated earlier by either party in accordance with provisions in the agreement, the collaboration period will terminate at the earlier of completion of all collaboration activities or 2.5 years. In connection with the KU Leuven Agreement, KU Leuven and our Company granted each other exclusive cross-licenses to use certain know-how and existing patents of the other party as well as certain joint know-how and joint patents to carry out research and development collaboration activities during the collaboration period. KU Leuven granted to us an exclusive (including as to KU Leuven), worldwide license under certain of KU Leuven's know-how and existing patents, and certain joint patents and joint know-how, to manufacture and commercialize the licensed products for the treatment, diagnosis or detection of viral infections in humans. KU Leuven reserved the right to use all KU Leuven knowhow, existing KU Leuven patents, joint patents and joint know-how for academic and non-commercial research and teaching purposes.

As consideration for this license, we are obligated to make payments to KU Leuven, in aggregate, totaling up to but no more than $30.0 million upon the achievement of certain commercial sales milestones. For each licensed product developed through KU Leuven and the Company's collaborative effort, the Company is obligated to make payments to KU Leuven, in aggregate, totaling up to $32.0 million upon the achievement of certain development and regulatory milestones. The Company is also required to pay KU Leuven a low-to-mid-single digit royalty percentage, subject to certain adjustments, on net sales of applicable products, if any. Unless terminated earlier by either party, the agreement shall continue until the expiration of the last to expire royalty term, which is the later of the expiration or termination of the last valid patent claim covering the manufacture, use, sale or importation of the licensed product in a particular country or 10 years after the first commercial sale of a licensed product.

License and Research Collaboration with Merck

In December 2020, we entered into an exclusive License and Research Collaboration Agreement with Merck under which Merck and Aligos will apply our oligonucleotide platform technology to discover, research, optimize and develop oligonucleotides directed against a NASH target and up to one additional liver-targeted cardiometabolic and/or fibroses target.

In January 2022, we entered into an amendment to such License and Research Collaboration Agreement, which expanded our collaboration to include a license to Merck of an early-stage program directed to a second undisclosed NASH target on which we has previously been working independently and separately from Merck. In addition, under this expanded arrangement, Merck has the right to add a third target of interest to the collaboration. This third target, if added, will be for a liver-based cardiometabolic/fibrosis target.

Under the terms of the original agreement, we received an upfront payment from Merck. Under the amendment, we will receive a payment from Merck to carry out the research program for the second undisclosed NASH target, as well as a further payment to carry out the research plan for any third target that may be later added to the collaboration. With respect to each collaboration target, we will be eligible to receive up to approximately $460 million in development and commercialization milestones as well as tiered royalties on net sales. We will be

primarily responsible for designing, preparing and evaluating the oligonucleotide molecules and delivering optimized lead molecules, and Merck will be responsible for subsequent research, clinical development and commercialization efforts.

Merck has the right to terminate the License and Research Collaboration Agreement in its entirety or on a target-by-target basis at any time by giving us 90 days' written notice. From the time Merck assumes responsibility for subsequent research until achievement of a certain regulatory event, we may terminate the License and Research Collaboration Agreement if Merck ceases all development activities for a specified period and fails to resume such activities within a reasonable time after we provide them with a resumption notice. Either party may terminate the License and Research Collaboration Agreement upon the other party's uncured material breach or insolvency. Upon termination for any reason other than our material breach, we will have the right to acquire from Merck the products and compounds being developed or commercialized by Merck under the License and Research Collaboration Agreement. Good faith negotiations between the Company and Merck would be performed to enact a transition plan.

Intellectual property

One key to our success is our ability to establish and maintain protection for our drug candidates, platform technology and know-how, in order to enforce and defend our intellectual property rights. To protect our drug candidates and technologies, we file U.S., Patent Cooperation Treaty (PCT) and foreign patent applications related to our inventions, improvements, manufacturing and analytical processes and technology. We also rely on our know-how, confidential methodologies and processes and continuing technological innovation as well as our active third-party intellectual property in-licensing program to develop and maintain our proprietary positions, in addition to trademarks, copyrights and trade secret laws, and employee disclosure and invention assignment agreements. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees, advisors and consultants, these agreements may be breached, and we may not have adequate remedies for any breach. In addition, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. As a result, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual or entity during the course of the party's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees, the agreements provide that all inventions conceived of by the individual during the course of employment, and which relate to or are reasonably capable or being used in our current or planned business or research and development, are our exclusive property. In addition, we take other appropriate precautions, such as physical and technological security measures, to guard against misappropriation of our proprietary technology by third parties. However, such agreements and policies may be breached, and we may not have adequate remedies for such breaches. For more information regarding the risks related to our intellectual property, see the section titled "Risk Factors—Risks related to intellectual property."

We have licensed patents and patent applications from various entities, including Emory, Luxna and AM Chemicals, which are further described below. As of December 31, 2021, we own 6 issued U.S. patents, 30 U.S. non-provisional patent applications, 19 U.S. provisional patent applications (excluding any non-expired U.S. provisional applications to which priority has already been claimed), 22 PCT applications and 208 foreign patent applications, including pending applications in Arab Emirates, ARIPO, Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Eurasia, Egypt, European Union, Georgia, Indonesia, Israel, India, Japan, South Korea, Malaysia, Mexico, New Zealand, OAPI, Peru, Philippines, Russian Federation, Singapore, Thailand, Taiwan, Ukraine, Uzbekistan and South Africa. The projected expiration date of any patent that issues from our non-provisional U.S. and foreign applications is between 2039 to 2042, excluding any additional term from a potential patent term extension and/or patent term adjustment.

For our drug candidates, we have filed and licensed certain patent applications and we generally intend to pursue patent protection covering compositions of matter, methods of making, and methods of use. As of December 31, 2021, we own U.S. patents with claims directed to ALG-000184 and ALG-55009.

Licensed intellectual property

Emory University

We have licensed the exclusive rights to a patent estate from Emory in the CAM chemical space, consisting of one issued U.S. patent, two pending nonprovisional U.S. patent application as well as 5 issued foreign patents and 35 foreign patent applications. The issued U.S. patent has an expected expiration of March 2037, excluding any potential patent term extension or adjustment.

Luxna

We have licensed the right to a patent estate from Luxna in the oligonucleotide chemical space, consisting of 3 issued U.S. patents, 2 nonprovisional U.S. patent applications and 15 issued foreign patents and 4 foreign patent applications. We have exclusive rights to use this technology in the development of drug candidates for CHB, as well as rights to certain named targets in NASH and respiratory diseases, including coronaviruses. These U.S. patents have an expected expiration between October 2030 and February 2035, excluding any potential patent term extension or adjustment.

AM Chemicals

We have licensed the exclusive right to the use of specific constructs encompassed by the patent estate from AM Chemicals, including 1 issued U.S. patent, 1 U.S. non-provisional patent application and 2 foreign patent applications. The issued U.S. patent has an expected expiration of July 2037. Any patent issuing from such non-provisional applications in this patent estate is projected to expire in July 2037, excluding any potential patent term extension or patent term adjustment.

Drug candidate intellectual property

Hepatitis B—ALG-000184 and additional potential drug candidates

We own a patent family that includes 1 issued U.S. patent and 30 applications pending across multiple jurisdictions (including the United States), and have claims directed to composition of matter, including ALG-000184 (our lead CAM molecule), pharmaceutical composition and method of use claims. This patent family also includes claims directed to combination treatment with our lead molecule with other modes of action drugs and drug candidates directed against CHB. U.S. Patent 11,191,747 is projected to expire in April 2040, excluding any potential patent term extension or adjustment.

Hepatitis B—ALG-020572 and additional potential drug candidates

We own a patent family that includes 30 patent applications pending across multiple jurisdictions (including the United States), and have claims to compositions of matter, including ALG-020572, our lead ASO candidate, and methods of use. This patent family also discloses combination therapies with our lead molecule. Any patent that issues from such non-provisional applications in this patent family is projected to expire in May 2040, excluding any potential patent term extension or patent term adjustment.

Hepatitis B—ALG-125755 and additional potential drug candidates

We own a patent family that includes 3 patent applications pending across multiple jurisdictions (including the United States), and have claims to compositions of matter, including ALG-125755, our lead siRNA candidate, and methods of use. This patent family will also disclose combination therapies with our lead molecule. Any patent that issues from such non-provisional applications in this patent family is projected to expire in March 2041, excluding additional term from a potential patent term extension and/or patent term adjustment.

NASH—ALG-055009 and additional potential drug candidates

We own a patent family that includes 1 issued U.S. patent and 30 applications across multiple jurisdictions, and have claims to compositions of matter, including ALG-055009, our lead drug candidate for the treatment of NASH, and methods of use. This patent family also discloses combination therapies with our lead molecule. US 11091467 is our issued US patent, and it is projected to expire in May 2040, excluding any potential patent term extension or patent term adjustment.

Discovery pipeline intellectual property

Hepatitis B

We own multiple families of applications that include claims to compositions of matter, pharmaceutical compositions and methods of use for the treatment of CHB with our additional drug candidates. This includes 2 U.S. patents, 8 U.S. non-provisional patent applications, 7 U.S. provisional patent applications, 6 PCT patent applications and 32 foreign patent applications in the small molecule space and 6 U.S. non-provisional patent applications, 6 PCT patent applications and 6 foreign patent applications in the oligonucleotide space. These patent families also disclose combination therapies with our drug candidates and other compounds for treating CHB. Any patent that issues from a non-provisional application in one of these patent families is projected to expire in 2040 to 2042, excluding any potential patent term extension or patent term adjustment.

NASH

We have filed 4 U.S. non-provisional patent application, 5 PCT patent applications, 1 U.S. provisional application and 3 foreign patent applications that include claims to compositions of matter and methods of use with our additional drug candidates for the treatment of NASH. These U.S. provisional applications also disclose combination therapies with our drug candidates and other compounds for treating NASH. Any patent that issues from a non-provisional application claiming in one of these patent families is projected to expire in 2042, excluding any potential patent term extension or patent term adjustment.

Coronaviruses

We have filed 3 U.S. nonprovisional patent applications, 9 U.S. provisional patent applications. 3 PCT patent applications and 2 foreign applications that include claims to compositions of matter, pharmaceutical compositions and methods of use for treating coronaviruses. This includes multiple applications covering both small molecule and oligonucleotide approaches. Some of these applications are co-owned by Aligos and a collaborator. These patent families also include disclosure relating to combination therapy strategies for treating coronaviruses. Any patent that issues from a non-provisional patent application in one of these patent families is projected to expire in 2041 to 2042, excluding any potential patent term extension or patent term adjustment.

With respect to both our licensed and our owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any current patents or any patents that may be granted to us in the future will be commercially useful in protecting our platforms and drug candidates and the methods used to manufacture them. Moreover, the time required for development, testing and regulatory review of our candidate drug candidates may shorten the length of effective patent protection following commercialization. If we do obtain any patents for our drug candidates, the term of such patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing of a non-provisional patent application. In the United States, the patent term of a patent that covers an FDA approved drug or biologic may also be eligible for patent term extension, which permits patent term restoration as compensation for the patent term lost during FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time that the drug or biologic is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug or biologic may be extended. Similar provisions are available in the EU and other foreign jurisdictions to extend the term of a patent that covers an approved drug or biologic. In the future, if our drug candidates receive FDA approval and if our patent applications relating to such drug candidates issue as patents, we expect to apply for patent term extensions where applicable on patents covering those drugs. We plan to seek patent term extensions to any of our future issued patents in any jurisdiction where these are available, however there is no guarantee that the applicable authorities, including FDA in the United States, will agree with our assessment of whether these extensions should be granted, and if granted, the length of these extensions. For this and other risks related to our proprietary technology, inventions, improvements, platforms and product candidates, see the section titled “Risk Factors—Risks related to intellectual property.”

Trademarks

Our trademark portfolio contains several trademark applications and registrations, including U.S. and foreign, as of December 31, 2021. The trademark portfolio includes the mark ALIGOS which is registered in the United States, Australia, the European Union, Great Britain and Japan, and is pending in China.

Government regulation and product approval

Government regulation

The FDA and other regulatory authorities at the federal, state, and local level, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, marketing and promotion, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products, such as those we are developing. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. drug regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act (the FDCA), and its implementing regulations. FDA approval is required before any new unapproved drug can be marketed in the United States. Drugs are also subject to other federal, state and local statutes and regulations. Failure to comply with applicable FDA or other requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA clinical holds, refusal to approve pending applications, withdrawal of an approval, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties and criminal prosecution.

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

- completion of nonclinical laboratory tests and animal studies, where all supporting safety and toxicity studies are performed in accordance with the FDA's Good Laboratory Practice (GLP) regulations;
- submission to the FDA of an investigational new drug application (IND), which must become effective before human clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent institutional review board (IRB), representing each clinical site before a clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with good clinical practice (GCP) regulations to establish the safety and efficacy of the product candidate for each proposed indication;
- preparation of and submission to the FDA of a new drug application (NDA);
- a determination by the FDA within 60 days of its receipt of an NDA to file the application for review;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility(ies) where the product is manufactured to assess compliance with current good manufacturing practice (cGMP) regulations, and of selected clinical investigation sites to assess compliance with GCP; and
- FDA review and approval of an NDA to permit commercial marketing of the product for its particular labeled uses in the United States.

Nonclinical and clinical studies

The nonclinical and clinical testing process can take many years and the actual time required to obtain approval, if any, may vary substantially based upon the type, complexity and novelty of the drug or condition being treated.

Nonclinical tests include laboratory (in vitro) evaluation of drug chemistry, formulation and toxicity, as well as animal (in vivo) studies to assess the characteristics and potential safety and efficacy of the drug candidate. The conduct of nonclinical studies that provide safety and toxicological information must comply with federal regulations and requirements, including GLPs. The results of nonclinical studies are submitted to the FDA as part of an IND along with other information, including information about drug CMC and any available human data or literature to support use of the drug in humans. Long-term nonclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

The central focus of an IND submission is on the general investigational plan and the protocol(s) for human studies. An IND must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA unless, before that time, the FDA raises concerns or questions related to the proposed clinical trials. 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 clinical trials can begin.

For each successive clinical trial conducted with the investigational drug, a separate, new protocol submission to an existing IND must be made, along with any subsequent changes to the investigational plan. Sponsors are also subject to ongoing reporting requirements, including submission of IND safety reports for any serious adverse experiences associated with use of the investigational drug or findings from nonclinical studies suggesting a significant risk for human subjects, as well as IND annual reports on the progress of the investigations conducted under the IND.

Clinical trials involve the administration of the investigational drug to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for participation in each clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety and the efficacy criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. Additionally, approval must also be obtained from each clinical trial site's IRB before a trial may be initiated at the site, and the IRB must monitor the trial until completed. Sponsors of clinical trials generally must register and report ongoing clinical trials and clinical trial results to public registries, including the website maintained by the U.S. National Institutes of Health, ClinicalTrials.gov.

For purposes of NDA approval, human clinical trials are typically divided into three or four phases. Although the phases are usually conducted sequentially, they may overlap or be combined.

- ***Phase 1.*** The drug is initially introduced into healthy human subjects or into patients with the target disease or condition. These studies are designed to evaluate the safety, dosage tolerance, metabolism and pharmacologic actions of the drug in humans, the side effects associated with increasing doses, and if possible, to gain early evidence of effectiveness.
- ***Phase 2.*** The drug is administered to a limited patient population to evaluate tolerance and optimal dose, identify possible adverse side effects and safety risks, and preliminarily evaluate efficacy. Multiple Phase 2 trials may be conducted to obtain additional data prior to beginning Phase 3 trials.
- ***Phase 3.*** The drug is administered to an expanded patient population, generally at geographically dispersed clinical trial sites to generate enough data to statistically evaluate dosage, clinical effectiveness and safety, to establish the overall benefit-risk relationship of the investigational drug and to provide an adequate basis for drug approval.
- ***Phase 4.*** In some cases, the FDA may condition approval of an NDA for a drug candidate on the sponsor's agreement to conduct additional clinical trials after approval. In other cases, a sponsor may voluntarily conduct additional clinical trials after approval to gain more information about the drug. Such post-approval trials are typically referred to as Phase 4 clinical trials.

The FDA, the IRB or the clinical trial sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk. The sponsor may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

Concurrent with clinical trials, companies may complete additional in vivo studies and develop additional information about the characteristics of the drug candidate. Companies must also finalize a process for manufacturing the drug in commercially applicable quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug and, among other things, must use validated methods for testing the drug against specifications to confirm its identity, strength, quality and purity. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the drug does not undergo unacceptable deterioration over its shelf life.

Submission of an NDA to the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development and testing are submitted to the FDA in the form of an NDA requesting approval to market the drug for one or more indications. The submission of an NDA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

An NDA must include all relevant data available from pertinent nonclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the drug's chemistry, manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical trials intended to test the safety and effectiveness of the drug for a specific use, or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and effectiveness of the drug to the satisfaction of the FDA.

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. The FDA may request additional information rather than accept an application for filing. In this event, the application must be resubmitted with the additional information and is subject to payment of additional user fees. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. Under applicable Prescription Drug User Fee Act (PDUFA) performance goals, the FDA endeavors to review NDAs for drugs containing new molecular entities within ten months of the 60-day filing date under standard review or within six months of the 60-day filing date under priority review.

The FDA may refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee for review, evaluation and recommendation as to whether the application should be approved and under what conditions.

Before approving an NDA, the FDA typically will inspect the facility or facilities where the drug is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and are adequate to assure consistent production of the drug within required specifications. Additionally, the FDA will typically inspect one or more clinical sites to assure that relevant trial data was obtained in compliance with GCP requirements.

After the FDA evaluates the NDA and conducts inspections of manufacturing facilities, it may issue 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 is not ready for approval. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA may ultimately decide that an application does not satisfy the regulatory criteria for approval. If, or when, the deficiencies have been addressed to the FDA's satisfaction in a resubmission of the application, the FDA will issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

As a condition of NDA approval, the FDA may require a Risk Evaluation and Mitigation Strategy (REMS) program to help ensure that the benefits of the drug outweigh its risks. If the FDA determines a REMS program is necessary, the drug sponsor must develop and submit a REMS as part of its NDA prior to approval. A REMS program may be required to include various elements, such as a medication guide or patient package insert, a communication plan to educate healthcare providers of the drug's risks, or other elements to assure safe use, such as

limitations on who may prescribe or dispense the drug, dispensing only under certain circumstances, special monitoring and the use of patient registries. In addition, all REMS programs must include a timetable to periodically assess the strategy following implementation.

Further, the FDA may require substantial post-approval testing and surveillance as a condition of NDA approval to monitor the drug's safety and efficacy, and the FDA has the authority to prevent or limit further marketing of a product based on the results of these post-marketing programs. Once granted, product approvals may be withdrawn if compliance with regulatory requirements is not maintained or problems are identified following initial marketing. Moreover, changes to the conditions established in an approved application, including changes in indications, labeling or manufacturing processes or facilities may require submission and FDA approval of a new NDA or NDA supplement before the changes can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that supporting the original approval, and the FDA uses similar procedures in reviewing supplements as it does in reviewing original applications.

Expedited development and review programs

The FDA offers a number of expedited development and review programs for qualifying drugs, one or more of which may be available for our current or future drug candidates.

New drug candidates are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the drug and the specific indication for which it is being studied. The sponsor of a fast track drug candidate has opportunities for frequent interactions with the review team during drug development and, once an NDA is submitted, the drug candidate may be eligible for priority review. A fast track drug candidate may also be eligible for rolling review, where 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.

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

After an NDA is submitted for a drug candidate, including a drug candidate with a fast track designation and/or breakthrough therapy designation, the NDA may be eligible for priority review. An NDA is eligible for priority review if it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition compared to marketed products. Depending on whether a drug candidate contains a new molecular entity, priority review designation means the FDA's goal is to take an action on the marketing application within six to eight months of the 60-day filing date, compared with ten to twelve months under standard review.

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

Orphan drug designation

We may pursue orphan drug designation for one or more of our current or future drug candidates, as appropriate, with the potential to obtain orphan drug exclusivity for our products, if approved.

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

If a drug that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the drug is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the drug with orphan drug exclusivity. Orphan drug exclusivity does not prevent the FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the drug to meet the needs of patients with the rare disease or condition.

Under the Pediatric Research Equity Act, certain NDAs and certain supplements to an NDA must contain data to assess the safety and efficacy 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 product is safe and effective. The FDA may grant deferrals for submission of pediatric data or full or partial waivers. The Food and Drug Administration Safety and Innovation Act amended the FDCA to require that a sponsor who is planning to submit an NDA for a drug that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration submit an initial Pediatric Study Plan (iPSP), within 60 days of an end-of-Phase 2 meeting or, if there is no such meeting, as early as practicable before the initiation of a Phase 3 or Phase 2/3 study. The iPSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach an agreement on the iPSP. A sponsor can submit amendments to an agreed-upon iPSP at any time if changes to the pediatric plan need to be considered based on data collected from nonclinical studies, early phase clinical trials and/or other clinical development programs.

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

Post-approval requirements

Once an NDA is approved, a drug will be subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to drug listing and registration, recordkeeping, periodic reporting, product sampling and distribution, adverse event reporting and advertising, marketing and promotion. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. While physicians may prescribe for off-label uses, manufacturers may only promote for the approved indications and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product’s FDA approved labeling. The FDA and other

agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

After approval, most changes to the approved drug, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which FDA assesses an annual program fee for each drug identified in an approved NDA. In addition, quality-control, drug manufacture, packaging and labeling procedures must continue to conform to cGMPs after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with the FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced and announced inspections by the FDA and these state agencies, during which the agency inspects manufacturing facilities to assess compliance with cGMPs. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon manufacturers and their subcontractors, if applicable. 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 of a drug if compliance with regulatory requirements is not maintained or if problems occur after the drug reaches the market. Later discovery of previously unknown problems with a drug, 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 trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a drug, complete withdrawal of the drug from the market or drug recalls;
- fines, warning or untitled letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing drug approvals;
- drug seizure or detention, or refusal of the FDA to permit the import or export of drugs; or
- injunctions or the imposition of civil or criminal penalties.

The FDA may also require post-approval studies and clinical trials if the FDA finds that scientific data, including information regarding related drugs, deem it appropriate. The purpose of such studies would be to assess a known serious risk or signals of serious risk related to the drug or to identify an unexpected serious risk when available data indicate the potential for a serious risk. The FDA may also require a labeling change if it becomes aware of new safety information that it believes should be included in the labeling of a drug.

International regulation

In addition to regulations in the United States, we are subject to certain and could become subject to a variety of additional foreign regulations regarding development, approval, commercial sales and distribution of our drugs if we seek to market our drugs (if approved) in other jurisdictions. Whether or not we obtain FDA approval for a drug candidate, we must obtain the necessary approvals by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the drug in those countries. The approval process varies from country to country and can involve additional drug testing and additional review periods, and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing, among other things, the conduct of clinical trials, drug licensing, pricing and reimbursement vary greatly from country to country. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others. If we fail to comply with applicable foreign regulatory requirements, we may be subject to fines, suspension or withdrawal of regulatory approvals, drug recalls, seizure of drugs, operating restrictions and criminal prosecution.

Other U.S. healthcare laws and compliance requirements

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. In the

United States, such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, price reporting, and transparency laws and regulations regarding drug pricing and payments and other transfers of value made to physicians and other healthcare providers. Violation of any of such laws or any other governmental regulations that apply may result in significant penalties, including, without limitation, administrative civil and criminal penalties, damages, disgorgement fines, additional reporting requirements and oversight obligations, contractual damages, the curtailment or restructuring of operations, exclusion from participation in governmental healthcare programs and imprisonment.

Pharmaceutical coverage, pricing and reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any drug candidates for which we or our collaborators obtain regulatory approval. In the United States and markets in other countries, sales of any drugs for which we or our collaborators receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage, and establish adequate reimbursement levels for such drug products.

In the United States, third-party payors include federal and state healthcare programs, government authorities, private managed care providers, private health insurers, and other organizations. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical drug products and medical services, in addition to questioning their safety and efficacy. Such payors may limit coverage to specific drug products on an approved list, also known as a formulary, which might not include all of the FDA-approved drugs for a particular indication. We or our collaborators may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our drugs, in addition to the costs required to obtain the FDA approvals. Nonetheless, our drug candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage for the drug product.

Moreover, the process for determining whether a third-party payor will provide coverage for a drug product may be separate from the process for setting the price of a drug product or for establishing the reimbursement rate that such a payor will pay for the drug product. For drugs administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. Additionally, separate reimbursement for the drug itself or the treatment for which the drug is used may not be available, which may impact physician utilization. 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 drug development.

Different pricing and reimbursement schemes exist in other countries. In Europe, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which drugs may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular drug candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs in general, particularly prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new drugs. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any drug 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 drug candidates for which we or our collaborators receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare reform

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and other third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement

for particular medical products and services, implementing reductions in Medicare and other healthcare funding and applying new payment methodologies. For example, in March 2010, the Affordable Care Act, or ACA was enacted, which affected existing government healthcare programs and resulted in the development of new programs.

Among the ACA's provisions of importance to the pharmaceutical industry, in addition to those otherwise described above, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively, and a cap on the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price (AMP);
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals, including individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Since its enactment, there have been judicial, executive and Congressional challenges to certain aspects of the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order initiating a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare.

Other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, included aggregate reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013, and will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2022, unless additional Congressional action is taken. In addition, in January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There has also been heightened governmental scrutiny recently over the manner in which pharmaceutical companies set prices for their marketed products, which has resulted in several Congressional inquiries and proposed federal legislation, as well as state efforts, 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 drug products. It is unclear whether the Biden administration will work to reverse these measures or pursue similar policy initiatives to control drug costs.

We anticipate that these new laws will result in additional downward pressure on coverage and the price that we receive for any approved drug, and could seriously harm our business. Any reduction in reimbursement from

Medicare and 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 drugs (if approved). In addition, it is possible that there will be further legislation or regulation that could harm our business, financial condition, and results of operations.

Data privacy and security

We may also be subject to federal, state and foreign data privacy and security laws and regulations. In the United States, numerous federal and state laws and regulations, including state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws and regulations (e.g., Section 5 of the FTC Act), govern the collection, use, disclosure, and protection of health-related and other personal information could apply to our operations or the operations of our partners. The Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH), and regulations implemented thereunder, impose requirements relating to the privacy, security and transmission of individually identifiable health information on certain health care providers, health plans and health care clearinghouses, known as covered entities, as well as their business associates that perform certain services that involve creating, receiving, maintaining or transmitting individually identifiable health information for or on behalf of such covered entities. Entities that are found to be in violation of HIPAA as the result of a breach of unsecured protected health information, a complaint about privacy practices or an audit by U.S. Department of Health & Human Services (HHS), may be subject to significant civil, criminal and administrative fines and penalties and/or additional reporting and oversight obligations if required to enter into a resolution agreement and corrective action plan with HHS to settle allegations of HIPAA non-compliance. Further, entities that knowingly obtain, use, or disclose individually identifiable health information maintained by a HIPAA covered entity in a manner that is not authorized or permitted by HIPAA may be subject to criminal penalties.

Even when HIPAA does not apply, according to the FTC, violating consumers' privacy rights or failing to take appropriate steps to keep consumers' personal information secure may constitute unfair acts or practices in or affecting commerce in violation of Section 5 of the FTC Act. The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Individually identifiable health information is considered sensitive data that merits stronger safeguards.

In addition, state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. By way of example, California recently enacted the California Consumer Privacy Act (CCPA), which went into effect on January 1, 2020, and creates certain individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling certain personal information of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. Further, the California Privacy Rights Act (CPRA) recently passed in California, which will impose additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data privacy agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions will go into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required. In the event that we are subject to or affected by HIPAA, the CCPA, the CPRA or other domestic privacy and data protection laws, any liability from failure to comply with the requirements of these laws could adversely affect our financial conditions.

We also are or will become subject to privacy laws in the jurisdictions in which we sell or market our products or run clinical trials. For example, in the EU we are subject to the EU General Data Protection Regulation (GDPR) in relation to our collection, control, processing, and other use of personal data (i.e. data relating to an identifiable living individual). We process personal data in relation to participants in our clinical trials in the European Economic Area (EEA), including the health and medical data of these participants. The GDPR is directly applicable in each EU and EEA Member State, however, it provides that EU and EEA Member States may introduce further conditions, including limitations which could limit our ability to collect, use and share personal data (including health and medical information), or could cause our compliance costs to increase, ultimately having an adverse impact on our business. The GDPR imposes onerous accountability obligations requiring data controllers and

processors to maintain a record of their data processing and implement policies as part of its mandated privacy governance framework. It also requires data controllers to be transparent and disclose to data subjects (in a concise, intelligible and easily accessible form) how their personal information is to be used, imposes limitations on retention of personal data; defines pseudonymized (i.e., key-coded) data; introduces mandatory data breach notification requirements; and sets higher standards for data controllers to demonstrate that they have obtained valid consent for certain data processing activities. We are also subject to EEA rules with respect to cross-border transfers of personal data out of the EEA. Recent legal developments in the EU have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States. On July 16, 2020, the Court of Justice of the European Union (CJEU) invalidated the EU-US Privacy Shield Framework (the Privacy Shield) under which personal data could be transferred from the EEA to US entities who had self-certified under the Privacy Shield scheme and imposed further restrictions on the use of standard contractual clauses (SCCs).The European Commission issued revised SCCs on June 4, 2021 to account for the decision of the CJEU and recommendations made by the European Data Protection Board. The revised SCCs must be used for relevant new data transfers from September 27, 2021; existing standard contractual clauses arrangements must be migrated to the revised clauses by December 27, 2022. The new SCCs apply only to the transfer of personal data outside of the EEA and not the UK; the UK's Information Commissioner's Office launched a public consultation on its draft revised data transfers mechanisms in August 2021. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or 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 operate and the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

We are subject to the supervision of local data protection authorities in those EU jurisdictions where we are subject to the GDPR, and we maintain an office in Belgium, which has its own set of stringent privacy and data protection laws and regulations. Fines for certain breaches of the GDPR are significant: up to the greater of €20 million or 4% of total global annual turnover. Further, from January 1, 2021, companies have to comply with the GDPR and also the United Kingdom GDPR (UK GDPR), which, together with the amended UK Data Protection Act 2018, retains the GDPR in UK national law. The UK GDPR mirrors the fines under the GDPR, i.e., fines up to the greater of €20 million (£17.5 million) or 4% of global turnover. The relationship between the United Kingdom and the EU in relation to certain aspects of data protection law remains unclear, and it is unclear how United Kingdom data protection laws and regulations will develop in the medium to longer term, and how data transfers to and from the United Kingdom will be regulated in the long term. The European Commission has adopted an adequacy decision in favor of the United Kingdom, enabling data transfers from EU member states to the United Kingdom without additional safeguards. However, the UK adequacy decision will automatically expire in June 2025 unless the European Commission re-assesses and renews or extends that decision. In addition to the foregoing, a breach of the GDPR or other applicable privacy and data protection laws and regulations could result in regulatory investigations, reputational damage, orders to cease / change our use of data, enforcement notices, or potential civil claims including class action type litigation.

Employees and human capital resources

As of December 31, 2021, we had 93 full-time employees, including 75 employees engaged in research and development. None of our employees are represented by labor unions or covered by collective bargaining agreements. 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 additional employees. The principal purposes of our equity incentive plans are to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards.

Corporate information

We were founded in February 2018 as a Delaware corporation. Our principal executive offices are located at One Corporate Dr., 2nd Floor, South San Francisco, California 94080, and our telephone number is (800) 466-6059.

Our website address is www.aligos.com. We make available on or through our website certain reports and amendments to those reports that we file with or furnish to the SEC in accordance with the Securities Exchange Act of 1934, as amended, or the Exchange Act. These include our annual reports on Form 10-K, our quarterly reports on

Form 10-Q, and our current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. We make this information available on or through our website free of charge as soon as reasonably practicable after we electronically file the information with, or furnish it to, the SEC. References to our website address do not constitute incorporation by reference of the information contained on the website, and the information contained on the website is not part of this document or any other document that we file with or furnish to the SEC. The SEC maintains a site on the worldwide web that contains reports, proxy and information statements and other information regarding our filings at www.sec.gov.

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 Annual Report on 10-K, 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. Many of the following risks and uncertainties are, and will be, exacerbated by the coronavirus pandemic (COVID-19) and any worsening of the global business and economic environment as a result. 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. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations and the market value of our common stock.

Risks related to our limited operating history, financial position and need for additional capital

We are a clinical-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred significant losses since inception. We expect to incur losses for at least the next several years and may never achieve or maintain profitability, which, together with our limited operating history, makes it difficult to assess our future viability.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We are a clinical-stage biopharmaceutical company, and we have only a limited operating history upon which you can evaluate our business and prospects. We currently have no products approved for commercial sale, have not generated any revenue from sales of products and have incurred losses in each year since our inception in February 2018. In addition, we have limited experience as a company and have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry.

Since inception, we have incurred significant net losses. Our net losses were $128.3 million for the year ended December 31, 2021, $108.5 million for the year ended December 31, 2020 and $52.3 million for the year ended December 31, 2019. As of December 31, 2021, we had a total stockholders' equity of $184.7 million. We have funded our operations to date primarily with proceeds from the sale of common stock, preferred stock and convertible notes. To date, we have devoted substantially all of our resources to organizing and staffing our company, business planning, raising capital, acquiring and discovering development programs, securing intellectual property rights and conducting discovery, research and development activities for our programs. We have not yet demonstrated our ability to successfully complete any clinical trials, including pivotal clinical trials, obtain marketing approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Our drug candidates will require substantial additional development time and resources before we will be able to apply for or receive regulatory approvals and, if approved, begin generating revenue from product sales. We expect to continue to incur significant expenses and operating losses for the foreseeable future.

We have never generated revenue from product sales and may never be profitable.

Our ability to generate revenue from product sales and achieve profitability depends on our ability, alone or with our collaboration partners, to successfully complete the development of, and obtain the regulatory approvals necessary to commercialize, our drug candidates. We do not anticipate generating revenue from product sales for the next several years, if ever. Our ability to generate revenue from product sales depends heavily on our and our current and potential future collaborators' success in:

- completing clinical and nonclinical development of drug candidates and programs and identifying and developing new drug candidates;
- seeking and obtaining marketing approvals for any drug candidates that we develop;
- launching and commercializing drug candidates for which we obtain marketing approval by establishing a sales force, marketing, medical affairs and distribution infrastructure or, alternatively, collaborating with a commercialization partner;
- achieving adequate coverage and reimbursement by third-party payors for drug candidates that we develop;

- establishing and maintaining supply and manufacturing relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development and the market demand for drug candidates that we develop, if approved;
- obtaining market acceptance of drug candidates that we develop as viable treatment options;
- technological and market developments;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter and performing our obligations in such collaborations;
- maintaining, protecting, enforcing and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how;
- defending against third-party interference, infringement or other intellectual property-related claims, if any; and
- attracting, hiring and retaining qualified personnel.

Even if one or more of the drug candidates that we develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved drug candidate. Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration (the FDA), the European Medicines Agency (the EMA), or other regulatory agencies to perform clinical trials or studies in addition to those that we currently anticipate. Even if we are able to generate revenue from the sale of any approved products, we may not become profitable and may need to obtain additional funding to continue operations.

We will require substantial additional financing to achieve our goals, which may not be available on acceptable terms, or at all. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

Our operations have consumed substantial amounts of cash since our inception. Since our inception, we have invested a significant portion of our efforts and financial resources in research and development activities for our initial nonclinical and clinical drug candidates. Nonclinical studies and clinical trials and additional research and development activities will require substantial funds to complete. As of December 31, 2021, we had cash, cash equivalents and investments of $205.8 million. In October 2020, we issued an aggregate of 3,569,630 shares of our Series B-2 redeemable convertible preferred stock in the second tranche of our Series B convertible preferred stock financing for aggregate proceeds to us of $40.0 million. In addition, we have received net proceeds of $151.4 million from the sale of an aggregate of 11,150,000 shares of our common stock on October 20, 2020 and on November 5, 2020 as part of our IPO, and net proceeds of $77.7 million from the sale of 4,400,000 shares of our common stock on July 6, 2021 as part of a follow-on offering. We expect to continue to spend substantial amounts to continue the nonclinical and clinical development of our current and future programs. If we are able to gain marketing approval for drug candidates that we develop, we will require significant additional amounts of cash in order to launch and commercialize such drug candidates. In addition, other unanticipated costs may arise. Because the design and outcome of our planned and anticipated clinical trials is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of any drug candidate we develop.

Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of researching and developing our drug candidates and programs, and of conducting nonclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining marketing approvals for drug candidates we develop if clinical trials are successful;
- the cost of commercialization activities for our current drug candidates, and any future drug candidates we develop, whether alone or in collaboration, including marketing, sales and distribution costs if our current drug candidates or any future drug candidate we develop is approved for sale;
- the cost of manufacturing our current and future drug candidates for clinical trials in preparation for marketing approval and commercialization;

- our ability to establish and maintain strategic licenses or other arrangements and the financial terms of such agreements including milestone payments to our licensors;
- the costs involved in preparing, filing, prosecuting, maintaining, expanding, defending and enforcing patent claims, including litigation costs and the outcome of such litigation;
- the timing, receipt and amount of sales of, or profit share or royalties on, our future products, if any;
- the emergence of competing therapies for hepatological indications and viral diseases and other adverse market developments; and
- any acquisitions or in-licensing of other programs or technologies.

We expect to finance our cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. In addition, we may seek additional capital to take advantage of favorable market conditions or strategic opportunities even if we believe we have sufficient funds for our current or future operating plans. Based on our research and development plans, we expect that our existing cash, cash equivalents and investments will enable us to fund our operations for at least 12 months following the date of this report. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned. Moreover, it is particularly difficult to estimate with certainty our future expenses given the dynamic nature of our business, the COVID-19 pandemic and the macro-economic environment generally.

Our ability to raise additional funds will depend on financial, economic and other factors, many of which are beyond our control. In particular, the COVID-19 pandemic continues to rapidly evolve and has already resulted in a significant disruption of global financial markets. If the disruption persists or deepens, we could be unable to access additional capital, which could negatively affect our ability to consummate certain corporate development transactions or other important, beneficial or opportunistic investments. If additional funds are not available to us when we need them, on terms that are acceptable to us, or at all, we may be required to:

- delay, limit, reduce or terminate nonclinical studies, clinical trials or other research and development activities or eliminate one or more of our development programs altogether; or
- delay, limit, reduce or terminate our efforts to establish manufacturing and sales and marketing capabilities or other activities that may be necessary to commercialize any future approved products, or reduce our flexibility in developing or maintaining our sales and marketing strategy.

Our operating results may fluctuate significantly, which will make our future results difficult to predict and could cause our results to fall below expectations.

Our quarterly and annual operating results may fluctuate significantly, which will make it difficult for us to predict our future results. These fluctuations may occur due to a variety of factors, many of which are outside of our control and may be difficult to predict, including:

- the timing and cost of, and level of investment in, research, development and commercialization activities, which may change from time to time;
- the timing and status of enrollment for our clinical trials;
- the timing of regulatory approvals, if any, in the United States and internationally;
- the timing of expanding our operational, financial and management systems and personnel, including personnel to support our clinical development, quality control, manufacturing and commercialization efforts and our operations as a public company;
- the cost of manufacturing, as well as building out our supply chain, which may vary depending on the quantity produced, and the terms of any agreements we enter into with third-party suppliers;
- the timing and amount of any milestone, royalty or other payments due under any current or future collaboration or license agreement, including our existing license agreements with Emory University (Emory) and Luxna Biotech Co., Ltd. (Luxna);

- coverage and reimbursement policies with respect to any future approved products, and potential future drugs that compete with our products;
- the timing and cost to establish a sales, marketing, medical affairs and distribution infrastructure to commercialize any products for which we may obtain marketing approval and intend to commercialize on our own or jointly with current or future collaborators;
- expenditures that we may incur to acquire, develop or commercialize additional products and technologies;
- the level of demand for any future approved products, which may vary significantly over time;
- future accounting pronouncements or changes in accounting principles or our accounting policies; and
- the timing and success or failure of nonclinical studies and clinical trials for our drug candidates or competing drug candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or collaboration partners.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even if we have met any previously publicly stated revenue or earnings guidance we may provide.

Our business could be materially adversely affected by the effects of health pandemics or epidemics, including the current outbreak of COVID-19 and future coronavirus outbreaks, and in particular in regions where we or third parties on which we rely have significant manufacturing facilities, concentrations of clinical trial sites or other business operations, including the San Francisco Bay Area where our headquarters are located.

Our business could be materially adversely affected by the effects of health pandemics or epidemics, including the current outbreak of COVID-19, which the World Health Organization declared a global pandemic and which has prompted severe lifestyle and commercial restrictions aimed at reducing the spread of the disease. In March 2020, the San Francisco Bay Area counties issued a joint shelter-in-place order, which was subsequently followed by a California state-wide shelter order, and other state and local governments implemented similar orders which, among other things, directed individuals to shelter at their places of residence, directed businesses and governmental agencies to cease non-essential operations at physical locations, prohibited certain non-essential gatherings, and ordered cessation of non-essential travel. As a result of these developments, we implemented work-from-home policies for most of our employees. Since the availability of COVID-19 vaccines, almost all of our U.S. employees have been fully vaccinated and as a result, we are allowing such employees to return to work at our U.S. facility. However, as the global COVID-19 pandemic and orders and guidance from state and local governments continue to evolve, we may need to reverse course and again implement work-from-home policies as necessary. For example, given the Omicron variant of COVID-19, we again implemented work-from-home policies for our employees in January 2022. While we have allowed our employees to return to work at our U.S. facility as of March 2022, we continue to monitor the COVID-19 situation and may once again reverse course as necessary. Government-imposed quarantines and our work-from-home policies may negatively impact productivity, disrupt our business and delay our clinical programs and timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions, the potential impact of changing government orders in response to upticks in COVID-19 cases and other limitations on our ability to conduct our business in the ordinary course. Although we do not anticipate any impacts to our clinical programs, these and similar, and perhaps more severe, disruptions in our operations could negatively impact our business, operating results and financial condition in the future.

Quarantines, shutdowns and shelter-in-place and similar government orders related to COVID-19 or other infectious diseases, or the perception that such events, orders or other restrictions on the conduct of business operations could occur, could impact personnel at third-party manufacturing facilities in the United States and other countries, or the availability or cost of materials, which would disrupt our supply chain. Although we do not

anticipate any clinical supply issues or concerns for our planned clinical trials, restrictions resulting from the COVID-19 outbreak may disrupt our supply chain in the future and delay or limit our ability to obtain sufficient materials for our drug candidates.

In addition, our current clinical trial and planned clinical trials may be affected by the ongoing COVID-19 pandemic. Site initiation and patient enrollment may be delayed due to prioritization of hospital resources toward the COVID-19 pandemic, and potential patients may not be able or willing to comply with clinical trial protocols, whether due to quarantines impeding patient movement or interrupting healthcare services, or due to potential patient concerns regarding interactions with medical facilities or staff. Similarly, our ability to recruit and retain principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19, may be delayed or disrupted, which may adversely impact our clinical trial operations.

In addition, the global COVID-19 pandemic has adversely affected, and any future significant outbreak of contagious diseases in the human population could similarly adversely affect, the economies and financial markets of many countries, including the United States, resulting in an economic downturn that could suppress demand for our future products. Any of these events could have a material adverse effect on our business, financial condition, results of operations or cash flows.

In addition, while the duration and severity of the effects of COVID-19 may be difficult to assess or predict, a continuing widespread pandemic could result in significant disruption of global financial markets, reducing our ability to access capital, which could negatively affect our liquidity and ability to progress our operations. In addition, a recession, down-turn, market correction or supply chain disruption resulting from the COVID-19 pandemic or other health pandemics or epidemics could materially adversely affect the value of our common stock.

Risks related to product development and regulatory process

We are early in our development efforts, and our business is dependent on the successful development of our current and future drug candidates. If we are unable to advance our current or future drug candidates through clinical trials, obtain marketing approval and ultimately commercialize any drug candidates we develop, or experience significant delays in doing so, our business will be materially harmed.

Our clinical development efforts across our drug candidates are in an early stage. We have initiated clinical trials for our most advanced drug candidates in many countries ALG-000184 in New Zealand, Hong Kong, the United Kingdom, South Korea, China and Moldova and ALG-020572 in New Zealand. Our other programs are in the discovery or nonclinical development stage. We have invested substantially all of our efforts and financial resources in the identification of targets and nonclinical development of therapeutics to address hepatological indications and viral diseases. However, the biology of these indications and diseases is complex and not completely understood, and our current and future drug candidates may never achieve expected or functional levels of efficacy or achieve an acceptable safety profile. For example, our CHB portfolio previously included our STOPS™ drug candidate, ALG-010133, one of our proprietary s-antigen transport-inhibiting oligonucleotide polymers that was in a Phase 1b dose range finding trial (NCT04485663) evaluating subjects with CHB. However, in January 2022, we announced we halted further development of ALG-010133 based on data from such trial indicating insufficient antiviral activity to warrant further development of such drug candidate. Our use of clinically validated targets to pursue treatments of these indications and diseases does not guarantee efficacy or safety or necessarily reduce the risk that our current or future drug candidates will not achieve expected or functional levels of efficacy or achieve an acceptable safety profile.

The success of our business, including our ability to finance our company and generate revenue from products in the future, which we do not expect will occur for several years, if ever, will depend heavily on the successful development and eventual commercialization of the drug candidates we develop, which may never occur. Our current drug candidates, and any future drug candidates we develop, will require additional nonclinical and clinical development, management of clinical, nonclinical and manufacturing activities, marketing approval in the United States and other markets, demonstrating effectiveness to pricing and reimbursement authorities, obtaining sufficient manufacturing supply for both clinical development and commercial production, building of a commercial organization, and substantial investment and significant marketing efforts before we generate any revenues from product sales.

As an organization, we have not yet completed any clinical trials for any of our drug candidates. Each of our lead drug candidates ALG-000184 and ALG-020572 are currently being evaluated in Phase 1 clinical trials in many countries ALG-000184 in New Zealand, Hong Kong, the United Kingdom, South Korea, China and Moldova, and

ALG-020572 in New Zealand. As a company, we have limited experience in preparing, submitting and prosecuting regulatory filings. Specifically, we have not previously submitted a new drug application (NDA) to the FDA or similar approval filings to a comparable foreign regulatory authority for any drug candidate. An NDA or other relevant regulatory filing must include extensive nonclinical and clinical data and supporting information to establish that the drug candidate is safe and effective for each desired indication. The NDA or other comparable regulatory filing must also include significant information regarding the chemistry, manufacturing and controls for the product. We have had limited interactions with the FDA and cannot be certain how many clinical trials of any of our drug candidates will be required or whether the FDA will agree with the design or implementation of our clinical trials. In addition, we cannot be certain that our current or future drug candidates will be successful in clinical trials such that the information contained in an NDA or comparable regulatory filing would support approval, and thus we cannot guarantee that any of our drug candidates will receive regulatory approval. Further, even if our current or future drug candidates are successful in clinical trials, such candidates may not receive regulatory approval. If we do not receive regulatory approvals for current or future drug candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approval to market a drug candidate, our revenue will depend, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights, as well as the availability of competitive products, third-party reimbursement and adoption by physicians.

We plan to seek regulatory approval to commercialize our drug candidates both in the United States and in select foreign countries. While the scope of regulatory approval in other countries is generally similar to that in the United States, in order to obtain separate regulatory approval in other countries we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy. Other countries also have their own regulations governing, among other things, clinical trials and commercial sales, as well as pricing and distribution of drugs, and we may be required to expend significant resources to obtain regulatory approval and to comply with ongoing regulations in these jurisdictions.

The success of our current and future drug candidates will depend on many factors, which may include the following:

- sufficiency of our financial and other resources to complete the necessary nonclinical studies and clinical trials, and our ability to raise any additional required capital on acceptable terms, or at all;
- our ability to develop and successfully utilize our drug discovery platforms;
- the timely and successful completion of our nonclinical studies and clinical trials, which may be significantly slower or cost more than we currently anticipate and will depend substantially upon the performance of third-party contractors;
- acceptance of investigational new drug applications (INDs), clinical trial applications (CTAs) and/or similar applications in other jurisdictions for our planned and future clinical trials;
- whether we are required by the FDA or a comparable foreign regulatory agency to conduct additional clinical trials or other studies beyond those planned to support approval of our drug candidates;
- successful enrollment and completion of clinical trials;
- successful data from our clinical program that supports an acceptable risk-benefit profile of our drug candidates in the intended populations;
- receipt and maintenance of marketing approvals from applicable regulatory authorities;
- establishing agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our drug candidates are approved;
- our ability, and the ability of any third parties with whom we contract, to remain in good standing with regulatory agencies and develop, validate and maintain commercially viable manufacturing processes that are compliant with current good manufacturing practices (cGMPs);
- entry into collaborations to further the development of our drug candidates in select indications or geographies;

- obtaining, maintaining and expanding our portfolio of intellectual property rights, including patents, trade secrets and know-how;
- enforcing and defending our intellectual property rights and having and successfully executing an intellectual property life cycle management strategy that supports long-term product development and commercialization goals;
- obtaining and maintaining regulatory exclusivity for our drug candidates;
- successfully launching commercial sales of our drug candidates, if approved;
- acceptance of the drug candidate's benefits and uses, if approved, by patients, the medical community and third-party payors;
- the prevalence, duration and severity of potential side effects or other safety issues experienced with our drug candidates following approval;
- effectively competing with other therapies; and
- obtaining and maintaining healthcare coverage and adequate reimbursement from third-party payors.

If we are not successful with respect to one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully obtain approval of or commercialize the drug candidates we develop, which would materially harm our business. If we do not receive marketing approvals for our current or future drug candidates, we may not be able to continue our operations. Even if regulatory approvals are obtained, we may never be able to successfully commercialize any products. Accordingly, we cannot provide assurances that we will be able to generate sufficient revenue through the sale of products to continue our business.

Nonclinical development is uncertain. Our nonclinical programs may experience delays or may never advance to clinical trials, which would adversely affect our ability to obtain regulatory approvals or commercialize our drug candidates on a timely basis or at all, which would have an adverse effect on our business.

In order to obtain approval from the FDA and other major regulatory agencies in non-U.S. countries to market a new drug candidate, we must demonstrate proof of safety and efficacy in humans. To meet these requirements, we will have to conduct adequate and well-controlled clinical trials. Before we can commence clinical trials for a drug candidate, we must complete extensive nonclinical studies that support our planned INDs or CTAs in the United States and other countries. At this time, we have two drug candidates (ALG-000184 and ALG-020572) being evaluated in Phase 1 clinical trials in many countries ALG-000184 in New Zealand, Hong Kong, the United Kingdom, South Korea, China and Moldova, and ALG-020572 in New Zealand. The rest of our programs are in nonclinical research or earlier stages of development, including our other chronic hepatitis B (CHB) drug candidates, our nonalcoholic steatohepatitis (NASH) drug candidate and our coronavirus drug candidates. We cannot be certain of the timely completion or outcome of our nonclinical studies and cannot predict if the FDA or other regulatory authorities will accept our proposed clinical programs or if the outcome of our nonclinical studies will ultimately support further development of our programs. In addition, the FDA may decline to accept the data we obtain from foreign clinical studies in support of an IND or NDA in the United States, which may require us to repeat or conduct additional nonclinical studies or clinical trials that we did not anticipate in the United States. As a result, we cannot be sure that we will be able to submit INDs in the United States, or CTAs or similar applications in other jurisdictions, on the timelines we expect, if at all, and we cannot be sure that submission of INDs, CTAs or similar applications will result in the FDA or other regulatory authorities allowing additional clinical trials to begin.

Conducting nonclinical testing is a complex, lengthy, time-consuming and expensive process. The length of time may vary substantially according to the type, complexity and novelty of the program, and often can take several years or more per program. Delays associated with programs for which we are directly conducting nonclinical studies may cause us to incur additional operating expenses. Moreover, we may be affected by delays associated with the studies of certain programs that are the responsibility of potential future partners, if any, over which we have no control. The commencement and rate of completion of nonclinical studies and clinical trials for a drug candidate may be delayed by many factors, including:

- inability or failure by us or third parties to comply with regulatory requirements, including the requirements of good laboratory practice (GLP);

- inability to generate sufficient nonclinical or other in vivo or in vitro data to support the initiation of clinical studies;
- delays in reaching a consensus with regulatory agencies on study design and obtaining regulatory authorization to commence clinical trials;
- obtaining sufficient quantities of our drug candidates for use in nonclinical studies and clinical trials from third-party suppliers on a timely basis;
- delays due to the COVID-19 pandemic, including due to reduced workforce productivity as a result of our implementation of a temporary work-from-home policy or illness among personnel, or due to delays at our third-party contract research organizations throughout the world for similar reasons or due to restrictions imposed by applicable governmental authorities; and
- delays due to other global-scale potentially catastrophic events, including other pandemics, terrorism, war, and climate changes.

Moreover, even if candidates from our drug programs advance into clinical trials, our development efforts may not be successful, and clinical trials that we conduct or that third parties conduct on our behalf may not demonstrate sufficient safety or efficacy to obtain the requisite regulatory approvals for any drug candidates we develop. Even if we obtain positive results from nonclinical studies or initial clinical trials, we may not achieve the same success in future trials.

The regulatory approval processes of the FDA, the EMA and comparable foreign authorities are lengthy, time-consuming, complex and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our drug candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA, the EMA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a drug candidate's clinical development and may vary across jurisdictions. We have not obtained regulatory approval for any drug candidate and it is possible that none of our current or future drug candidates will ever obtain regulatory approval.

Our current and future drug candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA, the EMA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA, the EMA or comparable foreign regulatory authorities that a drug candidate is safe or effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA, the EMA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a drug candidate's clinical and other benefits outweigh its safety risks;
- the FDA, the EMA or comparable foreign regulatory authorities may disagree with our interpretation of data from clinical trials or nonclinical studies;
- the data collected from clinical trials of our drug candidates may not be sufficient to support the submission of an NDA to the FDA or other submission or to obtain regulatory approval in the United States, the European Union or elsewhere;
- the FDA, the EMA or comparable foreign regulatory authorities may find deficiencies with or fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, the EMA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process as well as the unpredictability of clinical trial results may result in our failing to obtain regulatory approval to market any drug candidate we develop, which would significantly harm our business, results of operations and prospects. The FDA, the EMA and other comparable foreign authorities have substantial discretion in the approval process, and in determining when or whether regulatory approval will be obtained for any drug candidate that we develop. Even if we believe the data collected from future clinical trials of our drug candidates are promising, such data may not be sufficient to support approval by the FDA, the EMA or any other regulatory authority.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our drug candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a drug candidate with a label that does not include the labeling claims that we believe are necessary or desirable for the successful commercialization of that drug candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our drug candidates.

We cannot be certain that any of our programs will be successful in clinical trials or receive regulatory approval. Further, drug candidates we develop may not receive regulatory approval even if they are successful in clinical trials. If we do not receive regulatory approvals for our drug candidates, we may not be able to continue our operations.

Clinical product development involves a lengthy and expensive process, with uncertain outcomes. We may experience delays in completing, or ultimately be unable to complete, the development and commercialization of our current and future drug candidates, which could result in increased costs to us, delay or limit our ability to generate revenue and adversely affect our business, financial condition, results of operations and prospects.

To obtain the requisite regulatory approvals to commercialize any of our drug candidates, we must demonstrate through extensive nonclinical studies and clinical trials that our products are safe and effective in humans. Clinical trials are expensive and can take many years to complete, and their outcomes are inherently uncertain. Failure can occur at any time during the clinical trial process and our future clinical trial results may not be successful. For example, in January 2022, we halted further development of ALG-010133. This decision was based on emerging data from the Phase 1 Study ALG-010133-101, that indicated that at the projected efficacious dose (400 mg, estimated to achieve liver exposures >3 x EC90 for HBsAg inhibition) there was no meaningful HBsAg reduction. Furthermore, higher doses levels (maximum feasible dose is 600 mg) that were planned to be evaluated in a subsequent cohort were very unlikely to reach the 1 log10 IU/mL HBsAg reduction level that we had previously defined as necessary to advance the program.

We may experience delays in completing our clinical trials and initiating or completing additional clinical trials. We may also experience numerous unforeseen events prior to, during, or as a result of our nonclinical studies or clinical trials that could delay or prevent our ability to receive marketing approval or commercialize the drug candidates we develop, including:

- regulators, Institutional Review Boards (IRBs) or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable terms with prospective trial sites and prospective contract research organizations (CROs);
- the number of patients required for clinical trials may be larger than we anticipate;
- it may be difficult to enroll a sufficient number of suitable patients, or enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials or fail to return for post-treatment follow-up at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all, or may deviate from the clinical trial protocol or drop out of the trial, which may require us to add new clinical trial sites or investigators;
- the supply or quality of materials for drug candidates we develop or other materials necessary to conduct clinical trials may be insufficient or inadequate; and

- we may experience disruptions by man-made or natural disasters or public health pandemics or epidemics or other business interruptions, including the current COVID-19 pandemic and future outbreaks of the disease.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs or ethics committees of the institutions in which such trials are being conducted, by a Data Safety Monitoring Board for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of marketing approval of our drug candidates.

Further, we are currently conducting clinical trials of ALG-000184 and ALG-020572 in many countries, ALG-000184 in New Zealand, Hong Kong, the United Kingdom, South Korea, China and Moldova and ALG-020572 in New Zealand. We may also in the future conduct clinical trials for these and other drug candidates in other countries and territories which presents additional risks that may delay completion of our clinical trials. These risks include the possibility that we could be required to conduct additional nonclinical studies before initiating any clinical trials, may be unable to enroll and retain patients as a result of differences in healthcare services, research guidelines or cultural customs, or may face additional administrative burdens associated with comparable foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries.

If we experience termination or delays in the completion of any clinical trial of our drug candidates, the commercial prospects of our drug candidates will be harmed, and our ability to generate product revenues from any of these drug candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our drug candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Significant clinical trial delays could also allow our competitors to bring products to market before we do, shorten any periods during which we may have the exclusive right to commercialize our drug candidates, impair our ability to commercialize our drug candidates and harm our business and results of operations.

Specifically, the clinical trial sites for our current drug trials, including for ALG-000184 and ALG-020572 and future planned trials may be affected by the COVID-19 outbreak due to prioritization of hospital resources toward COVID-19 efforts, travel or quarantine restrictions imposed by national, federal, state or local governments, and the inability to access sites for initiation and patient monitoring and enrollment. As a result, patient screening, new patient enrollment, monitoring and data collection may be affected or delayed. Some of our third-party manufacturers we use for the supply of materials for drug candidates or other materials necessary to manufacture product to conduct clinical trials are located in countries affected by COVID-19, and, should they experience disruptions such as temporary closures or suspension of services, we would likely experience delays in advancing these trials.

Separately, principal investigators for our clinical trials serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or a regulatory authority concludes that the financial relationship may have affected the interpretation of the clinical trial, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection of any applications we submit. Any such delay or rejection could prevent or delay us from commercializing our current or future drug candidates.

Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or could lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our drug candidates or result in the development of our drug candidates being terminated.

Our pursuit of potential treatments for NASH is at an early stage and we may be unable to produce a therapy that successfully treats NASH. Even if successful, we may be unable to obtain regulatory approval for and successfully commercialize our drug candidates.

We have invested, and will continue to invest, a significant portion of our time and financial resources in the pursuit of a treatment for NASH. If we cannot successfully develop, obtain regulatory approval for and commercialize our drug candidates for the treatment of NASH, our business may be harmed. The mechanism of action of our NASH drug candidates is complex, and we do not know the degree to which it will translate into a therapeutic benefit, if any, in NASH or any other indication, and we do not know the degree to which the complex mechanism of action may contribute to long-term safety issues or adverse events when our drug candidates are taken for prolonged periods, as is inherent in the treatment of NASH.

In addition, the standards implemented by clinical or regulatory agencies may change at any time and we cannot be certain what efficacy endpoints the FDA or foreign clinical or regulatory agencies may require at the time we plan to conduct clinical trials with respect to NASH or any other applicable indication. Also, if we are able to obtain accelerated approval of our drug candidates based on a liver biopsy endpoint, we may be required to conduct a post-approval clinical outcomes trial to confirm the clinical benefit of the drug candidate; if any such post-approval trial is not successful, we would not be able to continue marketing the product.

If we are successful and any of our drug candidates are approved for the treatment of NASH, our drug candidates will likely compete with products that may be approved for the treatment of NASH prior to our drug candidates and/or that have greater efficacy than our drug candidates, either alone or in combination. Behavioral modifications, such as diet and exercise, can also decrease or eliminate the demand for our potential NASH treatments.

Our pursuit of potential therapies for COVID-19 is at an early stage.

In response to the outbreak of COVID-19, the disease caused by the virus SARS-CoV-2, we are pursuing various potential therapies to address the disease, including protease inhibitors and oligonucleotides. Our identification and development of these potential therapies is at an early stage, and we may be unable to produce in a timely manner a therapy that successfully treats the virus or that has broad clinical applicability, if at all.

For example, in June 2020, we entered into a Research, Licensing and Commercialization Agreement (the KU Leuven Agreement) with Katholieke Universiteit Leuven (KU Leuven) under which we are collaborating with KU Leuven's Rega Institute for Medical Research, as well as its Centre for Drug Design and Discovery, to research, develop, manufacture and commercialize potential protease inhibitors for the treatment of coronaviruses, including SARS-CoV-2. The KU Leuven Agreement may not result in a therapy that successfully treats SARS-CoV-2. Further, if the KU Leuven Agreement does result in such a therapy, the therapy may not be developed and commercialized in a timely manner, or at all.

We are also committing significant financial resources and personnel to the development of potential therapies for COVID-19, which may cause delays in or otherwise negatively impact our other development programs, despite uncertainties surrounding the longevity and extent of COVID-19 as a global health concern. COVID-19 may be substantially eradicated prior to our development of a successful therapy or a vaccine may be developed that is highly efficacious and widely adopted, reducing or eliminating the need for therapies to treat the disease. For instance, the Pfizer/BioNTech BNT162b2, the adenovirus type 26 (Ad26) vaccine by Janssen Pharmaceutical Companies of Johnson & Johnson, and Moderna mRNA-1273 COVID-19 vaccines have been approved and/or authorized for emergency use and are in the process of being widely being administered in various countries throughout the world which could adversely impact the need for our potential COVID-19 therapies. Further, while we hope to develop potential therapies that are effective against other or future coronaviruses, in addition to SARS-CoV-2, we cannot be certain this will be the case. If our potential therapies are not effective against other or future coronaviruses, the value and/or sales potential of our therapies will be reduced or eliminated. Our business could be negatively impacted by our allocation of significant resources to a global health threat that is unpredictable and could rapidly dissipate or against which our potential therapies, if developed, may not be partially or fully effective, and may ultimately prove unsuccessful or unprofitable. Furthermore, there are no assurances that our therapy will be approved for inclusion in government stockpile programs, which may be material to the commercial success of any approved coronavirus-related drug candidate, either in the United States or abroad.

We will also need to enter into manufacturing arrangements in the future in order to create a supply chain for our COVID-19 drug candidates that can adequately support demand. Even if we are successful in developing and

manufacturing an effective treatment for COVID-19, the SARS-CoV-2 virus could develop resistance to our treatment, which could affect any long-term demand or sales potential for our potential therapies.

In addition, another party may be successful in producing a more efficacious therapy for COVID-19 or a therapy with a more convenient or preferred route of administration or in producing a therapy in a more timely manner, which may lead to the diversion of funding away from us and toward other companies or lead to decreased demand for our potential therapies. For instance, on December 22, 2021, Pfizer, Inc. received an emergency use authorization from the FDA for Paxlovid, an orally administered COVID-19 protease inhibitor. Similarly, Merck (together with Ridgeback Bio), is developing the drug Molnupiravir, an oral antiviral drug which similarly has been issued an emergency use authorization by the FDA on December 23, 2021. Also, Enanta Pharmaceuticals recently announced nomination of clinical candidate EDP-235 which is its lead oral protease inhibitor specifically designed for the treatment of COVID-19 and which is planned to enter the clinic early 2022. Additionally, Pardes Biosciences protease inhibitor, PBI-0451, is currently in Phase 1 clinical study with top-line results expected to be reported in the first quarter of 2022 and where early results showing potential for an unboosted oral regimen against COVID-19. Furthermore, Novartis is working on a once a day, pan-coronavirus, main protease inhibitor pill and plans to start human testing in 2022, and Shionogi has filed for manufacture and sales approval in Japan for its oral therapeutic drug for COVID-19, S-217622, a 3CL protease inhibitor for which Shiongoi has completed the analysis of primary endpoints in its Phase 2b part of a Phase 2/3 clinical trial. Faced with such competitor efforts, the value and/or market potential of our COVID-19 protease inhibitor program which is further behind in terms of development process may be adversely impacted. Further, other therapies that are more affordable than our potential therapies may be used to treat COVID-19, including existing generic drugs, which could also hurt the funding of and demand for our potential therapies. In addition to BioNTech SE (together with Pfizer Inc.), Moderna, Inc. and Janssen Pharmaceutical Companies of Johnson & Johnson, there are efforts by several other public and private entities to develop a therapy or vaccine for COVID-19, including Alexion Pharmaceuticals Inc., Atea Pharmaceuticals, Inc. (together with Roche), Incyte Corporation, Sanofi S.A., Regeneron Pharmaceuticals, Inc., Amgen Inc. (together with Adaptive Biotechnologies Corporation), AbCellera Biologics, Inc. (together with Eli Lilly and Company), Vir Biotechnology, Inc. (together with Alnylam Pharmaceuticals, GSK, Biogen Inc. and WuXi Biologics Ltd.), Altimmune, Inc., AstraZeneca PLC (together with Oxford University), GlaxoSmithKline (GSK) (together with Sanofi S.A.), Heat Biologics, Inc., Inovio Pharmaceuticals, Inc., Novavax, Inc., Regeneron Pharmaceuticals Inc., Synairgen plc, Takeda Pharmaceutical Company Limited, and Vaxart, Inc., many of which are further along in the development process than we are. These other entities may be more successful at developing, manufacturing or commercializing a therapy for COVID-19, especially given that several of these other organizations are much larger than we are and have access to larger pools of capital, including U.S. government funding, and broader manufacturing infrastructure. The success or failure of other entities, or perceived success or failure, may adversely impact our ability to obtain any future funding for our development and manufacturing efforts or to ultimately commercialize a therapy for COVID-19, if approved.

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

Our drug candidates targeting SARS-CoV-2, the virus that causes COVID-19, are in the early discovery stages. The speed at which companies and institutions are acting to create and test many therapeutics and vaccines for COVID-19 is unusually rapid and evolving or changing plans or priorities within the FDA, including changes based on new knowledge of COVID-19 and how the disease affects the human body, may significantly affect the regulatory timelines for our COVID-19 drug candidates. Results from our continued development and planned clinical trials may raise new questions and require us to redesign proposed nonclinical studies and clinical trials, including revising proposed endpoints or adding new clinical trial sites or cohorts of subjects, with minimal lead time.

The FDA has the authority to grant an EUA to allow unapproved medical products to be used in an emergency to diagnose, treat, or prevent serious or life-threatening diseases or conditions when, based on the totality of scientific evidence, there is evidence of effectiveness of the medical product, and there are no adequate, approved, and available alternatives. For instance, the FDA had granted an EUA for each of the COVID-19 vaccines developed by Pfizer/BioNTech, Moderna and Janssen Pharmaceutical Companies of Johnson & Johnson. In addition, on December 22, 2021, Pfizer, Inc. received an emergency use authorization from the FDA for Paxlovid, an orally administered COVID-19 protease inhibitor. Similarly, Merck (together with Ridgeback Bio), is developing the drug Molnupiravir, an oral antiviral drug which similarly has been issued an emergency use authorization by the FDA on December 23, 2021. Depending on the outcomes of our planned nonclinical and initial clinical testing for

our proposed COVID-19 therapies, we may seek an EUA for one or more of our drug candidates for use in the ongoing public health emergency, which would permit us to commercialize a drug candidate prior to FDA approval of an NDA. However, commercialization under an EUA is permitted only during the underlying public health emergency (as declared by the Secretary of the Department of Health and Human Services), meaning that once the emergency declaration is terminated, we would be required to obtain NDA approval to continue marketing the product. Furthermore, the FDA may revoke an EUA based on a determination that the product no longer satisfies the criteria for issuance of an EUA—for example, if there is no longer evidence of effectiveness of the product or there are other adequate, approved alternatives. Accordingly, we cannot predict how long, if at all, an EUA for any of our drug candidates may remain in place. Any termination or revocation of an EUA (if any) for one of our drug candidates could adversely impact our business in a variety of ways, including if one of our COVID-19 drug candidates is not yet approved by the FDA and if we and our manufacturing partners have invested in the supply chain to provide one of our COVID-19 drug candidates under an EUA.

The results of nonclinical studies and early-stage clinical trials may not be predictive of future results.

The results of nonclinical studies may not be predictive of the results of clinical trials, and the results of any early-stage clinical trials we commence may not be predictive of the results of the later-stage clinical trials. Drug candidates in later stages of clinical trials may fail to show the desired safety and efficacy despite having progressed through nonclinical studies and initial clinical trials. There is a high failure rate for drugs proceeding through clinical trials, and a number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies. There can be no assurance that any of our current or future clinical trials will ultimately be successful or support further clinical development of any of our drug candidates. Even if our clinical trials are completed, the results may not be sufficient to obtain regulatory approval of any products. Any such setbacks in our clinical development could have a material adverse effect on our business and operating results.

Interim, "topline" and preliminary data from our clinical trials may differ materially from the final data.

From time to time, we may disclose interim data from our clinical trials, including the preliminary data with respect to our CAM candidate, ALG-000184 and our ASO candidate ALG-020572. Interim data from clinical trials are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more data on existing patients become available. Adverse differences between interim data and final data could significantly harm our business, financial condition, results of operations and prospects. From time to time, we may also publicly disclose preliminary or "topline" data from our clinical trials, which are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that we report may differ from future results of the same clinical trials, or different conclusions or considerations may qualify such topline results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular drug candidate or product and the value of our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is typically a summary of extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product, drug candidate or our business. If the topline data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our drug candidates may be harmed, which could harm our business, financial condition, operating results and prospects.

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

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. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the drug candidate being studied in relation to other available therapies, including any new products that may be approved for the indications we are investigating;
- our ability to obtain and maintain patient consents for participation in our clinical trials and, where appropriate, biopsies for future patient enrichment efforts;
- the risk that patients enrolled in clinical trials will not remain in the trial through the completion of evaluation; and
- disruption by man-made or natural disasters, or public health pandemics or epidemics or other business interruptions, including the current COVID-19 pandemic and future outbreaks of the virus.

In addition, our clinical trials will compete with other clinical trials for drug candidates that are in the same therapeutic areas as our current and potential future drug candidates. This competition will reduce the number and types of patients available to us, because some patients who might have enrolled in our trials may instead opt to enroll in a trial conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we may conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which would reduce the number of patients who are available for our clinical trials at such sites. Moreover, because our current and potential future drug candidates may represent a departure from more commonly used methods for treatment, potential patients and their doctors may be inclined to use conventional therapies rather than enroll patients in our clinical trials.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our drug candidates.

Changes in methods of drug candidate manufacturing or formulation may result in additional costs or delay.

As drug candidates proceed from nonclinical studies to late-stage clinical trials towards potential approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered to optimize results. However, any change could entail additional cost and risks potential delay if the reformulated or otherwise altered drug candidate performs different than expected or intended, which could require modification to the nonclinical or clinical program. Such changes may also require additional testing, including bridging or comparability testing to demonstrate the validity of clinical data obtained in clinical trials following manufacturing changes, FDA notification or FDA approval.

Moreover, we have not yet manufactured or processed on a commercial scale any of our drug candidates. We may make changes as we work to optimize our manufacturing processes, but we cannot be sure that even minor changes in our processes will result in therapies that are safe and effective or that will be approved for commercial sale.

Our current or future drug candidates may cause undesirable side effects or have other properties when used alone or in combination with other approved products or investigational new drugs that could delay or halt their clinical development, prevent their marketing approval, limit their commercial potential or result in significant negative consequences.

Undesirable or clinically unmanageable side effects from one or more of our drug candidates or potential future products could occur and cause us or regulatory authorities to interrupt, delay or terminate clinical trials, could result in a more restrictive label or could cause the delay or denial of marketing approval by the FDA or comparable foreign regulatory authorities. Further, results of our planned clinical trials could reveal unacceptably severe and prevalent side effects or unexpected characteristics.

If unacceptable toxicities or other undesirable side effects arise in the development of any of our current or future drug candidates, we could suspend or terminate our trials, or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of the drug candidate for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial, or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. Inadequately recognizing or managing the potential side effects of our drug candidates could result in patient injury or death. Any of these occurrences may prevent us from achieving or maintaining market acceptance of the affected drug candidate and may harm our business, financial condition and prospects significantly.

Although our current and future drug candidates will undergo safety testing to the extent possible and, where applicable, under such conditions discussed with regulatory authorities, not all adverse effects of drugs can be predicted or anticipated. Unforeseen side effects could arise either during clinical development or, if such side effects are more rare, after our products have been approved by regulatory authorities and the approved product has been marketed, resulting in the exposure of additional patients. To date, we have not demonstrated that any of our drug candidates are safe in humans, and we cannot predict if ongoing or future clinical trials will do so.

Furthermore, we plan to evaluate our drug candidates in combination with approved and/or experimental therapies. These combinations may have additional or more severe side effects than caused by our drug candidates as monotherapies or may cause side effects at lower doses. The uncertainty resulting from the use of our drug candidates in combination with other therapies may make it difficult to accurately predict side effects in potential future clinical trials.

If any of our drug candidates receives marketing approval and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could occur, including:

- regulatory authorities may withdraw their approval of the product;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;

- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- we may be required to implement a Risk Evaluation and Mitigation Strategy (REMS) or create a Medication Guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us from achieving or maintaining market acceptance of the particular drug candidate, if approved, and result in the loss of significant revenue to us, which would adversely affect our business, financial condition, results of operations and prospects. In addition, if one or more of our drug candidates prove to be unsafe, our entire technology platform and pipeline could be affected, which would have a material adverse effect on our business, financial condition, results of operations and prospects.

Even if we complete the necessary nonclinical studies and clinical trials, the marketing approval process is expensive, time-consuming and uncertain and may prevent us or any of our future collaboration partners from obtaining approvals for the commercialization of our current drug candidates and any other drug candidate we develop.

Any current or future drug candidates we may develop and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, and distribution, are subject to comprehensive regulation by the FDA and other regulatory authorities in the United States and by comparable authorities in other countries. Failure to obtain marketing approval for a drug candidate will prevent us from commercializing the drug candidate in a given jurisdiction. We have not received approval to market any drug candidates from regulatory authorities in any jurisdiction and it is possible that none of our current or future drug candidates will ever obtain regulatory approval. As an organization, we have no experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third-party CROs or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive nonclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the drug candidate’s safety and efficacy. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Any drug candidates we develop may not be effective, may be only moderately effective, or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive, may take many years if additional clinical trials are required, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity, and novelty of the drug candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional nonclinical, clinical or other studies. In addition, varying interpretations of the data obtained from nonclinical and clinical testing could delay, limit, or prevent marketing approval of a drug candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

If we experience delays in obtaining marketing approval or if we fail to obtain marketing approval of any current or future drug candidates we may develop, the commercial prospects for those drug candidates may be harmed, and our ability to generate revenues will be materially impaired.

Even if a current or future drug candidate receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any current or future drug candidate we develop receives marketing approval, whether as a single agent or in combination with other therapies, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors, and others in the medical community, or such participants may prefer existing treatment options such as nucleos(t)ide analogs including tenofovir and entecavir. If the drug candidates we develop do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable. The degree of market acceptance of any drug candidate, if approved for commercial sale, will depend on a number of factors, including:

- efficacy and potential advantages compared to alternative treatments;
- the ability to offer our products, if approved, for sale at competitive prices;
- convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- the ability to obtain sufficient third-party coverage and adequate reimbursement, including with respect to the use of the approved product as a combination therapy;
- adoption of a companion diagnostic and/or complementary diagnostic (if any); and
- the prevalence and severity of any side effects.

Adverse events in our therapeutic areas of focus, including hepatological indications and viral diseases, could damage public perception of our current or future drug candidates and negatively affect our business.

The commercial success of our products will depend in part on public acceptance of our therapeutic areas of focus. Adverse events in clinical trials of our drug candidates, or post-marketing activities, or in clinical trials of others developing similar products or targeting similar indications and the resulting publicity, as well as any other adverse events in our therapeutic areas of focus, including hepatological indications and viral diseases, could result in decreased demand for any product that we may develop. If public perception is influenced by claims that the use of therapies in our therapeutic areas of focus are unsafe, whether related to our therapies or those of our competitors, our products may not be accepted by the general public or the medical community.

Future adverse events in our therapeutic areas of focus or the biopharmaceutical industry could also result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approvals of our products. Any increased scrutiny could delay or increase the costs of obtaining marketing approval for the drug candidates we have developed, are developing and may in the future develop.

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

The clinical and commercial success of our drug candidates will depend in part on public acceptance of the use of technologies for the prevention or treatment of human diseases. Adverse public attitudes may adversely impact our ability to enroll clinical trials. Moreover, our success will depend upon physicians specializing in our targeted diseases prescribing, and their patients being willing to receive, our drug candidates as treatments in lieu of, or in addition to, existing, more familiar, treatments for which greater clinical data may be available. Any increase in negative perceptions of the technologies that we rely on may result in fewer physicians prescribing our products (if approved) or may reduce the willingness of patients to utilize our products or participate in clinical trials for our drug candidates.

Increased negative public opinion or more restrictive government regulations in response thereto, would have a negative effect on our business, financial condition, results of operations or prospects and may delay or impair the

development and commercialization of our drug candidates or demand for such drug candidates. Adverse events in our nonclinical studies or clinical trials or those of our competitors or of academic researchers utilizing similar technologies, even if not ultimately attributable to drug candidates we may discover and develop, and the resulting publicity could result in increased governmental regulation, unfavorable public perception, potential regulatory delays in the testing or approval of potential drug candidates we may identify and develop, stricter labeling requirements for those drug candidates that are approved, a decrease in demand for any such drug candidates and a suspension or withdrawal of approval by regulatory authorities of our drug candidates.

Even if we receive marketing approval of a drug candidate, 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 products, if approved.

Any marketing approvals that we receive for any current or future drug candidate may be subject to limitations on the approved indicated uses for which the product may be marketed or contain requirements for potentially costly post-market testing and surveillance to monitor the safety and efficacy of the drug candidate. The FDA may also require a REMS as a condition of approval of any drug candidate, which could include 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 comparable foreign regulatory authority approves a drug candidate, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import and export and record keeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, establishment registration, as well as continued compliance with current Good Manufacturing Practice, or cGMP, and Good Clinical Practice, or GCP, for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with any approved candidate, including adverse events 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 the product, withdrawal of the product from the market, or product recalls;
- fines, untitled and warning letters, or holds on clinical trials;
- refusal by the FDA or other regulatory authorities to approve pending applications or supplements to approved applications we filed or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of the product; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay marketing approval of a product. 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 profitability.

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

Approval of a drug candidate in the United States by the FDA does not ensure approval of such drug candidate by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries. Sales of our drug candidates outside the United States will be subject to foreign regulatory requirements governing clinical trials and marketing approval. Even if the FDA grants marketing approval for a drug candidate, comparable foreign regulatory authorities also must approve the manufacturing and marketing of the drug candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and more onerous than, those in the United States, including additional nonclinical studies or clinical trials. In many countries outside the United States, a drug candidate must be approved for reimbursement before it can be approved for sale in that country. In some cases, the price that we intend to charge for any drug candidates, if approved, is also subject to

approval. Obtaining approval for our drug candidates in the European Union (the EU) from the European Commission following the opinion of the EMA, if we choose to submit a marketing authorization application there, would be a lengthy and expensive process. Even if a drug candidate is approved, the EMA may limit the indications for which the product may be marketed, require extensive warnings on the product labeling or require expensive and time-consuming additional clinical trials or reporting as conditions of approval. Approval of certain drug candidates outside of the United States, particularly those that target diseases that are more prevalent outside of the United States, will be particularly important to the commercial success of such drug candidates. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our drug candidates in certain countries.

Further, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. For example, we are conducting our initial clinical trials for ALG-000184 and ALG-020572 in many countries, ALG-000184 in New Zealand, Hong Kong, the United Kingdom, South Korea, China and Moldova and ALG-020572 in New Zealand, and plan to conduct additional clinical trials in several other countries and territories within the Asia Pacific and/or Europe and our conduct of the trials must satisfy specific requirements in order for the FDA to accept the data in support of an IND or NDA in the United States. Further, any regulatory approval for our drug candidates may be withdrawn. If we fail to comply with the applicable regulatory requirements, our target market will be reduced and our ability to realize the full market potential of our drug candidates will be harmed and our business, financial condition, results of operations and prospects could be harmed.

Risks associated with our international operations, including seeking and obtaining approval to commercialize our drug candidates in foreign jurisdictions, could harm our business.

We engage in international operations with offices in the United States, Belgium and China and intend to seek approval to market our drug candidates outside of the United States. We may also do so for future drug candidates. We expect that we are or will be subject to additional risks related to these international business markets and relationships, including:

- different regulatory requirements for approval of drug candidates in foreign countries, including challenging processes for marketing biopharmaceutical products;
- reduced protection for and enforcement of intellectual property rights;
- heightened or different data privacy and information security laws, regulations and policies;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- foreign reimbursement, pricing and insurance regimes;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities;
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires; and
- disruptions resulting from the impact of public health pandemics or epidemics (including, for example, the ongoing COVID-19 pandemic).

In addition, there are complex regulatory, tax, labor and other legal requirements imposed by many of the individual countries in which we may operate, with which we will need to comply.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or could otherwise prevent

new or modified products from being developed, approved or commercialized in a timely manner or at all, 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, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, 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. Disruptions at the FDA and other agencies may also slow the time necessary for new products to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Relatedly, 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 on March 18, 2020, the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. Subsequently, on July 10, 2020, the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission-critical inspections to resumption of all regulatory activities. According to the guidance, the FDA may request such remote interactive evaluations where the FDA determines that remote evaluation would be appropriate based on mission needs and travel limitations. In May 2021, the FDA outlined a detailed plan to move toward a more consistent state of inspectional operations, and in July 2021, the FDA resumed standard inspectional operations of domestic facilities and was continuing to maintain this level of operation as of September 2021. More recently, the FDA has continued to monitor and implement changes to its inspectional activities to ensure the safety of its employees and those of the firms it regulates as it adapts to the evolving COVID-19 pandemic. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to events such as the COVID-19 pandemic. 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 impair the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

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

We currently focus our product development on novel therapeutics to address unmet needs in hepatological indications and viral diseases. Our eligible patient population, pricing estimates and available coverage and reimbursement may differ significantly from the actual market addressable by our drug candidates. Our estimates of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our drug candidates, are based on our beliefs and analyses based on a variety of sources, including scientific literature, patient foundations or market research, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of the diseases we are targeting. The number of patients may turn out to be lower than expected, and the potentially addressable patient population for each of our drug candidates may be limited or may not be receptive to treatment with our drug candidates, and new patients may become increasingly difficult to identify or access. Certain potential patients may have or develop a resistance to our potential therapies or otherwise be unable to be treated with our potential therapies for COVID-19, HBV or other viral diseases as a result of their genetic makeup. In addition, the route of administration for our potential therapies could be inconvenient and/or not commercially viable, which could also limit the potential market for our therapies. If the market opportunities for our drug candidates are smaller than we estimate, it could have an adverse effect on our business, financial condition, results of operations and prospects.

For example, we believe NASH to be one of the most prevalent chronic liver diseases worldwide, however, our projections of the number of people who have NASH, as well as the subset of people with the disease who have the potential to benefit from treatment with our drug candidates, are based on our beliefs and estimates. The effort to identify patients with NASH is in early stages, and we cannot accurately predict the number of patients for whom treatment might be possible. NASH is often undiagnosed and may be left undiagnosed for a long time, partly because a definitive diagnosis of NASH is currently based on a histological assessment of a liver biopsy, which impairs the ability to easily identify patients. If improved diagnostic techniques for identifying NASH patients who will benefit from treatment are not developed, our market opportunity may be smaller than we currently anticipate. Further, if government authorities and third-party payors choose to limit coverage and reimbursement of our NASH drug candidate, such as limiting the number of patients' treatment that would be covered and reimbursable, this could result in a smaller market opportunity for our NASH drug candidate than we anticipate.

In addition, the number of people who have HBV, as well as the subset of people with the disease who have the potential to benefit from treatment with our drug candidates, may be reduced due to factors including the genotype or variant of HBV, more widespread use of vaccines or alternative therapies, political roadblocks to approval and/or treatment in certain countries and the virus's development of resistance to our potential treatments after long-term and persistent exposure to antiviral therapy.

We intend to develop our current drug candidates, and expect to develop other future drug candidates, in combination with other therapies, which exposes us to additional risks.

We intend to develop our current drug candidates, and expect to develop other future drug candidates, in combination with one or more therapies, including therapies that we develop and those developed externally. Even if a drug candidate we develop were to receive marketing approval or be commercialized for use in combination with other therapies, we would face the risk that the FDA or similar regulatory authority outside of the United States could revoke approval of the therapy used in combination with our drug candidate or that safety, efficacy, manufacturing or supply issues could arise with these other therapies. Combination therapies are commonly used for the treatment of viral diseases and it is generally believed they will be required for NASH, and we would be subject to similar risks if we develop any of our drug candidates for use in combination with other drugs. This could result in our own products, if approved, being removed from the market or suffering commercially. In addition, we may evaluate our current drug candidates and other future drug candidates in combination with one or more other therapies that may have not yet been approved for marketing by the FDA or similar regulatory authorities outside of the United States. We will not be able to market and sell any drug candidate we develop in combination with any such unapproved therapies that do not ultimately obtain marketing approval.

If the FDA or similar regulatory authorities outside of the United States do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, the drugs we choose to evaluate in combination with or any of our drug candidate, we may be unable to obtain approval of or market any of our combination treatments.

We face significant competition, and if our competitors develop and market products that are more effective, safer or less expensive than the drug candidates we develop, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive. We are currently developing therapies that will compete, if approved, with other products and therapies that currently exist or are being developed. Products we may develop in the future are also likely to face competition from other products and therapies, some of which we may not currently be aware of. We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, universities and other research institutions. Many of our competitors have significantly greater financial, manufacturing, marketing, product development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining marketing approvals, recruiting patients and manufacturing pharmaceutical products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development, and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the drug candidates that we develop obsolete. Further, mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. As a result of all of these factors, our competitors may

succeed in obtaining patent protection and/or marketing approval or discovering, developing and commercializing products in our field before we do.

There are a number of companies developing or marketing treatments for CHB, including Roche Holding AG (Roche), Gilead, Bristol-Myers Squibb Company, Arbutus Biopharma Corporation, Dicerna Pharmaceuticals, Inc. (together with Roche), Ionis Pharmaceuticals, Inc. (together with GSK), Arrowhead Pharmaceuticals, Inc. (together with Janssen Pharmaceuticals Company (Janssen)), Vir Biotechnology, Inc. (together with Alnylam Pharmaceuticals, Inc.), Johnson & Johnson, Assembly Biosciences Inc., Enanta Pharmaceuticals, Altimmune, Inc., GSK, Janssen, Transgene SA, Dynavax Technologies, Inc., Merck and Replicor, Inc. There are also companies developing or marketing treatments or vaccines for COVID-19, including Soliris by Alexion Pharmaceuticals Inc., Atea Pharmaceuticals, Inc. (together with Roche), Jakafi by Incyte Corporation, Kevzara by Sanofi S.A./Regeneron Pharmaceuticals, Inc., Amgen Inc. (together with Adaptive Biotechnologies Corporation), AbCellera Biologics, Inc. (together with Eli Lilly and Company), Vir Biotechnology, Inc. (together with GSK, Biogen Inc. and WuXi Biologics Ltd.), Altimmune, Inc., AstraZeneca PLC (together with Oxford University), BioNTech SE (together with Pfizer Inc.), GlaxoSmithKline plc (GSK) (together with Sanofi S.A.), Heat Biologics, Inc., Inovio Pharmaceuticals, Inc., Johnson & Johnson, Moderna, Inc., Novavax, Inc., Regeneron Pharmaceuticals Inc., Vaxart, Inc., Enanta Pharmaceuticals, Novartis and Shionogi & Co., Ltd. For example, BioNTech SE (together with Pfizer Inc.), Janssen Pharmaceutical Companies of Johnson & Johnson and Moderna Inc. have developed COVID-19 vaccines that have received authorization for emergency use and/or regulatory approval are being widely administered. In addition, on December 22, 2021, Pfizer, Inc. received an emergency use authorization from the FDA for Paxlovid, an orally administered COVID-19 protease inhibitor. Similarly, Merck (together with Ridgeback Bio) is developing the drug Molnupiravir, an oral antiviral drug which similarly has been issued an emergency use authorization by the FDA on December 23, 2021.The availability of such COVID-19 vaccines and each of Pfizer's and Merck's oral COVID-19 drug may reduce or eliminate the need for our potential COVID therapies to treat the disease and therefore negatively impact the commercial opportunity therefor.

Furthermore, there are companies developing or marketing treatments for NASH, including AbbVie, Inc., AstraZeneca PLC/MedImmune LLC, Bristol-Myers Squibb Company, Eli Lilly and Company, FronThera US Pharmaceuticals LLC, Janssen, Merck, Novartis Pharmaceuticals Corporation (together with Pfizer, Inc.), Novo Nordisk A/S, Pfizer Inc., Roche, Sanofi S.A., Takeda Pharmaceutical Company Limited (together with HemoShear Therapeutics, LLC), 89bio, Inc., Akero Therapeutics, Inc., Blade Therapeutics, Inc., Cirius Therapeutics, Inc., Enanta Pharmaceuticals, Inc., Galectin Therapeutics Inc., Galmed Pharmaceuticals Ltd., Genfit SA, Gilead, Intercept Pharmaceuticals, Inc., Inventiva Pharma SA, Madrigal Pharmaceuticals, Inc., MediciNova, Inc., NGM Biopharmaceuticals, Inc., Pliant Therapeutics, Inc. (together with Novartis), Terns Pharmaceuticals, Inc. and Viking Therapeutics, Inc.

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 effects, are more convenient, have a broader label, are marketed more effectively, including gaining exclusivity for their competing products on formularies thereby excluding our products from such formularies, are reimbursed or are less expensive than any products that we may develop. Our competitors also may obtain FDA, EMA or other marketing approval for their products more rapidly than we may obtain approval for ours (if at all), which could result in our competitors establishing a strong market position before we are able to enter the market (if ever). Even if the drug candidates we develop achieve marketing approval, they may be priced at a significant premium over competitive products, resulting in reduced competitiveness of our products.

Smaller and other early stage companies may also prove to be significant competitors. In addition, academic research departments and public and private research institutions may be conducting research on compounds that could prove to be competitive.

These third parties compete with us not only in drug candidate development, but also in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring and/or licensing technologies complementary to, or necessary for, our programs.

In addition, the biopharmaceutical industry is characterized by rapid technological change. If we fail to keep pace with technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our drug candidates obsolete, less competitive or not economical, thereby adversely affecting our business, financial condition and results of operations.

If any of our current or future drug candidates obtain regulatory approval, additional competitors could enter the market with generic versions of such products, which may result in a material decline in sales of our competing products.

Under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Amendments to the Federal Food, Drug, and Cosmetic Act (the FDCA), a pharmaceutical manufacturer may file an abbreviated new drug application (an ANDA) seeking approval of a generic version of an approved innovator product. Under the Hatch-Waxman Amendments, a manufacturer may also submit an NDA under section 505(b)(2) of the FDCA that references the FDA's prior approval of the innovator product. A 505(b)(2) NDA product may be for a new or improved version of the original innovator product. The Hatch-Waxman Amendments also provide for certain periods of regulatory exclusivity, which preclude FDA approval (or in some circumstances, FDA filing and review) of an ANDA or 505(b)(2) NDA. In addition to the benefits of regulatory exclusivity, an innovator NDA holder may have patents claiming the active ingredient, product formulation or an approved use of the drug, which would be listed with the product in the FDA publication "Approved Drug Products with Therapeutic Equivalence Evaluations," known as the Orange Book. If there are patents listed in the Orange Book for a product, a generic or 505(b)(2) applicant that seeks to market its product before expiration of the patents must include in their applications what is known as a "Paragraph IV" certification, challenging the validity or enforceability, or claiming non-infringement, of the listed patent or patents. Notice of the certification must be given to the patent owner and NDA holder and if, within 45 days of receiving notice, either the patent owner or NDA holder sues for patent infringement, approval of the ANDA or 505(b)(2) NDA is stayed for up to 30 months.

Accordingly, if any of our future drug candidates are approved, competitors could file ANDAs for generic versions of these products or 505(b)(2) NDAs that reference our products. If there are patents listed for such drug products in the Orange Book, those ANDAs and 505(b)(2) NDAs would be required to include a certification as to each listed patent indicating whether the ANDA applicant does or does not intend to challenge the patent. We cannot predict which, if any, patents in our current portfolio or patents we may obtain in the future will be eligible for listing in the Orange Book, how any generic competitor would address such patents, whether we would sue on any such patents or the outcome of any such suit.

We may not be successful in securing or maintaining proprietary patent protection for products and technologies we develop or license, despite expending a significant amount of resources that could have been focused on other areas of our business. Moreover, if any of our owned or in-licensed patents that are listed in the Orange Book are successfully challenged by way of a Paragraph IV certification and subsequent litigation, the affected product could immediately face generic competition and its sales would likely decline rapidly and materially.

Even if we are able to commercialize any drug candidates, such products may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern marketing approvals, pricing and reimbursement for new products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a drug candidate in a particular country, but then be subject to price regulations that delay our commercial launch of the drug candidate, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the drug candidate in that country, potentially to the point of unviability. Adverse pricing limitations may hinder our ability to recoup our investment in one or more drug candidates, even if our drug candidates obtain marketing approval.

Our ability to successfully commercialize any drug candidates, whether as a single agent or in combination, will also depend in part on the extent to which coverage and reimbursement for these drug candidates and related treatments is available from government authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. It is difficult to predict at this time what government authorities and third-party payors may decide with respect to coverage and reimbursement for our programs (if approved).

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities, particularly in the European Union, and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular products and requiring substitutions of generic products and/or biosimilars. Increasingly, third-party payors are scrutinizing the prices charged for drugs. We cannot be sure that coverage will be available for any drug candidate that we commercialize and, if coverage is available, the level of reimbursement. These government authorities and third-party payors are also examining the cost-effectiveness of drugs, in addition to their safety and efficacy. For example, in some countries, we, or any future collaborators, may be required to conduct a clinical trial that compares the cost-effectiveness of our drug to other therapies to obtain reimbursement or pricing approval. Reimbursement may impact the demand for, or the price of, any drug candidate for which we obtain marketing approval. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any drug candidate for which we obtain marketing approval.

Further, there may be significant delays in obtaining coverage and reimbursement for newly approved drugs, as the process is time-consuming and costly, and coverage may be more limited than the purposes for which the drug is approved by the FDA or comparable foreign regulatory authorities. Additionally, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payors in the United States, which may result in coverage and reimbursement for drug products that differ significantly from payor to payor. Moreover, eligibility for reimbursement does not imply that any drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for new drugs, if applicable, may not be sufficient to cover our costs and may not be permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower-cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and profitable payment rates from both government-funded and private payors for any approved drugs that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize drugs and our overall financial condition.

We may not be successful in our efforts to identify or discover other drug candidates and may fail to capitalize on programs or drug candidates that may present a greater commercial opportunity or for which there is a greater likelihood of success.

The success of our business depends upon our ability to identify, develop and commercialize drug candidates. If we do not successfully develop and eventually commercialize products, we will face difficulty in obtaining product revenue in future periods, resulting in significant harm to our financial position and adversely affecting our share price. Research programs to identify new drug candidates require substantial technical, financial and human resources, and we may fail to identify potential drug candidates for numerous reasons.

Additionally, because we have limited resources, we may forego or delay pursuit of opportunities with certain programs or drug candidates or for indications that later prove to have greater commercial potential. For example, we are currently focused on the development of our current drug candidates for hepatological indications. In addition, we are pursuing other drug candidates for viral diseases. However, the advancement of these drug candidates may ultimately prove to be unsuccessful or less successful than another program in our pipeline that we might have chosen to pursue on a less aggressive basis. However, due to the significant resources required for the development of our drug candidates, we must focus on specific diseases and disease pathways and decide which drug candidates to pursue and the amount of resources to allocate to each. Our near-term objective is to demonstrate favorable risk/benefit profiles through Phase 1 clinical trials of our drug candidates ALG-000184 and ALG-020572. Our estimates regarding the potential market for our drug candidates could be inaccurate and our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular drug candidates or therapeutic areas may not lead to the development of any viable commercial product and may divert resources away from better opportunities. Similarly, any potential decision to delay or terminate development of a drug candidate or program may subsequently also prove to be suboptimal and could cause us to miss valuable opportunities. Further, if we do not accurately evaluate the commercial potential for a particular drug candidate, we may relinquish valuable rights to that drug candidate through collaboration, licensing or other arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such drug candidate. Alternatively, we may allocate internal resources to a drug

candidate in a therapeutic area in which it would have been more advantageous to enter into a partnering arrangement.

If any of these events occur, we may be forced to abandon or delay our development efforts with respect to a particular drug candidate or we may fail to develop a potentially successful drug candidate or capitalize on profitable market opportunities, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may seek and fail to obtain fast track or breakthrough therapy designations from the FDA for our current or future drug candidates or priority review designation for any NDA we may submit to the FDA. Even if we are successful, these programs may not lead to a faster development or regulatory review process, and they do not guarantee we will receive approval for any drug candidate. We may also seek to obtain accelerated approval for one or more of our drug candidates but the FDA may disagree that we have met the requirements for such approval.

If a product is intended for the treatment of a serious or life-threatening condition and nonclinical or clinical data demonstrate the potential to address an unmet medical need for this condition, the product sponsor may apply for fast track designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular drug candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive fast track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may rescind the fast track designation if it believes that the designation is no longer supported by data from our clinical development program.

We may also seek breakthrough therapy designation for any drug candidate that we develop. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Like fast track designation, breakthrough therapy designation is within the discretion of the FDA. Accordingly, even if we believe a drug candidate we develop meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of breakthrough therapy designation for a drug candidate may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if a drug candidate we develop qualifies as a breakthrough therapy, the FDA may later decide that the drug no longer meets the conditions for qualification and rescind the designation.

Drugs designated as fast track products or breakthrough therapies by the FDA are also eligible for priority review of any NDA submitted for such drug candidates, which could result in FDA action on the NDA in a shorter timeframe than under standard review. In order to grant priority review designation, the FDA must find that the product, if approved, would provide a significant improvement in the safety or effectiveness of the treatment, diagnosis or prevention of a serious disease or condition. However, priority review does not guarantee approval of the NDA and may not result in a shorter overall review timeline if the FDA has significant questions or additional requests as part of the NDA review.

In addition, the FDA may grant accelerated approval to a product if the FDA determines that it 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. For example, this is currently the case with drugs for the treatment of NASH. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA requires pre-approval of promotional materials for accelerated approval products, once approved. We cannot guarantee that the FDA will conclude that any of our drug candidates has met the criteria to receive accelerated approval, which would require us to conduct additional clinical testing prior to seeking FDA approval. Even if any of our drug candidates received approval through this pathway, the product may fail required post-approval confirmatory clinical trials, and we may be required to remove the product from the market or amend the product label in a way that adversely impacts its marketing.

We may seek Orphan Drug Designation for drug candidates we develop, and we may be unsuccessful or may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for market exclusivity.

As part of our business strategy, we may seek Orphan Drug Designation for any drug candidates we develop, and we may be unsuccessful in obtaining such designation. Regulatory authorities in some jurisdictions, including the United States and the EU, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the United States, Orphan Drug Designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers.

Similarly, in the EU, the European Commission grants Orphan Drug Designation after receiving the opinion of the EMA Committee for Orphan Medicinal Products on an Orphan Drug Designation application. Orphan Drug Designation is intended to promote the development of drugs that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than 5 in 10,000 persons in Europe and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized (or the product would be a significant benefit to those affected). Additionally, designation is granted for drugs intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the drug in Europe would be sufficient to justify the necessary investment in developing the drug. In Europe, Orphan Drug Designation entitles a party to a number of incentives, such as protocol assistance and scientific advice specifically for designated orphan medicines, and potential fee reductions depending on the status of the sponsor.

Generally, if a drug with an Orphan Drug Designation subsequently receives the first marketing approval for the indication for which it has such designation, the drug is entitled to a period of marketing exclusivity, which precludes the EMA or the FDA from approving another marketing application for the same drug and indication for that time period, except in limited circumstances. The applicable period is seven years in the United States and ten years in the EU. The EU exclusivity period can be reduced to six years if a drug no longer meets the criteria for Orphan Drug Designation or if the drug is sufficiently profitable such that market exclusivity is no longer justified.

Even if we obtain orphan drug exclusivity for a drug candidate, that exclusivity may not effectively protect the drug candidate from competition because different therapies can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, a designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. Moreover, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug candidate nor gives the drug candidate any advantage in the regulatory review or approval process. While we may seek Orphan Drug Designation for applicable indications for our current and any future drug candidates, we may never receive such designations. Even if we do receive such designations, there is no guarantee that we will enjoy the benefits of those designations.

We may be required to make significant payments under our license agreements with Emory University and Luxna Biotech Co., Ltd.

We entered into a License Agreement with Emory in June 2018 (the Emory License Agreement), and a License Agreement with Luxna in December 2018 and an amendment in April 2020 (as amended, the Luxna Agreement). Under the Emory License Agreement and Luxna Agreement, we are subject to significant obligations, including milestone payments, royalty payments, and certain other agreed-to costs. For more information regarding our license agreements, please see the section titled “Business—License agreements and collaborations” of this report. If these payments become due under the terms of either the Emory University License Agreement or Luxna Agreement, we may not have sufficient funds available to meet our obligations and our development efforts may be materially harmed. Furthermore, if we are forced to raise additional funds, we may be required to delay, limit,

reduce or terminate our product development or future commercialization efforts, or grant rights to develop and market drug candidates that we would otherwise develop and market ourselves.

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

We face an inherent risk of product liability as a result of the clinical testing of drug candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any drug candidate we develop causes or is perceived to cause illness or is found to be otherwise unsuitable during clinical 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 any approved products. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for any approved product;
- 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 payments 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;
- adverse effects to our results of operations and business;
- the inability to commercialize any drug candidate; and
- a decline in our share price.

Our inability to obtain sufficient product liability insurance at an acceptable cost or at all to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop, alone or with collaboration partners.

Insurance coverage is increasingly expensive. We may not be able to maintain insurance, including product liability insurance at a reasonable cost or in an amount adequate to satisfy any liability that may arise, if at all. Our product liability insurance policy contains various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with current or future collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Affordable Care Act (the ACA) was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the U.S. pharmaceutical industry. The ACA, among other things, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries

during their coverage gap period, as a condition for the manufacturer's outpatient drugs being covered under Medicare Part D.

Since its enactment, there have been judicial, executive and Congressional challenges to certain aspects of the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, re-examining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how other healthcare reform measures of the Biden administration will impact our business.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2022, unless additional Congressional action is taken. In addition, on January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. 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 additional pricing pressure or reduced demand for any drug candidate we develop or complementary or companion diagnostics. For example, it is possible that additional governmental action will be taken to address the COVID-19 pandemic, which could impact our business in an as-yet unknown manner.

Additionally, 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 and enacted federal and state legislation and regulation 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. It is unclear whether the Biden administration will work to reverse these measures or pursue similar policy initiatives to control drug costs. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payers.

Failure to comply with current or future federal, state and foreign laws and regulations and industry standards relating to privacy and data protection laws could lead to government enforcement actions, which could include civil or criminal penalties, private litigation, and/or adverse publicity and could negatively affect our operating results and business.

We and our partners may be subject to federal, state and foreign data privacy and security laws and regulations. Failure by us or our third-party vendors, collaborators, contractors and consultants to comply with any of these laws and regulations could result in notification obligations or enforcement actions against us, which could result in, among other things, fines, claims for damages by affected individuals, damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations or prospects. These laws, rules and regulations evolve frequently and their scope may continually change, through new legislation, amendments to existing legislation and changes in enforcement, and may be inconsistent from one jurisdiction to another. The interpretation and application of consumer, health-related and data protection laws in the United States, the EU and elsewhere, are often uncertain, contradictory and in flux. As a result, implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future. As our operations and business grow, we may become subject to or affected by new or additional data protection laws and regulations and face increased scrutiny or attention from regulatory authorities.

In the United States, numerous federal and state laws and regulations, including federal health information privacy laws, state data breach notification laws, state health information privacy laws and federal and state consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), which govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA, as amended. Depending on the facts and circumstances, we could be subject to criminal penalties if we knowingly obtain, use, or disclose individually identifiable health information provided to us by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

Many states have also adopted comparable privacy and security laws and regulations, some of which may be more stringent than HIPAA. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. Further, we may also be subject to other state laws governing the privacy, processing and protection of personal information. For example, the California Consumer Privacy Act of 2018 (CCPA) went into effect on January 1, 2020. The CCPA, among other things, creates individual privacy rights for California consumers, such as the right to access and delete their personal information, opt-out of certain sales of personal information and receive detailed information about how their personal information is used. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase the frequency of data breach litigation. The CCPA may increase our compliance costs and potential liability, and many similar laws have been proposed at the federal level and in other states. Further, the California Privacy Rights Act (CPRA) recently passed in California, which significantly amends the CCPA and will impose additional data protection obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses of sensitive data. It will also create a new California data protection agency authorized to issue substantive regulations and could result in increased privacy and information security enforcement. The majority of the provisions will go into effect on January 1, 2023, and additional compliance investment and potential business process changes may be required. In the event that we are subject to or affected by HIPAA, the CCPA or other domestic privacy and data protection laws, any liability from failure to comply with the requirements of these laws could adversely affect our financial condition.

We currently operate in countries outside of the United States, including Belgium, Australia and China, where laws may in some cases be more stringent than the requirements in the United States. For example, in Europe, the General Data Protection Regulation (GDPR) went into effect in May 2018 and imposes strict requirements for the collection, storage, use, disclosure, transfer and other processing of the personal data of individuals within the European Economic Area (EEA). The GDPR applies extra-territorially under certain circumstances and imposes stringent requirements on controllers and processors of personal data, including, for example, requirements to obtain consent or other legal bases from individuals to process their personal data, provide robust disclosures to individuals, accommodate a set of individual data rights, provide data security breach notifications, limit retention of personal information and apply enhanced protections to health data and other special categories of personal data. The GDPR also applies to pseudonymized data, which is defined as “the processing of personal data in such a way that the data can no longer be attributed to a specific data subject without the use of additional information,” and imposes additional obligations when we contract with third-party processors in connection with the processing of any personal data. The GDPR provides that EU and EEA member states may make their own further laws and regulations limiting the processing of personal data, including genetic, biometric or health data, which could limit our ability to use and share personal data, could cause our costs to increase and could harm our financial condition. Failure to comply with the requirements of the GDPR could result in fines of up to €20 million or 4% of the total worldwide annual turnover of our preceding fiscal year, whichever is higher, and other administrative penalties.

Further, from January 1, 2021, we have to comply with the GDPR and also the United Kingdom GDPR (UK GDPR), which, together, with the amended Data Protection Act 2018, retains the GDPR in UK national law, the latter regime having the ability to separately fine up to the greater of £17.5 million or 4% of global turnover. The relationship between the United Kingdom and the EU in relation to certain aspects of data protection law remains unclear, and it is unclear how United Kingdom data protection laws and regulations will develop in the medium to longer term, and how data transfers to and from the United Kingdom will be regulated in the long term.The European Commission has adopted an adequacy decision in favor of the United Kingdom, enabling data transfers from EU member states to the United Kingdom without additional safeguards. However, the UK adequacy decision

will automatically expire in June 2025 unless the European Commission re-assesses and renews or extends that decision.

The GDPR further prohibits, without an appropriate legal basis, the transfer of personal data to countries outside of the EEA, such as the United States, which are not considered by the European Commission to provide an adequate level of data protection. Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States. For example, in July 2020, the Court of Justice of the EU (CJEU) limited how organizations could lawfully transfer personal data from the EU/EEA to the United States by invalidating the Privacy Shield for purposes of international transfers and imposing further restrictions on the use of standard contractual clauses (SCCs). The European Commission issued revised SCCs on June 4, 2021 to account for the decision of the CJEU and recommendations made by the European Data Protection Board. The revised SCCs must be used for relevant new data transfers from September 27, 2021; existing standard contractual clauses arrangements must be migrated to the revised clauses by December 27, 2022. The new SCCs apply only to the transfer of personal data outside of the EEA and not the UK; the UK's Information Commissioner's Office launched a public consultation on its draft revised data transfers mechanisms in August 2021. There is some uncertainty around whether the revised clauses can be used for all types of data transfers, particularly whether they can be relied on for data transfers to non-EEA entities subject to the GDPR. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the SCCs cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or 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.

Compliance with U.S. and foreign privacy and security laws, rules and regulations could require us to take on more onerous obligations in our contracts, require us to engage in costly compliance exercises, restrict our ability to collect, use and disclose data, or in some cases, impact our or our partners' ability to operate in certain jurisdictions. Each of these evolving laws can be subject to varying interpretations. Failure to comply with U.S. and foreign data protection laws and regulations could result in government investigations and enforcement actions (which could include civil or criminal penalties), fines, private litigation, and/or adverse publicity and could negatively affect our operating results and business.

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

Despite the implementation of security measures, our internal computer systems and those of our CROs and other contractors and consultants are vulnerable to damage from cyber-attacks, computer hacks, theft, viruses, malicious software, phishing, employee error, denial-of-service attacks, unauthorized access and other security breaches that could jeopardize the performance of our software and computer systems, and could expose us to financial and reputational harm. Attacks upon information technology systems are increasing in their frequency, levels of persistence, sophistication and intensity, and are being conducted by sophisticated and organized groups and individuals with a wide range of motives and expertise. As a result of the COVID-19 pandemic, we may also face increased cybersecurity risks due to our reliance on internet technology and the number of our employees who are working remotely, which may create additional opportunities for cybercriminals to exploit vulnerabilities. Furthermore, because the techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. While we have not to our knowledge experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for the manufacture of our drug candidates and to conduct clinical trials, and similar events relating to their computer 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, we could incur liability and the development and commercialization of our future drug candidates could be delayed.

Risks related to reliance on third parties

We depend on collaborations with third parties for the development of certain of our potential drug candidates, and we may depend on additional collaborations in the future for the development and commercialization of these or other potential candidates. If our collaborations are not successful, we may not be able to capitalize on the market potential of these drug candidates.

We are currently collaborating with third parties to develop certain of our potential drug candidates. For example, we are collaborating with the Rega Institute and Centre for Drug Design and Discovery at KU Leuven with respect to potential protease inhibitors for the treatment of coronaviruses, including SARS-CoV-2, with Emory University with respect to certain aspects of our small molecule CHB program and with Merck with respect to the discovery, research and development of oligonucleotides against a NASH target. In the future, we may form or seek strategic alliances, joint ventures, or collaborations, or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to drug candidates we develop.

Collaborations involving our current and future drug candidates may pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial, abandon a drug candidate, repeat or conduct new clinical trials or require a new formulation of a drug candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products (if any) or drug candidates;
- a collaborator with marketing, manufacturing and distribution rights to one or more products may not commit sufficient resources to or may otherwise not perform satisfactorily in carrying out these activities;
- collaborators may not properly prosecute, maintain, enforce or defend our intellectual property rights or may use our proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation, or other intellectual property proceedings;
- collaborators may own or co-own intellectual property covering products that result from our collaboration with them, and in such cases, we may not have the exclusive right to develop, license or commercialize such intellectual property;
- disputes may arise with respect to ownership of any intellectual property developed pursuant to our collaborations;
- disputes may arise between a collaborator or strategic partner and us that cause the delay or termination of the research, development or commercialization of the drug candidate, or that result in costly litigation or arbitration that diverts management attention and resources; and
- if a current or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed, diminished or terminated.

As a result, if we enter into additional collaboration agreements and strategic partnerships or license our intellectual property, products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations, which could delay our timelines or otherwise adversely affect our business. We also cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction. Any delays in entering into new collaborations or strategic partnership agreements related to any drug candidate we develop could delay the development and commercialization of our drug candidates, which would harm our business prospects, financial condition, and results of operations.

We may seek to establish additional collaborations, and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans.

The advancement of our drug candidates and development programs and the potential commercialization of our current and future drug candidates will require substantial additional cash to fund expenses. For some of our programs, we may decide to collaborate with other pharmaceutical and biotechnology companies with respect to development and potential commercialization. Any of these 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, divert our management's attention and disrupt our business.

We face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Whether we reach a definitive agreement for any other collaborations will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the progress of our clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject drug candidate, the costs and complexities of manufacturing and delivering such drug candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative drug candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our drug candidate. Further, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for future drug candidates because they may be deemed to be at too early of a stage of development for collaborative efforts and third parties may not view them as having the requisite potential to demonstrate safety and efficacy.

We may also be restricted under future collaboration agreements from entering into additional agreements on certain terms with potential collaborators.

In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the drug candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our drug candidates or bring them to market and generate product revenue.

If conflicts arise between us and our collaborators or strategic partners, these parties may act in a manner adverse to us and could limit our ability to implement our strategies.

If conflicts arise between our academic collaborators or strategic partners and us, the other party may act in a manner adverse to us and could limit our ability to implement our strategies. Current or future collaborators or strategic partners may develop, either alone or with others, products in related fields that are competitive with the products or potential products that are the subject of these collaborations.

Our current or future collaborators or strategic partners may preclude us from entering into collaborations with their competitors, fail to obtain timely regulatory approvals, terminate their agreements with us prematurely, or fail to devote sufficient resources to the development and commercialization of products. Furthermore, competing products, either developed by our current or future collaborators or strategic partners or to which our collaborators or strategic partners may have rights, may result in the withdrawal of partner support for our drug candidates. Any of these developments could harm our product development efforts.

We rely on third parties to conduct our ongoing and planned clinical trials and certain of our nonclinical studies for drug candidates we develop. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain marketing

approval for or commercialize the drug candidates we are developing and our business could be substantially harmed.

We do not have the ability to independently conduct certain nonclinical studies and clinical trials. We rely on medical institutions, clinical investigators, contract laboratories, and other third parties, such as CROs, to conduct or otherwise support certain nonclinical studies and clinical trials for our drug candidates, including ALG-000184 and ALG-020572, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our nonclinical studies and clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on CROs will not relieve us of our regulatory responsibilities. For any violations of laws and regulations during the conduct of our nonclinical studies or clinical trials, we could be subject to untitled and warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

We and our CROs are required to comply with regulations and requirements, including GLP and GCP, for conducting, monitoring, recording and reporting the results of nonclinical studies and clinical trials, respectively, to ensure that the data and results are scientifically credible and accurate, and that the trial patients are adequately informed of the potential risks of participating in clinical trials and their rights are protected. These regulations are enforced by the FDA, the Competent Authorities of the Member States of the EEA and comparable foreign regulatory authorities for any drugs in clinical development. The FDA enforces GLP and GCP requirements through periodic inspections of laboratories conducting studies, clinical trial sponsors, principal investigators and trial sites. If we or our CROs fail to comply with applicable GLP or GCP, the data generated in our nonclinical studies or clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional nonclinical studies before allowing us to proceed with clinical trials or additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any of our future nonclinical studies or clinical trials will comply with GLP or GCP, as applicable. In addition, our nonclinical studies and clinical trials must be conducted with drug candidates produced under cGMP regulations. Our failure or the failure of our CROs to comply with these regulations may require us to delay or repeat nonclinical studies or clinical trials, which would delay the marketing approval process and could also subject us to enforcement action. We also are required to register certain ongoing clinical trials and provide certain information, including information relating to the trial's protocol, on a government-sponsored database, ClinicalTrials.gov, within specific timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Although we intend to design the nonclinical studies and clinical trials for our drug candidates, CROs conduct all of the clinical trials and certain nonclinical studies. As a result, many important aspects of our nonclinical and clinical development, including their conduct and timing, will be outside of our direct control. Our reliance on third parties to conduct future nonclinical studies and clinical trials will also result in less direct control over the management of data developed through nonclinical studies or clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities;
- become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our nonclinical studies or clinical trials and may subject us to unexpected cost increases and/or delays that are beyond our control. If the CROs do not perform nonclinical studies or clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, the development, marketing approval and commercialization of our drug candidates may be delayed, we may not be able to obtain marketing approval and commercialize our drug candidates, or our development program may be materially and irreversibly harmed. If we are unable to rely on nonclinical or clinical data collected by our CROs, we could be required to repeat, extend the

duration of, or increase the size of any nonclinical studies or clinical trials we conduct and this could significantly delay commercialization and require significantly greater expenditures.

If any of our relationships with these third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs on commercially reasonable terms, or at all. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced, if the quality or accuracy of the nonclinical or clinical data they obtain are compromised due to the failure to adhere to our protocols, regulatory requirements or for other reasons, or if they are negatively impacted by the COVID-19 pandemic, any nonclinical studies or clinical trials such CROs are associated with may be extended, delayed or terminated, and we may not be able to obtain marketing approval for or successfully commercialize our drug candidates. As a result, we believe that our financial results and the commercial prospects for our drug candidates in the subject indication would be harmed, our costs would increase and our ability to generate revenue would be delayed.

We rely on third parties to manufacture nonclinical and clinical drug supplies, and we intend to rely on third parties to produce commercial supplies of any approved product which increases the risk that we will not have sufficient quantities of such drug candidates or products or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not own or operate manufacturing facilities for the production of nonclinical, clinical or commercial supplies of the drug candidates that we are developing or evaluating in our development programs. We have limited personnel with experience in drug manufacturing and lack the resources and the capabilities to manufacture any of our drug candidates on a nonclinical, clinical or commercial scale. We rely on third parties for supply of our nonclinical and clinical drug supplies (including key starting and intermediate materials), and our strategy is to outsource all manufacturing of our drug candidates and products to third parties. A disruption or termination in the supply of nonclinical or clinical drug supplies due to our reliance on third parties and/or a disruption in the supply chain generally could delay, prevent or impair our development or commercialization efforts.

In order to conduct clinical trials of drug candidates, we will need to have them manufactured in potentially large quantities. Our third-party manufacturers may be unable to successfully increase the manufacturing capacity for any of our clinical drug supplies (including key starting and intermediate materials) in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities and at any other time. For example, ongoing data on the stability of our drug candidates may shorten the expiry of our drug candidates and lead to clinical trial material supply shortages, and potentially clinical trial delays. If these third-party manufacturers are unable to successfully scale up the manufacture of our drug candidates in sufficient quality and quantity, the development, testing and clinical trials of that drug candidate may be delayed or infeasible, and regulatory approval or commercial launch of that drug candidate may be delayed or not obtained, which could significantly harm our business.

Our use of new third-party manufacturers increases the risk of delays in production or insufficient supplies of our drug candidates (and the key starting and intermediate materials for such drug candidates) as we transfer our manufacturing technology to these manufacturers and as they gain experience manufacturing our drug candidates (and the key starting and intermediate materials for such drug candidates).

Even after a third-party manufacturer has gained significant experience in manufacturing our drug candidates (or the key starting and intermediate materials for such drug candidates) or even if we believe we have succeeded in optimizing the manufacturing process, there can be no assurance that such manufacturer will produce sufficient quantities of our drug candidates (or the key starting and intermediate materials for such drug candidates) in a timely manner or continuously over time, or at all.

We may be delayed if we need to change the manufacturing process used by a third party. Further, if we change an approved manufacturing process, then we may be delayed if the FDA or a comparable foreign authority needs to review the new manufacturing process before it may be used.

We do not currently have any agreements with third-party manufacturers for long-term commercial supply. In the future, we may be unable to enter into agreements with third-party manufacturers for commercial supplies of any drug candidate that we develop, or may be unable to do so on acceptable terms. Even if we are able to establish and maintain arrangements with third-party manufacturers, reliance on third-party manufacturers entails risks, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party;

- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and
- the possible termination or non-renewal of the agreement by the third party at a time that is costly or inconvenient for us.

Third-party manufacturers may not be able to comply with cGMP requirements or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable requirements could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of drug candidates or products, operating restrictions and/or criminal prosecutions, any of which could significantly and adversely affect supplies of our drug candidates.

Our future drug candidates and any products that we may develop may compete with other drug candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP requirements and that might be capable of manufacturing for us.

If the third parties that we engage to supply any materials or manufacture product for our nonclinical studies and clinical trials should cease to continue to do so for any reason, we likely would experience delays in advancing these studies and trials while we identify and qualify replacement suppliers or manufacturers and we may be unable to obtain replacement supplies on terms that are favorable to us or at all. In addition, if we are not able to obtain adequate supplies of our drug candidates or the substances used to manufacture them, it will be more difficult for us to develop our drug candidates and compete effectively.

Some of our third-party manufacturers which we use for the supply of materials for drug candidates or other materials necessary to manufacture product to conduct clinical trials are located in countries affected by COVID-19, and should they experience disruptions, such as temporary closures or suspension of services, we would likely experience delays in advancing our clinical development.

Our current and anticipated future dependence upon others for the manufacture of our drug candidates (or the key starting and intermediate materials for such drug candidates) may adversely affect our future profit margins and our ability to develop drug candidates and commercialize any products that receive marketing approval on a timely and competitive basis.

Our future relationships with customers and third-party payors in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, transparency, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any drug candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act (the FCA), which may constrain the business or financial arrangements and relationships through which we sell, market and distribute any products for which we obtain marketing approval. In addition, we may be subject to transparency laws by the U.S. federal and state governments and by governments in foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under the Medicare and Medicaid programs or other federal healthcare programs. A person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other;
- the federal civil and criminal false claims laws, including the FCA, which prohibit any person or entity from, among other things, knowingly presenting, or causing to be presented, a false, fictitious or

fraudulent claim for payment to, or approval by, the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. In addition, 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 FCA;

- HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity can be found guilty of violating HIPAA without actual knowledge of the statutes or specific intent to violate them;
- the Physician Payments Sunshine Act, created under the ACA, and its implementing regulations, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain other healthcare professionals (including physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiology assistants and certified nurse-midwives) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- analogous state laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and healthcare laws in the EU and other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available under such laws, it is possible that some of our business activities could be subject to challenge under one or more of such laws. The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Ensuring that our business arrangements with third parties comply with applicable healthcare laws, as well as responding to investigations by government authorities, can be time- and resource-consuming and can divert management's attention from the business.

If our operations are found to be in violation of any of the laws described above or any other government regulations that apply to us, we may be subject to penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, individual imprisonment, possible exclusion from participation in federal- and state-funded healthcare programs, contractual damages and the curtailment or restricting of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, any of which could harm our ability to operate our business and our financial results. Further, if the physicians or other providers or entities with whom we expect to do business are found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. In addition, the

approval and commercialization of any drug candidate we develop outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Risks related to intellectual property

If we and our collaborators are unable to obtain, maintain, protect and enforce sufficient patent and other intellectual property protection for our drug candidates and technology, our competitors could develop and commercialize products and technology similar or identical to ours, and we may not be able to compete effectively in our market or successfully commercialize any drug candidates we may develop.

Our success depends in significant part on our ability and the ability of our current or future collaborators and licensors to obtain, maintain, enforce and defend patents and other intellectual property rights with respect to our drug candidates and technology and to operate our business without infringing, misappropriating, or otherwise violating the intellectual property rights of others. If we and our current or future collaborators and licensors are unable to obtain and maintain sufficient intellectual property protection for our drug candidates or other drug candidates that we may identify, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors and other third parties could develop and commercialize drug candidates similar or identical to ours, and our ability to successfully commercialize our drug candidates and other drug candidates that we may pursue may be impaired. While we own some issued or allowed patents with respect to our programs, including our CHB and NASH programs, we do not own or in-license any issued patents with claims that specifically recite our ALG-020572 or ALG-125755 drug candidates. We can provide no assurance that any of our other current or future patent applications will result in issued patents or that any issued patents will provide us with any competitive advantage. We cannot be certain that there is no invalidating prior art of which we and the patent examiner are unaware or that our interpretation of the relevance of prior art is correct. If a patent or patent application is determined to have an earlier priority date, it may prevent our patent applications from issuing at all or issuing in a form that provides any competitive advantage for our drug candidates. Failure to obtain additional issued patents could have a material adverse effect on our ability to develop and commercialize our drug candidates. Even if our patent applications do issue as patents, third parties may be able to challenge the validity and enforceability of our patents on a variety of grounds, including that such third party's patents and patent applications have an earlier priority date, and if such challenges are successful, we may be required to obtain one or more licenses from such third parties, or be prohibited from commercializing our drug candidates.

We seek to protect our proprietary positions by, among other things, filing patent applications in the United States and abroad related to our current drug candidates and other drug candidates that we may identify. Obtaining, maintaining, defending and enforcing pharmaceutical patents is costly, time consuming and complex, and we may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, under certain of our license or collaboration agreements, we may not have the right to control the preparation, filing, prosecution and maintenance of patent applications, or to maintain the rights to patents licensed to or from third parties.

We currently are the assignee of a number of U.S. provisional patent applications. U.S. provisional patent applications are not eligible to become issued patents until, among other things, we file a non-provisional patent application within 12 months of filing of one or more of our related provisional patent applications. With regard to such U.S. provisional patent applications, if we do not timely file any non-provisional patent applications, we may lose our priority dates with respect to our provisional patent applications and any patent protection on the inventions disclosed in our provisional patent applications. Further, in the event that we do timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any such patent applications will result in the issuance of patents or if such issued patents will provide us with any competitive advantage.

Although we enter into confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, collaborators, CROs, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach these agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. Further, we may not be aware of all third-party intellectual property rights potentially relating to our drug candidates. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or, in some cases, not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions

claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions.

The patent position of pharmaceutical companies generally is highly uncertain, involves complex legal, technological and factual questions and has, in recent years, been the subject of much debate and litigation throughout the world. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States, or vice versa. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. The subject matter claimed in a patent application can be significantly reduced or eliminated before the patent issues, if at all, and its scope can be reinterpreted or narrowed after issuance. Therefore, our pending and future patent applications may not result in patents being issued in relevant jurisdictions that protect our drug candidates, in whole or in part, or that effectively prevent others from commercializing competitive drug candidates, and even if our patent applications issue as patents in relevant jurisdictions, they may not issue in a form that will provide us with any meaningful protection for our drug candidates or technology, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Additionally, our competitors may be able to circumvent our patents by challenging their validity or by developing similar or alternative drug candidates or technologies in a non-infringing manner.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents may be challenged in the courts or patent offices in the United States and abroad. We may be subject to a third-party preissuance submission of prior art to the United States Patent and Trademark Office (the USPTO), or become involved in opposition, derivation, revocation, reexamination, *inter partes* review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others, or other proceedings in the USPTO or applicable foreign offices that challenge priority of invention or other features of patentability. An adverse determination in any such submission, proceeding or litigation could result in loss of exclusivity or ability to sell our products free from infringing the patents of third parties, patent claims being narrowed, invalidated or held unenforceable, in whole or in part, and limitation of the scope or duration of the patents directed to our drug candidates, all of which could limit our ability to stop others from using or commercializing similar or identical drug candidates or technology to compete directly with us, without payment to us, or result in our inability to manufacture or commercialize drug candidates or approved products (if any) without infringing third-party patent rights. In addition, if the breadth or strength of the claims of our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future drug candidates, or could have a material adverse effect on our ability to raise funds necessary to continue our research programs or clinical trials. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us.

In addition, given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products or technology similar or identical to ours for a meaningful amount of time, or at all. Moreover, some of our licensed patents and owned or licensed patent applications may in the future be co-owned with third parties. If we are unable to obtain exclusive licenses to any such co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners in order to enforce such patents against third parties, and such cooperation may not be provided to us. Any of the foregoing could harm our competitive position, business, financial condition, results of operations and prospects.

We have entered into licensing and collaboration agreements with third parties. If we fail to comply with our obligations in the agreements under which we license intellectual property rights to or from third parties, or these agreements are terminated, or we otherwise experience disruptions to our business relationships with our licensors or licensees, our competitive position, business, financial condition, results of operations and prospects could be harmed.

In addition to patent and other intellectual property rights we own or co-own, we have licensed, and may in the future license, patent and other intellectual property rights to and from other parties. In particular, we have in-licensed significant intellectual property rights from Emory and Luxna. Licenses may not provide us with exclusive rights to use the applicable intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our drug candidates, products (if approved) and technology in the

future. As a result, we may not be able to prevent competitors from developing and commercializing competitive products or technologies.

In addition, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications or to maintain, defend and enforce the patents that we license to or from third parties, and we may have to rely on our partners to fulfill these responsibilities. For example, under the Luxna Agreement, we obtained a license from Luxna under patents relevant to certain aspects of our HBV programs as well as to various potential therapies, which we are pursuing to address SARS-CoV-2. Although we have review and comment rights regarding prosecution of patents that we license under the Luxna Agreement, Luxna retains ultimate decision-making control with respect to the prosecution of these patents. Additionally, under the Emory License Agreement, we obtained a license from Emory University under patents relevant to certain aspects of our small molecule CHB program. Although we direct prosecution of patents licensed under the Emory License Agreement, we are obligated to consult with Emory University with respect to prosecution of these patents and Emory and its counsel are responsible for making all filings related to such prosecution. Similarly, although we will control the prosecution of jointly developed patents resulting from our collaboration with the Rega Institute for Medical Research and the Centre for Drug Design and Discovery under the KU Leuven Agreement, we are obligated to consult with such parties with respect to prosecution of these patents. Consequently, any such licensed patents and applications may not be prepared, filed, prosecuted, maintained, enforced, and defended in a manner consistent with the best interests of our business. If our current or future licensors, licensees or collaborators fail to prepare, file, prosecute, maintain, enforce, and defend licensed patents and other intellectual property rights, such rights may be reduced or eliminated, and our right to develop and commercialize any of our drug candidates or technology that are the subject of such licensed rights could be adversely affected. In addition, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights.

If we fail to comply with our obligations, including the obligation to make various milestone payments and royalty payments, under any of the agreements under which we license intellectual property rights from third parties, such as the Emory License Agreement or Luxna Agreement, the licensor may have the right to terminate the license. Under some of our in-license agreements, as a sublicensee, we may be obligated to comply with applicable requirements, limitations or obligations of our sublicensors to other third parties. For example, the Luxna Agreement includes rights that Luxna in-licensed from Osaka University (Osaka), which are in turn sublicensed to us. Prior to granting such rights to Luxna, Osaka granted certain rights to third parties and therefore the rights we in-license from Luxna are subject to such third-party rights. Although we understand that these rights granted to such third parties are for uses outside the scope of our business, license agreements are complex, subject to multiple interpretations and disputes may arise regarding scope of such licensed rights. Further, under the Luxna Agreement and other in-licenses under which we sublicense certain rights, we rely on Luxna and our other sublicensors to comply with their obligations under their upstream license agreements, where we may have no relationship with the original licensor of such rights. If our sublicensors fail to comply with their obligations under their upstream license agreements, and the upstream license agreements are consequently terminated, such termination may result in the termination of our sublicenses.

If any of our license agreements are terminated, the underlying licensed patents fail to provide the intended exclusivity or we otherwise experience disruptions to our business relationships with our licensors, we could lose intellectual property rights that are important to our business or be prevented from developing and commercializing our drug candidates, and competitors could have the freedom to seek regulatory approval of, and to market, products identical to ours. Termination of these agreements or reduction or elimination of our rights under these agreements may also result in our having to negotiate new or reinstated agreements with less favorable terms, cause us to lose our rights under these agreements, including our rights to important intellectual property or technology, or impede, delay or prohibit the further development or commercialization of one or more drug candidates that rely on such agreements. It is possible that we may be unable to obtain any additional licenses at a reasonable cost or on reasonable terms, if at all. In that event, we may be required to expend significant time and resources to redesign our drug candidates or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis.

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

Licensing of intellectual property is of critical importance to our business and involves complex legal, business and scientific issues and certain provisions in intellectual property license agreements may be susceptible to multiple interpretations. Disputes may arise between us and our licensing partners regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which technology and processes of one party infringe intellectual property of the other party that are not subject to the licensing agreement;
- rights to sublicense patent and other rights to third parties;
- any diligence obligations with respect to the use of the licensed technology in relation to development and commercialization of our drug candidates, and what activities satisfy those diligence obligations;
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property;
- rights to transfer or assign the license; and
- the effects of termination.

The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could harm our business, financial condition, results of operations and prospects. If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms or at all, we may be unable to successfully develop and commercialize the affected drug candidates. Moreover, any dispute or disagreement with our licensing partners may result in the delay or termination of the research, development or commercialization of our drug candidates or any future drug candidates, and may result in costly litigation or arbitration that diverts management attention and resources away from our day-to-day activities, which may adversely affect our business, financial conditions, results of operations and prospects.

Furthermore, current and future collaborators or strategic partners may develop, either alone or with others, products in related fields that are competitive with the products or potential products that are the subject of these collaborations. Competing products, either developed by our collaborators or strategic partners or to which the collaborators or strategic partners have rights, may result in the withdrawal of partner support for our drug candidates. Any of these developments could harm our product development efforts.

In addition, if our licensors fail to abide by the terms of the license, if the licensors fail to prevent infringement by third parties or if the licensed patents or other rights are found to be invalid or unenforceable, our business, competitive position, financial condition, results of operations and prospects could be materially harmed. For more information regarding our license agreements, see the section titled “Business—License agreements and collaborations” of this report.

If we are unable to obtain licenses from third parties on commercially reasonable terms or at all, our business could be harmed.

It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our products (if approved), in which case we would be required to obtain a license from these third parties. The licensing of third-party intellectual property rights is a competitive area, and more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. More established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to license such technology, or if we are forced to license such technology on unfavorable terms, our business could be materially harmed. If we are unable to obtain a necessary license, we may be unable to develop or commercialize the affected drug candidates, which could materially harm our business, and the third parties owning such intellectual property rights could seek either an injunction prohibiting our sales, or, with respect to our sales, an obligation on our part to pay royalties and/or other forms of compensation. Even if we are able to obtain a license, it may be or become non-exclusive, thereby giving our competitors access to the same technologies licensed to us. For example, under the Emory License Agreement we currently have an exclusive license with respect to certain patents and a non-exclusive license with respect to certain of Emory's specified know-how. Beginning in June 2022, the license to such patents will become non-exclusive with respect to all fields except for the treatment and prevention of HBV. For more information regarding our license agreements, see the section titled "Business—License agreements and collaborations" of this report. Any of the foregoing could harm our competitive position, business, financial condition, results of operations and prospects.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might subject us to infringement claims or adversely affect our ability to develop and market our drug candidates.

We cannot guarantee that any of our or our licensors' patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending patent application in the United States and abroad that is relevant to or necessary for the commercialization of our drug candidates in any jurisdiction. For example, U.S. patent applications filed before November 29, 2000 and certain U.S. patent applications filed after that date that will not be filed outside the United States remain confidential until patents issue. As mentioned above, patent applications in the United States and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our drug candidates could have been filed by third parties without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our drug candidates or the use of our drug candidates. The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our drug candidates. We may incorrectly determine that our drug candidates are not covered by a third-party patent or may incorrectly predict whether a third party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our drug candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our drug candidates.

We are aware of certain third-party issued patents and pending patent applications, including those of our competitors, that, if issued with their current claim scope, may be construed to cover our drug candidates, including ALG-055009 and ALG-125755. In the event that any of these patents were asserted against us, we believe that we would have defenses against any such action, including that such patents are not valid. However, if any such patents were to be asserted against us and our defenses to such assertion were unsuccessful and alternative technology was not available or technologically or commercially practical, unless we obtain a license to such patents, we could be liable for damages, which could be significant and include treble damages and attorneys' fees if we are found to willfully infringe such patents, and we could be precluded from commercializing any drug candidates that were ultimately held to infringe such patents.

In addition, if we fail to identify and correctly interpret relevant patents, we may be subject to infringement claims. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay damages, which may be significant, we may be temporarily or permanently prohibited from commercializing any of our drug candidates that are held to be infringing. We might, if possible, also be forced to redesign drug candidates so that they no longer infringe the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business and could adversely affect our business, financial condition, results of operations and prospects.

Patent terms may be inadequate to establish our competitive position on our drug candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our drug candidates are obtained, once the patent life has expired for a drug candidate, we may be open to competition from competitive medications, including generic versions. Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents directed towards such drug candidates might expire before or shortly after such drug candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing drug candidates similar or identical to ours for a meaningful amount of time, or at all.

Depending upon the timing, duration and conditions of any FDA marketing approval of our drug candidates, one or more of our owned or licensed U.S. patents may be eligible for limited patent term extension under the Hatch-Waxman Act, and similar legislation in the EU and certain other countries. The Hatch-Waxman Act permits a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. However, we may not receive an extension if we fail to exercise due diligence during the testing phase or regulatory review process, fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. Only one patent per approved product can be extended, the extension cannot extend the total patent term beyond 14 years from approval and only those claims for the approved drug, a method for using it or a method for manufacturing it may be extended. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for the applicable drug candidate will be shortened and our competitors may obtain approval to market competing products sooner. As a result, our revenue from applicable products could be reduced. Further, if this occurs, our competitors may take advantage of our investment in development and trials by referencing our clinical and nonclinical data and launch their product earlier than might otherwise be the case, and our competitive position, business, financial condition, results of operations and prospects could be materially harmed.

Further, there are detailed rules and requirements regarding the patents that may be submitted to the FDA for listing in the Orange Book. We may be unable to obtain patents covering our drug candidates that contain one or more claims that satisfy the requirements for listing in the Orange Book. Even if we submit a patent for listing in the Orange Book, the FDA may decline to list the patent, or a manufacturer of generic drugs may challenge the listing. If one of our drug candidates is approved and a patent covering that drug candidate is not listed in the Orange Book, a manufacturer of generic drugs would not have to provide advance notice to us of any abbreviated new drug application filed with the FDA to obtain permission to sell a generic version of such drug candidate. Any of the foregoing could harm our competitive position, business, financial condition, results of operations and prospects.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, maintaining, defending and enforcing patents on our drug candidates in all countries throughout the world would be prohibitively expensive, and consequently our intellectual property rights in some countries outside the United States may 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 patents to develop their own products and may export otherwise infringing products to territories where we have patents, but enforcement rights are not as strong as those in the United States. These products may compete with our drug candidates 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 some countries do not favor the enforcement or protection of patents, trade secrets and other intellectual property, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property 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.

Many foreign countries, including some EU countries, India, Japan and China, have compulsory licensing laws under which a patent owner may be compelled under specified circumstances to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In those countries, we may have limited remedies if patents are infringed or if we are compelled to grant a license to a third party, which could materially diminish the value of the applicable patents and limit our potential revenue opportunities. 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, which could adversely affect our business, financial condition, results of operations and prospects.

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

Obtaining and enforcing patents in the pharmaceutical industry is inherently uncertain, due in part to ongoing changes in the patent laws. For example, in the United States, depending on decisions by Congress, the federal courts, and the USPTO, the laws and regulations governing patents, and interpretation thereof, could change in unpredictable ways that could weaken our and our collaborators' or licensors' ability to obtain new patents or to enforce existing or future patents. For example, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Therefore, there is increased uncertainty with regard to our and our collaborators' or licensors' ability to obtain patents in the future, as well as uncertainty with respect to the value of patents once obtained.

Patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our and our collaborators' or licensors' patent applications and the enforcement or defense of our or our collaborators' or licensors' issued patents. For example, assuming that other requirements for patentability are met, prior to March 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. After March 2013, under the Leahy-Smith America Invents Act (the Leahy-Smith Act), enacted in September 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. The Leahy-Smith Act also includes a number of significant changes that affect the way patent applications are prosecuted and may also affect patent litigation. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to challenge the validity of a patent by USPTO-administered post-grant proceedings, including post-grant review, *inter partes* review and derivation proceedings. The USPTO has developed new regulations and procedures to govern administration of the

Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, particularly the first inventor-to-file provisions. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our or our licensors' patent applications and the enforcement or defense of our or our licensors' issued patents. Similarly, statutory or judicial changes to the patent laws of other countries may increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. All of the foregoing could harm our business, financial condition, results of operations and prospects.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time-consuming and unsuccessful, and issued patents directed towards our technology and drug candidates could be found invalid or unenforceable if challenged.

Competitors and other third parties may infringe or otherwise violate our issued patents or other intellectual property or the patents or other intellectual property of our licensors and collaborators. In addition, our patents or the patents of our licensors and collaborators may become involved in inventorship or priority disputes. To counter infringement or other unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. Significantly, our pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. Our ability to enforce patent rights also depends on our ability to detect infringement. It may be difficult to detect infringers who do not advertise the components or methods that are used in connection with their products and services. Moreover, it may be difficult or impossible to obtain evidence of infringement in a competitor's or potential competitor's product or service. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents or that our patents are invalid or unenforceable. In a patent infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, in whole or in part, construe the patent's claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology. An adverse result in any litigation proceeding could put one or more of our owned or licensed patents at risk of being invalidated, held unenforceable or interpreted narrowly. We may find it impractical or undesirable to enforce our intellectual property against some third parties.

If we were to initiate legal proceedings against a third party to enforce a patent directed to our drug candidates, or one of our future drug candidates, 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, including lack of novelty, obviousness, non-enablement or insufficient written description. 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. Third parties may also raise similar claims before the USPTO or an equivalent foreign body, even outside the context of litigation. Potential proceedings include reexamination, post-grant review, inter partes review, interference proceedings, derivation proceedings and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in the revocation of, cancellation of, or amendment to our patents in such a way that they no longer cover our technology or any drug candidates that we may develop. The outcome following legal assertions of invalidity and unenforceability 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 rights directed towards the applicable drug candidates or technology related to the patent rendered invalid or unenforceable. Such a loss of patent rights would materially harm our business, financial condition, results of operations and prospects.

Interference proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome 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 materially harmed if the prevailing party does not offer us a license on commercially reasonable terms.

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.

Some of our competitors are larger than we are and have substantially greater resources. They are, therefore, likely to be able to sustain the costs of complex patent litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing, misappropriating or otherwise violating our intellectual property. Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims could result in substantial costs and diversion of management resources, which could harm our business. In addition, the uncertainties associated with litigation could compromise our ability to raise the funds necessary to continue our clinical trials, continue our internal research programs, or in-license needed technology or other drug candidates. There could also be public announcements of the results of the hearing, motions, or other interim proceedings or developments. If securities analysts or investors perceive those results to be negative, it could cause the price of shares of our common stock to decline. Any of the foregoing events could harm our business, financial condition, results of operation and prospects.

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

Our commercial success depends upon our ability to develop, manufacture, market and sell our drug candidates and use our proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property and other proprietary rights of third parties. There is considerable intellectual property litigation in the pharmaceutical industry. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our drug candidates and their manufacture and our other technology, including reexamination, interference, post-grant review, inter partes review or derivation proceedings before the USPTO or an equivalent foreign body. Numerous U.S.- and foreign-issued patents and pending patent applications owned by third parties exist in the fields in which we are developing our drug candidates. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of their merit.

Even if we believe third-party intellectual property claims are without merit, there is no assurance that a court would find in our favor on questions of claim scope, infringement, validity, enforceability or priority. A court of competent jurisdiction could hold that third-party patents asserted against us are valid, enforceable and infringed, which could materially and adversely affect our ability to commercialize any drug candidates we may develop and any other drug candidates or technologies covered by the asserted third-party patents. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. If we are found to infringe, misappropriate or otherwise violate a third party's intellectual property rights, and we are unsuccessful in demonstrating that such rights are invalid or unenforceable, we could be required to obtain a license from such a third party in order to continue developing and marketing our products and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be or may become non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. A finding of infringement could prevent us from commercializing our drug candidates or force us to cease some of our business operations. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, pay royalties and other fees, redesign our infringing drug candidate or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business. Any of the foregoing events would harm our business, financial condition, results of operations and prospects.

We may be subject to claims by third parties asserting that we or our employees have infringed, misappropriated or otherwise violated their intellectual property rights, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at other biotechnology or pharmaceutical companies. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these individuals have used or

disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's former employer. We may also be subject to claims that patents and applications we have filed to protect inventions made on our behalf by our employees, consultants and advisors, even those related to one or more of our drug candidates, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs, delay development of our drug candidates and be a distraction to management. Any of the foregoing events would harm our business, financial condition, results of operations and prospects.

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in our owned or in-licensed patents, trade secrets, or other intellectual property as an inventor or co-inventor. For example, we or our licensors or collaborators may have inventorship disputes arising from conflicting obligations of employees, consultants or others who are involved in developing our drug candidates. While it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and litigation may be necessary to defend against these and other claims challenging inventorship or our or our licensors' or collaborators' ownership of our owned or in-licensed patents, trade secrets or other intellectual property. If we or our licensors or collaborators fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our drug candidates. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection, if any, afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make products that are similar to any drug candidates we may develop or utilize similar technology but that are not covered by the claims of the patents that we license or may own in the future;
- we, or our current or future licensors or collaborators might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or may own in the future;
- we, or our current or future licensors or collaborators might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our pending owned or licensed patent applications or those that we may own or license in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;

- the intellectual property rights of others may harm our business; and
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent directed to such intellectual property.

Should any of these events occur, they could harm our business, financial condition, results of operations and prospects.

Risks related to employee matters, managing our growth and other risks related to our business

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

We are highly dependent on our management, scientific and medical personnel, including our Chief Executive Officer, Dr. Blatt, and our President, Dr. Beigelman. The loss of the services of any of them may adversely impact the achievement of our objectives. Any of our executive officers could leave our employment at any time, as all of our employees are "at-will" employees. We currently do not have "key person" insurance on any of our employees.

Recruiting and retaining qualified employees, consultants and advisors for our business, including scientific and technical personnel, also will be critical to our success. Competition for skilled personnel is intense and the turnover rate can be high. We may not be able to attract and retain personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies and academic institutions for skilled individuals. In addition, failure to succeed in nonclinical studies, clinical trials or applications for marketing approval may make it more challenging to recruit and retain qualified personnel. The inability to recruit, or the loss of services of certain executives, significant employees, consultants or advisors, may impede the progress of our research, development and commercialization objectives and have a material adverse effect on our business, financial condition, results of operations and prospects.

We currently have no sales organization. If we are unable to establish sales capabilities on our own or through third parties, we may not be able to market and sell any products effectively, if approved, or generate product revenue.

We currently do not have a marketing or sales organization. In order to commercialize any product, if approved, in the United States and foreign jurisdictions, we must build our marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. In advance of any of our drug candidates receiving regulatory approval, we expect to establish a sales organization with technical expertise and supporting distribution capabilities to commercialize each such drug candidate, which will be expensive and time-consuming. We have no prior experience in the marketing, sale and distribution of pharmaceutical products, and there are significant risks involved in building and managing a sales organization, including our ability to hire, retain, and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of our drug candidates. We may choose to collaborate with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. If we are unable to enter into such arrangements on acceptable terms or at all, we may not be able to successfully commercialize our drug candidates. If we are not successful in commercializing products, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses.

We will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of December 31, 2021, we had 93 full-time employees, including 75 employees engaged in research and development. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;

- managing our internal development efforts effectively, including the clinical and FDA review process for our current drug candidates and any other drug candidate we develop, while complying with our contractual obligations to contractors and other third parties; and
- expanding and enhancing our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to advance development of and, if approved, commercialize our current drug candidates and any other drug candidate we develop will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including substantially all aspects of marketing, clinical management, and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed or at a reasonable cost, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our nonclinical studies and clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of any current or future drug candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may experience delays or may not be able to successfully implement the tasks necessary to further develop and commercialize our current drug candidates and any future drug candidates we develop and, accordingly, may not achieve our research, development and commercialization goals.

If we 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.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste products. We cannot eliminate the risk of contamination or injury from these materials, and we generally contract with third parties for the disposal of these materials and wastes. In the event of contamination or injury resulting from our use or third-party disposal of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

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, and as such we would have to pay the full amount of any resultant liability out of pocket, which could significantly impair our financial condition.

We or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our corporate headquarters and other facilities are located in the San Francisco Bay Area, which in the past has experienced both severe earthquakes and wildfires. We are also conducting our initial clinical trials for ALG-000184 and ALG-020572 in New Zealand, an area also known for earthquakes. We do not carry earthquake insurance, and as such we would have to pay the full amount of any resultant liability out of pocket, which could significantly impair our financial condition. In addition, earthquakes, wildfires or other natural disasters could severely disrupt our operations. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our enterprise financial systems or manufacturing resource planning and enterprise quality systems, that delayed our clinical trials,

or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, particularly when taken together with our lack of earthquake insurance, could have a material adverse effect on our business, results of operations, financial condition and prospects. Furthermore, integral parties in our supply chain are similarly vulnerable to natural disasters or other sudden, unforeseen and severe adverse events. If such an event were to affect our supply chain, it could have a material adverse effect on our business.

Our employees, independent contractors, vendors, principal investigators, CROs, consultants and collaborators may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk that our employees, independent contractors, vendors, principal investigators, CROs, consultants and collaborators may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate the regulations of the FDA and comparable foreign regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; healthcare fraud and abuse laws and regulations in the United States and abroad; or laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our nonclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, 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.

Risks related to our common stock

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for investors.

Our stock price is likely to be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The ongoing COVID-19 pandemic, for example, has negatively affected the stock market and investor sentiment and has resulted in significant volatility. The market price for our common stock may be influenced by many factors, including:

- the success of our and competitive products or technologies;
- results of clinical trials and nonclinical studies or those of our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to our drug candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license drug candidates;

- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, political, and market conditions and overall fluctuations in the financial markets in the United States and abroad;
- the COVID-19 pandemic; and
- investors' general perception of us and our business.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from selling their shares at or above the price paid for the shares and may otherwise negatively affect the liquidity of our common stock.

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

An active trading market for our common stock may not be sustained.

Prior to our initial public offering in October 2020, there was no public market for shares of our common stock and an active trading market for our shares may not be sustained. In the absence of an active trading market for our common stock, investors may not be able to sell their common stock at a price or at the time that they would like to sell.

An inactive market may also impair our ability to raise capital by selling shares and may impair our ability to acquire other drug candidates, businesses, or technologies using our shares as consideration.

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

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, investors are not likely to receive any dividends on common stock owned by them for the foreseeable future. Since we do not intend to pay dividends, an investor's ability to receive a return on its investment will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which our holders purchased it.

We are an emerging growth company and a smaller reporting company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies and smaller reporting companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, certain disclosure obligations regarding executive compensation and the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year of our IPO, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of our IPO, (b) in

which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700.0 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use the extended transition period for any other new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations.

Even after we no longer qualify as an emerging growth company, we may continue to qualify as a smaller reporting company, which would allow us to rely on certain reduced disclosure requirements, such as an exemption from providing selected financial data and executive compensation information. We are also exempt from the requirement to obtain an external audit on the effectiveness of internal control over financial reporting provided in Section 404(b) of the Sarbanes-Oxley Act. These exemptions and reduced disclosures due to our status as a smaller reporting company mean that our auditors do not review our internal controls over financial reporting and may make it harder for investors to analyze our results of operations and financial prospects.

We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions as an emerging growth company and a smaller reporting company. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Our executive officers, directors and their affiliates have significant influence over our company, which will limit an investor's ability to influence corporate matters and could delay or prevent a change in corporate control.

As of December 31, 2021, our executive officers, directors and their affiliates beneficially own, in the aggregate, approximately 43.2% of our outstanding common stock (assuming all shares of non-voting common stock are converted into voting common stock in accordance with the terms of our amended and restated certificate of incorporation). As a result, these stockholders, if they act together, will be able to influence our management and affairs and the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation or sale of all or substantially all of our assets. In addition, this concentration of ownership might adversely affect the market price of our common stock by:

- delaying, deferring or preventing a change of control of us;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

The dual class structure of our common stock may limit the ability to influence corporate matters and may limit the visibility with respect to certain transactions.

The dual class structure of our common stock may limit an investor's ability to influence corporate matters. Holders of our common stock are entitled to one vote per share, while holders of our non-voting common stock are not entitled to any votes. Nonetheless, each share of our non-voting common stock may be converted at any time into one share of our common stock at the option of its holder by providing written notice to us, subject to the limitations provided for in our amended and restated certificate of incorporation. Consequently, the exercise by holders of our non-voting common stock of their option to make this conversion will have the effect of increasing the relative voting power of such holders, and correspondingly decreasing the voting power of the holders of our common stock, which may limit an investor's ability to influence corporate matters. As of December 31, 2021, we had 3,092,338 shares of non-voting common stock outstanding. Additionally, stockholders who hold, in the aggregate, more than 10% of our common stock and non-voting common stock, but 10% or less of our common stock, and are not otherwise a company insider, may not be required to report changes in their ownership due to transactions in our non-voting common stock pursuant to Section 16(a) of the Exchange Act of 1934, as amended

(the Exchange Act), and may not be subject to the short-swing profit provisions of Section 16(b) of the Exchange Act.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline.

As of December 31, 2021 approximately 9,133,012 shares of common stock that are either subject to outstanding options or reserved for future issuance under our equity incentive plans are eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

In addition, the holders of approximately 42.7 million of our total common stock and non-voting common stock are entitled to rights with respect to the registration of their shares under the Securities Act described above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates. Any sales of securities by these stockholders could have a material adverse effect on the market price of our common stock.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the Code), and corresponding provisions of state law, if a corporation undergoes an "ownership change" (generally defined as a greater than 50 percentage point change (by value) in its equity ownership over a rolling three-year period), the corporation's ability to use its pre-change net operating loss (NOL) carryforwards and other pre-change tax attributes to offset its post-change income may be limited. We performed an IRC Section 382 analysis in 2021 and determined there was an ownership change that resulted in Section 382 limitations. The ownership change limited our ability to utilize net operating losses against future taxable income but will not result in the expiration of any NOLs. We may have experienced additional ownership changes in the past and may in the future experience ownership changes as a result of changes in our stock ownership (some of which are not in our control). In addition, under current tax law, federal NOL carryforwards generated in periods after December 31, 2017, may be carried forward indefinitely but, in taxable years beginning after December 31, 2020, may only be used to offset 80% of our taxable income. For these reasons, our ability to utilize our NOL carryforwards and other tax attributes to reduce future tax liabilities may be limited.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

The trading market for our common stock relies, in part, on the research and reports that industry or financial analysts publish about us or our business. If no or few analysts commence coverage of us, the trading price of our stock would likely decrease. If one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which, in turn, could cause our stock price to decline.

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

Pursuant to Section 404 of Sarbanes-Oxley, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with this annual report, for our fiscal year ended December 31, 2021. When we lose our status as an "emerging growth company," our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, we will need to implement additional financial and management controls, reporting systems and procedures and hire additional accounting and finance staff, all of which will entail additional expense.

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

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. These provisions include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- the required approval of at least 66 2/3% of the shares entitled to vote at an election of directors to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by our chief executive officer or, in the absence of a chief executive officer, president or by the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws and our indemnification agreements that we have entered into with our directors and officers provide that:

- we will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful;
- we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law;
- we are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification;
- we will not be obligated pursuant to our amended and restated bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors;
- the rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter and have entered into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and
- we may not retroactively amend our amended and restated bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

Our amended and restated certificate of incorporation provides for an exclusive forum in the Court of Chancery of the State of Delaware for certain disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation, our amended and restated bylaws or any action as to which the Delaware General Corporation Law confers jurisdiction to the Court of Chancery of the State of Delaware; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our amended and restated certificate of incorporation also provides that the federal district courts of the United States of America is the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees or agents and arising under the Securities Act. We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. However, these provisions may have the effect of discouraging lawsuits against our directors and officers. The choice of forum provision requiring that the Court of Chancery of the State of Delaware or the federal district courts of the United States of America be the exclusive forum for certain actions does not apply to suits brought to enforce any liability or duty created by the Exchange Act. Our exclusive forum provision does not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations. Although our amended and restated certificate of incorporation contains the choice of forum provisions described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

General risk factors

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

To date, we have primarily financed our operations through the sale of common stock, preferred stock and convertible notes. We will be required to seek additional funding in the future and may to do so through public or private equity offerings or debt financings, credit or loan facilities, collaborations or a combination of one or more of these funding sources. If we raise additional funds by issuing equity securities, our stockholders may suffer dilution and the terms of any equity financing may adversely affect the rights of our stockholders. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing stockholders. Debt financing, if available, is likely to involve restrictive covenants limiting our flexibility in conducting future business activities, and, in the event of insolvency, debt holders would be repaid before holders of our equity securities received any distribution of our corporate assets. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our drug candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. Attempting to secure additional financing may also divert our management's attention from our day-to-day activities, which may adversely affect our ability to develop our drug candidates.

Unfavorable global economic conditions could adversely affect our business, financial condition, stock price and results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. For example, the 2008 global financial crisis caused extreme volatility and disruptions in the capital and credit markets. In addition, Russia began a full-scale invasion of Ukraine in February 2022 which is the largest conventional military attack in Europe since World II and has triggered unprecedented sanctions against Russia. While the situation remains highly fluid and the outlook of such war in Ukraine is subject to extraordinary uncertainty, the ongoing war and associated sanctions will likely have a severe impact on the global economy. A severe or prolonged economic downturn, such as the 2008 global financial crisis, and one that could be caused by the war in Ukraine, could result in a variety of risks to our business, including, weakened demand for any drug candidates we may develop and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy or disruptions in the supply chain generally could also strain our suppliers, possibly resulting in supply disruption. 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 clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers or other partners may not survive such difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business. Furthermore, our stock price may decline due in part to the volatility of the stock market and any general economic downturn.

Our insurance policies are expensive and protect us only from some business risks, which leaves us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include general liability, property, umbrella, clinical trials and directors' and officers' insurance. Any additional insurance coverage we acquire in the future may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our cash position and results of operations.

We also expect that operating as a public company will make it more difficult and more expensive for us to obtain directors' and officers' liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

The United Kingdom's withdrawal from the EU may have a negative effect on global economic conditions, financial markets and our business.

Following a national referendum and enactment of legislation by the government of the United Kingdom, the United Kingdom formally withdrew from the EU and ratified a trade and cooperation agreement (TCA) governing its future relationship with the EU, including ensuring tariff-free trade for certain goods and services. Since the regulatory framework for pharmaceutical products in the United Kingdom relating to quality, safety and efficacy of pharmaceutical products, clinical trials, marketing authorization, commercial sales and distribution of pharmaceutical products is derived from EU directives and regulations, Brexit will materially impact the future regulatory regime which applies to products and the approval of product candidates in the United Kingdom. Longer term, the United Kingdom is likely to develop its own legislation that diverges from that in the EU.

The TCA provides details on how some aspects of the United Kingdom's and EU's relationship will operate going forwards, however there are still many uncertainties. The uncertainty concerning the United Kingdom's legal, political and economic relationship with the EU since Brexit may be a source of instability in the international markets, create significant currency fluctuations, and/or otherwise adversely affect trading agreements or similar cross-border co-operation arrangements (whether economic, tax, fiscal, legal, regulatory or otherwise). These developments have had, and may continue to have, a significant adverse effect on global economic conditions and the stability of global financial markets, and could significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets.

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

U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations (collectively, Trade Laws), prohibit, among other matters, 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, and reputational harm, among other consequences. We routinely have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations, and we expect our non-U.S. activities to increase in time. We plan to engage third parties for clinical trials and/or obtain necessary permits, licenses, patent registrations, and other regulatory approvals from such officials, employees and government agencies and affiliates and we may be held liable for any 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.

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 rights, if any, could be reduced or eliminated if we fail to comply with these requirements.

Periodic maintenance fees, renewal fees, annuity fees, and various other fees are required to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of a patent. In certain circumstances, we rely on our collaborators or licensors to pay these fees. The USPTO and various foreign patent agencies also require compliance with a number of procedural, documentary, fee payment and other similar requirements during the patent application and prosecution process. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official communications within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. While an inadvertent lapse can in some cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which non-compliance can result in irrevocable abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If we or our licensors fail to maintain the patents and patent applications covering our drug candidates, our competitors might be able to enter the market with similar or identical products or technology, which would harm our business, financial condition, results of operations and prospects.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. As noted above, some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace, including compromising our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties, or enter into development collaborations that would help us commercialize our drug candidates, if approved. Any of the foregoing events would harm our business, financial condition, results of operations and prospects.

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

We rely on confidential methodologies and processes and confidentiality agreements to protect our unpatented know-how, technology and other proprietary information and to maintain our competitive position. Trade secrets and know-how can be difficult to protect. We seek to protect these trade secrets and other proprietary technology, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, licensors, 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. We cannot guarantee that we have entered into such agreements with each party that may have or has had access to our trade secrets or proprietary technology and processes. 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. Unauthorized parties may also attempt to copy or reverse engineer certain aspects of our drug candidates that we consider proprietary. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary information will be effective.

We also seek to preserve the integrity and confidentiality of our confidential proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems, but it is possible that these security measures could be breached. 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 inside and outside the United States 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 or other third party, 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 or other third party, our competitive position would be materially and adversely harmed.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential collaborators or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Further, we may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names. Our efforts to enforce or protect our proprietary rights related to trademarks, trade names, trade secrets, domain names,

copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and prospects.

We may in the future engage in strategic transactions; such transactions could affect our liquidity, dilute our existing stockholders, increase our expenses and present significant challenges in focus and energy to our management or prove not to be successful.

From time to time, we may consider strategic transactions, such as acquisitions of companies, asset purchases and out-licensing or in-licensing of intellectual property, products or technologies.

Such potential transactions that we may consider in the future include a variety of business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations, investments and licensings. Any future transactions could result in potentially dilutive issuances of our equity securities, including our common stock, or the incurrence of debt, contingent liabilities, amortization expenses or acquired in-process research and development expenses, any of which could affect our financial condition, liquidity and results of operations. Future acquisitions may also require us to obtain additional financing, which may not be available on favorable terms or at all. These transactions may never be successful and may require significant time and attention of management. In addition, the integration of any business that we may acquire in the future may disrupt our existing business and may be a complex, risky and costly endeavor for which we may never realize the full benefits of the acquisition.

Public health pandemics or epidemics, political instability, terrorist attacks, other acts of violence or war, or other unexpected events could materially and adversely impact us.

Public health pandemics or epidemics, political instability, terrorist attacks, other acts of violence or war or other unexpected events could materially interrupt our business operations (or those of the third parties upon whom we depend), cause consumer confidence and spending to decrease or result in increased volatility in the United States and worldwide financial markets and economy. They also could result in or prolong an economic recession in the United States. Any of these occurrences could materially and adversely affect us.

Current or future litigation or administrative proceedings could have a material adverse effect on our business, our financial condition and our results of operations.

We may be involved in legal proceedings, administrative proceedings, claims, and other litigation that arise in the ordinary course of business. Unfavorable outcomes or developments relating to proceedings to which we are a party or transactions involving our current or future drug candidates, such as judgments for monetary damages, injunctions, or denial or revocation of permits, could have a material adverse effect on our business, our financial condition, and our results of operations. In addition, settlement of claims could adversely affect our financial condition and our results of operations.

We incur significantly increased costs as a result of operating as a public company, and our management is required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, we are incurring significant legal, accounting and other expenses that we did not previously incur as a private company. We are subject to the reporting requirements of the Exchange Act, which requires, among other things, that we file with the SEC, annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and Nasdaq to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act) was enacted. There are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas, such as “say on pay” and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of the IPO. We intend to take advantage of this legislation, but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition, results of operations and prospects. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services (if approved). For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

We may experience fluctuations in our tax obligations and effective tax rate, which could materially and adversely affect our results of operations.

We are subject to U.S. federal and state income taxes and taxes in certain other non-U.S. jurisdictions. Tax laws, regulations and administrative practices in various jurisdictions may be subject to significant change, with or without advance notice, due to economic, political and other conditions, and significant judgment is required in evaluating and estimating our provision and accruals for these taxes. There are many transactions that occur during the ordinary course of business for which the ultimate tax determination is uncertain. Our effective tax rates could be affected by numerous factors, such as changes in tax, accounting and other laws, regulations, administrative practices, principles and interpretations, the mix and level of earnings in a given taxing jurisdiction or our ownership or capital structures.

If we sell shares of our common stock in future financings, stockholders may experience immediate dilution and, as a result, our stock price may decline.

We may from time to time issue additional shares of common stock at a discount from the current trading price of our common stock. As a result, our stockholders would experience immediate dilution upon the purchase of any shares of our common stock sold at such discount. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, preferred stock or common stock. If we issue common stock or securities convertible into common stock, our common stockholders would experience additional dilution and, as a result, our stock price may decline.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. If our assumptions change or if actual circumstances differ from our assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters are located in South San Francisco, California, where we lease and occupy space in two separate buildings. The total amount of space leased across both building equals approximately 51,000 square feet of office and laboratory space. The current term of our two South San Francisco leases expire on March 2027 and July 2027, with options to extend the terms through March 2035 and July 2032, respectively.

We also have an office in Leuven, Belgium, where we lease and occupy approximately 8,100 square feet of office and laboratory space. The current term of our Leuven, Belgium lease expires in August 2023, with an option to extend the term through August 2028.

We lease all of our facilities and do not own any real property. We believe our existing facilities are sufficient for our needs for the foreseeable future. To meet the future needs of our business, we may lease additional or alternate space, and we believe suitable additional or alternative space will be available in the future on commercially reasonable terms.

Item 3. Legal Proceedings.

From time to time, we may become involved in litigation or other legal proceedings. While the outcome of any such proceedings cannot be predicted with certainty, as of December 31, 2021, we were not a party to any litigation or legal proceedings that, in the opinion of our management, are probable to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on our business, financial condition, results of operations and prospects 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.

Market Information

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "ALGS" since October 20, 2020. Prior to that date, there was no public trading market for our common stock.

Holders of Record

As of March 4, 2022, there were 46 holders of record of our common stock, which consist of 44 holders of record of our voting common stock and 2 holders of record of our non-voting 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 dividend on our common stock. We do not expect to declare or pay any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors might deem relevant.

Securities Authorized for Issuance under Equity Compensation Plans

The information required by this item is incorporated by reference to the definitive Proxy Statement for our 2022 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2021.

Recent Sales of Unregistered Securities

None.

Use of Proceeds.

On October 15, 2020, our registration statement on Form S-1 (File No. 333-249077) relating to our IPO of Common Stock became effective. The IPO closed on October 20, 2020, at which time we issued 10 million shares of common stock at a price to the public of $15.00 per share. We received net proceeds from the IPO of approximately $135.4 million, after deducting the underwriting discounts and commissions of $10.5 million and expenses of $4.1 million. None of the expenses associated with the IPO were paid to directors, officers, persons owning 10% or more of any class of equity securities, or to our affiliates. On November 5, 2020, the underwriters of the IPO partially exercised their overallotment option by purchasing an additional 1,150,000 shares from the Company at the IPO price, resulting in an additional $16.0 million in net proceeds after deducting the underwriting discounts and commissions. J.P. Morgan Securities LLC, Jefferies LLC, Piper Sandler & Co. acted as joint book-running managers for the offering.

There has been no material change in the planned use of our net IPO proceeds as described in our Prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on October 19, 2020.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers.

None.

Item 6. [Reserved].

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. In addition to historical financial information, this discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Special note regarding forward-looking statements" and "Risk Factors" and elsewhere in this Annual Report on Form 10-K. Our fiscal year ends on December 31 each year.

Overview

We are a clinical-stage biopharmaceutical company focused on developing novel therapeutics to address unmet medical needs in viral and liver diseases. We utilize our proprietary oligonucleotide and small molecule platforms to develop pharmacologically optimized drug candidates for use in combination regimens designed to achieve improved treatment outcomes. Our lead effort is to develop a functional cure for Chronic Hepatitis B (CHB), which often results in life-threatening conditions such as cirrhosis, end-stage liver disease (ESLD) and the most common form of liver cancer, hepatocellular carcinoma (HCC). The most widely used treatment for CHB, nucleos(t)ide analogs, suppresses viral replication but only achieves low rates of functional cure and often requires long-term administration. To address this issue, we have developed a portfolio of differentiated drug candidates for CHB, including a small molecule Capsid Assembly Modulator (CAM) and oligonucleotides (Antisense Oligonucleotides (ASO) and Small Interfering Ribonucleic Acids (siRNA)), each of which is designed against clinically validated targets in the Hepatitis B Virus (HBV) life cycle. We are also exploring approaches towards boosting immune response with the use of small molecule antagonists of the PD1/PD-L1 interaction. We believe that combination regimens utilizing our portfolio of CHB drug candidates may lead to higher rates of functional cure.

Initial Phase 1a studies in healthy volunteers (HVs) for our CAM and ASO drug candidates have been completed and Phase 1b dose range studies evaluating the safety, pharmacokinetics and antiviral activity of these drugs in CHB patients are ongoing. For the CAM drug candidate, ALG-000184, preliminary data as of January 28, 2022, in both HVs and CHB subjects indicate the drug has a predictable, dose proportional pharmacokinetic (PK) profile and was well tolerated after up to 28 days of oral daily dosing. Specifically, one unrelated serious adverse event (SAE) (hospitalization for management of pre-existing back pain) and no treatment emergent adverse events (TEAEs) leading to discontinuation have been reported and no concerning TEAEs, laboratory abnormalities, or other safety assessments have been identified by the study's safety committee. Preliminary antiviral activity data through completion of dosing (i.e., 28 days) are available in cohorts of Hepatitis B E-antigen (HBeAg) negative subjects (100 mg (Cohort 1) and 50 mg (Cohort 2)) and HBeAg positive subjects (100 mg (Cohort 4)). ALG-000184 was observed to have similar levels of activity at 50-100 mg doses in Cohorts 1-2, where both doses achieved HBV DNA and HBV RNA reductions of approximately 3-4 $\log_{10}$ IU/mL and approximately 1.5-2 $\log_{10}$ copies/mL, respectively. In both of these cohorts, HBV DNA and HBV RNA levels fell below the lower limit of quantitation (LLOQ) in ≥75% and 100% of subjects, respectively. In Cohort 4 (HBeAg positive subjects receiving 100 mg ALG-000184), HBV DNA and HBV RNA declined by >4 $\log_{10}$ IU/mL and >3 $\log_{10}$ copies/mL, respectively, with no plateauing of the antiviral effect throughout dosing. Enrollment in Cohorts 3 (10 mg for 28 days in HBeAg negative CHB) and 5 (300 mg for 28 days in HBeAg positive CHB) is ongoing with topline data planned to be presented at a scientific conference in mid-2022. In order to understand the effects of longer-term dosing with ALG-000184 on viral markers (e.g., HBV DNA, HBV RNA, HBsAg, and HBeAg) as well as safety, the Phase 1 protocol has been amended to add Part 4, which is planned to dose HBeAg positive subjects for 12 weeks at the 100 mg and 300 mg dose levels in combination with a nucleos(t)ide analog. Dosing in Part 4 is expected to be completed during the fourth quarter of 2022.

For the ASO drug candidate, ALG-020572, dosing in HVs is complete. After reviewing preliminary data through Cohort 4 (480 mg given subcutaneously (SC)), the highest dose evaluated, the study's safety committee identified no concerning findings. Based on the drug's acceptable safety and PK profile to date, dosing in Part 2, which is evaluating multiple SC doses (7 doses given over 29 days) in CHB patients, was initiated at the 210 mg dose level. Enrollment in the first cohort of CHB subjects is complete. Preliminary data, including antiviral activity, through multiple cohorts in Part 2 are anticipated to be shared at a scientific conference in the fourth quarter of 2022.

Our preclinical activities to advance our siRNA targeted against HBV are ongoing, with the clinical trial application (CTA) filing for ALG-125755 on-track for the first half of 2022 and dosing in HVs set to begin in the third quarter of 2022.

If our CHB drug candidates are advanced from Phase 1 into Phase 2 development, we plan in 2023 to initiate a Phase 2 platform study to evaluate the safety and efficacy of various combinations of our CAM, ASO, and siRNA drug candidates with or without additional drugs with alternative mechanisms of action.

Finally, note that our CHB portfolio previously included the drug candidate, ALG-010133, one of our proprietary S-antigen Transport-inhibiting Oligonucleotide Polymers (STOPS^{TM}) drug candidates that was in a Phase 1b dose range finding trial (NCT04485663) evaluating subjects with CHB. In January 2022, we announced that we halted further development of ALG-010133 based on data from the Phase 1b trial, which indicated there was insufficient antiviral activity to warrant further development.

Our second area of focus is in non-alcoholic steatohepatitis (NASH), a complex, chronic liver disease where combination regimens may likewise prove beneficial. Our most advanced drug candidate for NASH is
ALG-055009, a small molecule THR-ß agonist. This drug candidate is being evaluated in a Phase 1a/1b study in HVs (oral single ascending doses) and subjects with hyperlipidemia (14 oral daily doses); dosing in both populations is currently underway. Topline data, including safety, PK, and anti-lipid effects in hyperlipidemic subjects are anticipated in the third quarter of 2022. Based on the previously demonstrated effects of other thyromimetics on liver fat, noninvasive markers of nonalcoholic fatty liver disease (NAFLD)/NASH, and liver histology in NASH patients, we believe ALG-055009 has the potential to become an integral component of future combination regimens for NASH.

Our third area of focus is to develop drug candidates with pan-coronavirus activity, including against Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2), the virus responsible for COVID-19. Our efforts to identify a coronavirus therapeutic are focused on a small molecule approach, where we are exploring coronavirus protease inhibitors in collaboration with Katholieke Universiteit Leuven (KU Leuven), the Center for Innovation and Stimulation of Drug Discovery (CISTIM) and the Centre for Drug Design and Discovery (CD3).

In October 2020, we completed our initial public offering (IPO) and issued 10,000,000 shares of our common stock at a price to the public of $15.00 per share for net proceeds of $135.4 million, after deducting underwriting discounts and commissions of $10.5 million and estimated expenses of $4.1 million. In connection with the IPO, all shares of Series A, Series B-1 and Series B-2 redeemable convertible preferred stock converted into 19,761,870 shares of voting common stock and 3,092,338 shares of non-voting common stock. On November 5, 2020, the underwriters of the IPO partially exercised their overallotment option by purchasing an additional 1,150,000 shares from the Company, resulting in an additional $16.0 million, after deducting underwriting discounts and commissions of $1.2 million. Prior to our IPO, we had received gross proceeds of approximately $186.9 million from sales of our preferred stock and our issuance of convertible debt.

In July 2021, we completed a follow-on offering and issued 4,400,000 shares of our common stock at a price to the public of $19.00 per share for net proceeds of $77.7 million, after deducting underwriting discounts and commissions and offering expenses payable by us.

We have incurred net losses and negative cash flows from operations in each year since our formation in February 2018. Our net losses were $128.3 million and $108.5 million for the years ended December 31, 2021 and 2020, respectively. We have had no revenue from product sales. As of December 31, 2021, we had an accumulated deficit of $303.1 million. Substantially all of our net losses have resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses over at least the next several years. Our net operating losses may fluctuate from quarter to quarter and year to year depending primarily on the timing of our clinical trials and nonclinical studies and our other research and development expenses. We have no internal manufacturing capabilities or sales force and outsource a substantial portion of our clinical trial work to third parties.

Components of our results of operations

Operating expenses

Our operating expenses since inception have consisted solely of research and development costs and general and administrative costs.

Research and development expenses

We rely substantially on third parties to conduct our discovery activities, nonclinical studies, clinical trials and manufacturing. We primarily estimate research and development expenses based on estimates of services performed and rely on third party contractors and vendors to provide us with timely and accurate estimates of expenses of services performed to assist us in these estimates. A portion of our research and development expenses are based on contractual milestones. Research and development costs consist primarily of costs incurred for the identification and development of our drug candidates through our technology platforms, which include:

- salaries, benefits and other employee-related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- costs of outside consultants, including their fees, and related travel expenses;
- costs associated with in-process research and development, including license fees and milestones paid to third-party collaborators for technologies with no alternative use;
- costs related to production of clinical materials, including fees paid to contract manufacturers;
- expenses incurred under agreements with collaborators that perform nonclinical activities;
- costs related to compliance with regulatory requirements; and
- facility costs, depreciation, and other expenses, which include direct and allocated expenses for rent and maintenance of facilities, insurance, and other supplies.

We expense research and development costs as the services are performed or the goods are received. Non-refundable payments for goods or services that will be used for future research and development activities are deferred and capitalized. Such amounts are recognized as an expense as the goods are delivered or the related services are performed until it is no longer expected that the goods will be delivered, or the services will be rendered.

We expect our research and development costs to increase in future periods as we continue to invest in research and development activities and advance our nonclinical and clinical programs through clinical development. The process of conducting nonclinical studies and, eventually, clinical trials necessary to obtain regulatory approval is costly and time consuming, and the successful development of our drug candidates is highly uncertain. As a result, we are unable to determine the duration and completion costs of our research and development projects or clinical trials or if and to what extent we will generate revenue from the commercialization and sale of any of our drug candidates.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our executive, finance, corporate and business development and administrative functions. General and administrative expenses also include legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and consulting services; insurance costs; travel expenses; and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs not otherwise classified as research and development costs.

We expect that our general and administrative expenses will increase in the future as we increase our general and administrative personnel headcount to support personnel in research and development and to support our operations generally as we increase our research and development activities and activities related to the potential commercialization of our drug candidates. We also expect to incur increased expenses associated with operating as a public company, including costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing rules and requirements of the Securities and Exchange Commission (the SEC), director and officer insurance costs, and investor and public relations costs.

Interest and other (expense) income, net

Interest and other (expense) income, net comprises interest (expense) income, net and other income (expense), net. Interest income (expense), net primarily consists of interest earned on our cash, cash equivalents, and investments and interest expense related to our convertible preferred stock liability and warrants. Other (expense) income, net consists primarily of the change in fair value of our derivative liabilities.

We classified our warrants and the commitment to sell redeemable convertible preferred stock as liabilities on

our consolidated balance sheets and recorded changes in fair value at each balance sheet date with the corresponding change recorded as other income (expense), net. Prior to our IPO, all outstanding warrants were exercised for the issuance of shares of common stock and, upon that exercise, such warrants were no longer outstanding. Similarly, the redeemable convertible preferred stock liability was converted to common stock.

We do not anticipate other (expense) income, net to fluctuate in the future due to the conversion of the redeemable convertible preferred stock liability prior to our IPO.

Provision for income taxes

Since our inception in 2018, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in any year or for our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2021, we had federal net operating loss (NOL) carryforwards of $255.9 million available to reduce taxable income and these NOLs can be carried forward indefinitely. We have state NOL carryforwards of $263.0 million as of December 31, 2021, available to reduce future state taxable income, which expire at various dates beginning in 2038. As of December 31, 2021, the Company had $1.5 million of Australia NOL carryforwards, which carryforward indefinitely. As of December 31, 2021, we also had federal and state research and development tax credit carryforwards of $6.1 million and $3.0 million, respectively. The federal development tax credit carryforwards begin to expire in 2038, while the state development tax credit carryforwards can be carried forward indefinitely. Under Sections 382 and 383 of the Code, and corresponding provisions of state law, if a corporation undergoes an "ownership change" (generally defined as a greater than 50 percentage point change (by value) in its equity ownership over a rolling three-year period), the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income may be limited. We performed an IRC Section 382 analysis in 2021 and determined there was an ownership change that resulted in Section 382 limitations. The ownership change limited our ability to utilize net operating losses against future taxable income but will not result in the expiration of any NOLs. We may in the future experience ownership changes as a result of changes in our stock ownership (some of which are not in our control). In addition, under current tax law, federal NOL carryforwards generated in periods after December 31, 2017, may be carried forward indefinitely but, in taxable years beginning after December 31, 2020, may only be used to offset 80% of our taxable income. For these reasons, our ability to utilize our NOL carryforwards and other tax attributes to reduce future tax liabilities may be limited.

Results of operations

Comparison of the years ended December 31, 2021 and 2020

The following table summarizes our operating expenses for the years ended December 31, 2021 and 2020:

Consolidated Statements of Operations Data:	**2021**	**2020**	**Change**	
(in thousands)			**$**	**%**
Revenue from collaborations	$ 4,359	$ —	$ 4,359	—%
Operating expenses:				
Research and development	104,153	79,890	24,263	30%
General and administrative	28,527	17,944	10,583	59%
Total operating expenses	132,680	97,834	34,846	36%
Loss from operations	(128,321)	(97,834)	(30,487)	31%
Interest and other income (expense), net				
Interest income, net	242	1,256	(1,014)	(81)%
Other loss, net	(110)	(11,804)	11,694	(99)%
Total interest and other income (expense), net	132	(10,548)	10,680	(101)%
Loss before provision for income taxes	(128,189)	(108,382)	(19,807)	18%
Income tax expense	(143)	(161)	18	(11)%
Net loss	$ (128,332)	$ (108,543)	$ (19,789)	18%

Research and development expenses

Research and development expenses were $104.2 million for the year ended December 31, 2021, compared to $79.9 million for the year ended December 31, 2020, an increase of $24.3 million. The increase was due to an increase of $8.3 million of additional employee-related costs, of which $6.2 million related to stock-based compensation. Additionally, we had an increase of $10.5 million in third-party expenses for our nonclinical programs and the continued increase in expenditures related to research, development and manufacturing activities associated with our CAM, ASO and STOPs, clinical trial activities, as well as activities related to our NASH program (we have discontinued our STOPs program in the first quarter of 2022, refer to Note 16, *Subsequent Events* for further details). In addition, we had higher facilities and related expenses allocated to research and development in 2021.

General and administrative expenses

General and administrative expenses were $28.5 million for the year ended December 31, 2021, compared to $17.9 million for the year ended December 31, 2020, an increase of $10.6 million. The increase was primarily due to an increase of $6.4 million of additional employee-related costs, of which $4.3 million related to stock-based compensation. In addition, we had a $4.0 million increase in third-party expenses primarily due to increased administrative and legal costs and an increase in of $2.6 million for D&O insurance, all to support our status as a public company, partially offset by a decrease in facilities and related expenses allocated to general and administrative cost centers in 2021.

Interest income, net

Interest income, net decreased to $0.2 million for the year ended December 31, 2021 from $1.3 million for the year ended December 31, 2020, a decrease of approximately $1.0 million, primarily due to the change in our portfolio of cash equivalents, short-term and long-term investments as well as a general decrease in market interest rates during the year ended December 31, 2021.

Other (loss) income, net

Other (loss) income, net was a loss of $0.1 million for the year ended December 31, 2021 compared to a loss of $11.8 million for the year ended December 31, 2020, a difference of $11.7 million. The difference was due primarily to the prior year loss recognized on the net increase in fair value of both our redeemable convertible preferred stock liability and warrant liabilities prior to our IPO.

Liquidity and capital resources

Liquidity

We have incurred net losses since inception. We have not generated any revenue from product sales or any other sources and have incurred significant operating losses. We have not yet commercialized any products and we do not expect to generate revenue from sales of any drug candidates for at least several years, if ever.

Our operations have been financed primarily by net proceeds from the sale and issuance of our convertible preferred stock, net proceeds from our IPO, and the issuance of convertible debt. In October 2020, we issued an aggregate of 3,569,630 shares of our Series B-2 redeemable convertible preferred stock in the second tranche of our Series B convertible preferred stock financing for aggregate proceeds of $40.0 million. On October 20, 2020, we closed our IPO and issued 10,000,000 shares of our common stock at a price to the public of $15.00 per share for net proceeds of $135.4 million, after deducting underwriting discounts and commissions of $10.5 million and expenses of $4.1 million. On November 5, 2020, the underwriters of the IPO partially exercised their overallotment option by purchasing an additional 1,150,000 shares from the Company, resulting in an additional $16.0 million, after deducting underwriting discounts and commissions of $1.2 million. In July 2021, we completed a follow-on offering and issued 4,400,000 shares of our common stock at a price to the public of $19.00 per share for net proceeds of $77.7 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

As of December 31, 2021, we had cash, cash equivalents and investments of $205.8 million.

Capital resources

Our primary use of cash is to fund operating expenses, which consist primarily of research and development costs related to our drug candidates and our discovery programs, and to a lesser extent, general and administrative

expenditures. We expect our expenses to increase substantially in connection with our ongoing clinical development activities related to our most advanced drug candidate ALG-000184, which we have initiated clinical trials, as well as our research and development of our other drug candidates within our CHB, NASH and coronavirus programs.

In addition, we are incurring additional costs associated with operating as a public company following our IPO in October 2020. We expect that our expenses will increase substantially to the extent we:

- conduct our current and future clinical trials, and additional nonclinical studies;
- initiate and continue research and nonclinical and clinical development of other drug candidates;
- seek to identify additional drug candidates;
- pursue marketing approvals for any of our drug candidates that successfully complete clinical trials, if any;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- require the manufacture of larger quantities of our drug candidates for clinical development and potentially commercialization;
- obtain, maintain, expand, protect and enforce our intellectual property portfolio;
- acquire or in-license other drug candidates and technologies;
- hire and retain additional clinical, quality control and scientific personnel;
- achieve milestones triggering payments by us under our current and potential future licensing and/or collaboration agreements;
- build out or expand existing facilities to support our ongoing development activity; and
- add operational, financial and management information systems and personnel, including personnel to support our drug development, any future commercialization efforts and our transition to becoming a public company.

We believe that our existing cash, cash equivalents and investments will enable us to fund our planned operating expenses and capital expenditure requirements through at least the twelve months from the date of issuing our financial statements. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. Furthermore, we may elect to raise additional capital on an opportunistic basis to fund operations.

Because of the numerous risks and uncertainties associated with our research and development programs and because the extent to which we may enter into collaborations with third parties for development of our drug candidates is unknown, we are unable to estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our drug candidates. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of researching and developing our drug candidates and programs, and of conducting nonclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining marketing approvals for drug candidates we develop if clinical trials are successful;
- the cost of commercialization activities for our current drug candidates, and any future drug candidates we develop, whether alone or in collaboration, including marketing, sales and distribution costs if our current drug candidates or any future drug candidate we develop is approved for sale;
- the cost of manufacturing our current and future drug candidates for clinical trials in preparation for marketing approval and commercialization;
- our ability to establish and maintain strategic licenses or other arrangements and the financial terms of such agreements;

- the costs involved in preparing, filing, prosecuting, maintaining, expanding, defending and enforcing patent claims, including litigation costs and the outcome of such litigation;
- the timing, receipt and amount of sales of, or profit share or royalties on, our future products, if any;
- the emergence of competing therapies for hepatological indications and viral diseases and other adverse market developments; and
- any acquisitions or in-licensing of other programs or technologies.

Developing pharmaceutical products, including conducting nonclinical 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 for any drug candidates or generate revenue from the sale of any drug candidate for which we may obtain marketing approval. In addition, our drug candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences and anti-dilution protections that could adversely affect the rights of a common stockholder. Additional debt or preferred equity financing, if available, may involve agreements that include restrictive covenants that may limit our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends, which could adversely constrain our ability to conduct our business, and may require the issuance of warrants, which could potentially dilute ownership interest.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technology, future revenue streams, research programs, or drug candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or collaborations, strategic alliances or licensing arrangements with third parties when needed, we may be required to delay, limit, reduce and/or terminate our product development programs or any future commercialization efforts or grant rights to develop and market drug candidates that we would otherwise prefer to develop and market ourselves.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

(in thousands)	2021	2020
Net cash (used in) operating activities	$ (115,662)	$ (74,263)
Net cash provided by investing activities	3,022	32,755
Net cash provided by financing activities	78,677	192,348
Net (decrease) increase in cash, cash equivalents, and restricted cash	$ (33,963)	$ 150,840

Operating activities

During Fiscal 2021, operating activities used $115.7 million of cash, primarily resulting from our net loss of $128.3 million and cash used as a result of changes in our operating assets and liabilities of $4.7 million, partially offset by non-cash charges of $17.3 million. Net cash used as a result of changes in our operating assets and liabilities of $4.7 million consisted of an increase in other assets of $8.1 million, a decrease of $4.4 million in deferred revenue from collaborations, a decrease of $1.4 million in operating lease liabilities, a decrease of $0.3 million in accounts payable and a decrease of $0.2 million in other liabilities, partially offset by an increase in accrued liabilities of $9.7 million. The increase in other assets resulted from advances for clinical trial costs and deposits for manufacturing slot reservation fees. The decrease in deferred revenue from collaborations was a result of recognition of revenue from collaborations due to progress towards the completion of the project. Operating lease liabilities decreased due to contractual lease payments, and the increase in accrued liabilities was due primarily due

to a ramp in manufacturing activities for various drug compounds that are expected to be consumed in future clinical trials.

During Fiscal 2020, operating activities used $74.3 million of cash, primarily resulting from our net loss of $108.5 million, partially offset by non-cash charges of $18.2 million and cash provided by changes in our operating assets and liabilities of $16.1 million. Net cash provided by changes in our operating assets and liabilities of $16.1 million consisted of an increase of $9.4 million in accounts payable and accrued liabilities, an increase of $12.0 million in deferred revenue, partially offset by an increase of $4.1 million in other current assets and a decrease of $1.3 million in operating lease liability. The increase in accounts payable and accrued liabilities was largely due to an increase in external research and development costs. The increase in other assets was largely due to an increase in prepayments for services. The decrease in operating lease liability was a result of payments made on outstanding lease obligations.

Investing activities

During Fiscal 2021, investing activities provided $3.0 million of cash, consisting primarily of $23.0 million of investment maturities, offset by $19.1 million of investment purchases and $0.9 million of purchases of property and equipment.

During Fiscal 2020, investing activities provided $32.8 million of cash, consisting primarily of $80.1 million of investment maturities, offset by $45.3 million of investment purchases and $2.1 million of purchases of property and equipment.

Financing activities

During Fiscal 2021, net cash provided by financing activities was $78.7 million, consisting primarily of $78.6 million in proceeds from our follow-on offering, net of issuance costs, and $1.0 million from the issuance of common stock from the exercise of employee stock options and the issuance of shares through our employee stock purchase plan. The cash provided was partially offset by costs related to our follow-on offering of $0.9 million and payments for our capital leases of $0.1 million.

During Fiscal 2020, net cash provided by financing activities was $192.3 million, consisting primarily of $155.5 million in net proceeds from the initial public offering and underwriters exercise of the overallotment option and $41.1 million in proceeds from the issuance of redeemable convertible preferred stock, partially offset by $4.1 million in payments of deferred offering costs.

Contractual obligations and commitments

Our principal commitments consist of obligations under our operating leases for office space in South San Francisco, California, and Belgium, and finance lease commitments representing obligations related to vehicle leases for employees and a lease for lab equipment. All of our finance leases are for assets in Belgium. We do not have any material purchase commitments for contracts with fixed or minimum service requirements. We also enter into contracts in the normal course of business with various vendors that generally provide for contract termination following a certain notice period. The Company enters into contracts in the normal course of business that includes arrangements with clinical research organizations, vendors for preclinical research and vendors for manufacturing. These agreements generally allow for cancellation with notice. As of December 31, 2021, the Company had non-cancellable purchase commitments of approximately $1.9 million related to the discontinued development of STOPS™ drug candidate. Refer to note 16, *Subsequent Events*, for further details.

Off-balance sheet arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Indemnification agreements

We enter into standard indemnification arrangements in the ordinary course of business. Pursuant to these arrangements, we indemnify, hold harmless and agree to reimburse the indemnified parties for losses suffered or incurred by the indemnified party, in connection with any trade secret, copyright, patent or other intellectual property infringement claim by any third party with respect to its technology. The term of these indemnification agreements is generally perpetual any time after the execution of the agreement. The maximum potential amount of future payments we could be required to make under these arrangements is not determinable. We have never

incurred costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, we believe the fair value of these agreements is minimal.

Critical accounting 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 (GAAP). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts and the disclosure of 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 relevant assumptions 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.

While our significant accounting policies are described in the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K, we believe that the following critical accounting policies are most important to understanding and evaluating our reported financial results and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Accrued research and development costs

We record accrued expenses for estimated costs of our research and development activities conducted by third-party service providers, which include the conduct of clinical trials and nonclinical studies. We record the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced and include these costs in accrued liabilities in the consolidated balance sheets and within research and development expense in the consolidated statements of operations and comprehensive loss. These expenses are a significant component of our research and development costs. We record accrued expenses for these costs based on factors such as estimates of the work completed and in accordance with agreements established with these third-party service providers. Any payments made in advance of services provided are recorded as prepaid expenses and other assets, which are expensed as the contracted services are performed.

We estimate the amount of work completed through discussions with internal personnel and external service providers as to the progress or stage of completion of the services and the agreed-upon fee to be paid for such services. We make significant judgments and estimates in determining the accrued balance in each reporting period. As actual costs become known, we adjust our accrued estimates. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed could vary from actuals and result in us reporting amounts that are too high or too low in any particular period. Our accrued expenses are dependent, in part, upon the receipt of timely and accurate reporting from clinical research organizations and other third-party service providers. For the periods presented, we have experienced no material differences between our accrued expenses and actual expenses.

Research and development expenses

We expense research and development costs as incurred. Acquired intangible assets are expensed as research and development if, at the time of payment, the technology is under development; is not approved by the U.S. Food and Drug Administration or other regulatory agencies for marketing; has not reached technical feasibility; or otherwise has no foreseeable alternative future use.

Research and development expenses consist of costs incurred in performing research and development activities, including salaries, stock-based compensation and benefits, facilities costs, depreciation, and third-party license fees. Non-refundable prepayments for goods or services that will be used or rendered for future research and development activities are expensed as incurred. In-process research and development (IPR&D) expense represents the costs to acquire technologies to be used in research and development that have not reached technological feasibility or have no alternative future uses and thus are expensed as incurred. IPR&D expense also includes upfront license fees and milestones paid to collaborators for technologies with no alternative use.

Stock-based compensation

We measure stock options and other stock-based awards granted to employees, directors and other service providers based on their fair value on the date of grant and recognize compensation expense of those awards over

the requisite service period, which is generally the vesting period of the respective award. We recognize the impact of forfeitures on stock-based compensation expense as forfeitures occur. We apply the straight-line method of expense recognition to all awards with only service-based vesting conditions. During the year ended December 31, 2021, we did not grant any stock-based awards with performance-based vesting conditions. During the year ended December 31, 2020, we granted stock-based awards with performance-based vesting conditions. We recognize compensation expense related to these awards when it is determined that satisfying the performance conditions is probable using the accelerated attribution method over the requisite service period.

We estimate the fair value of each stock option grant on the date of grant using the Black-Scholes option-pricing model, which requires the use of highly subjective assumptions including:

- Expected term—We have opted to use the "simplified method" for estimating the expected term of plain-vanilla options, whereby the expected term equals the arithmetic average of the vesting term and the original contractual term of the option (generally 10 years). We estimated the expected term of performance-based vesting options based on the expected life of the options to remain outstanding, which is estimated to be materially consistent with time-vesting options.
- Risk-free interest rate—The risk-free rate assumption is based on the U.S. Treasury instruments with maturities similar to the expected term of our stock options.
- Expected dividend—We have not issued any dividends and do not anticipate to issue dividends on our common stock. As a result, we have estimated the dividend yield to be zero.
- Expected volatility—Due to our limited operating history and a lack of company-specific historical and implied volatility data, we have based our estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility data was computed using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of the stock-based awards.

Emerging growth company status

In April 2012, the Jumpstart Our Business Startups Act of 2012 (the JOBS Act), was enacted. Section 107 of the JOBS Act provides that an "emerging growth company" (an EGC) can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for any new or revised accounting standards during the period in which we remain an EGC; however, we may adopt certain new or revised accounting standards early.

We will remain an EGC until the earliest to occur of: (1) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (2) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (3) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

In addition, we intend to rely on the other exemptions and reduced reporting requirements provided to EGCs by the JOBS Act. Subject to certain conditions set forth in the JOBS Act, as an EGC, we are not required to, among other things, (i) provide an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, (ii) provide all of the compensation disclosure that may be required of non-emerging growth public companies under the Dodd-Frank Wall Street Reform and Consumer Protection Act, (iii) comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (auditor discussion and analysis) or (iv) disclose certain executive compensation-related items such as the correlation between executive compensation and performance and comparisons of the Chief Executive Officer's compensation to median employee compensation.

Recently issued and adopted accounting pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Interest rate risk

Our cash, cash equivalents and investments of $205.8 million as of December 31, 2021, consist of bank deposits, money market funds, certificates of deposit and US Treasury available-for-sale securities. We are exposed to market risk related to changes in interest rates applicable to our investment portfolio of cash equivalents and short-term and long-term investments. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. Should U.S. interest rates decline, interest income would be reduced in future periods for short- and long-term investments which mature and the proceeds of which are reinvested in similar instruments at lower interest rates. Additionally, the fair value of our short-term and long-term investments is subject to change as a result of potential changes in market interest rates, including changes resulting from the impact of the COVID-19 pandemic. As of December 31, 2021, we estimate that a hypothetical 100 basis point adverse movement would not result in a material impact on our financial position or results of operations or cash flows.

Foreign currency exchange risk

We have employees and operations, including contracts with third-party vendors, in Europe through our subsidiary Aligos Belgium BVBA. We have similar, but more limited, operations in Australia and China. Though the functional currency in these locations is the U.S. dollar, we remeasure transactions initially recorded in local currencies in these locations, the Euro, Australian dollar and Chinese Yuan, respectively, to the U.S. dollars periodically. As such, we are exposed to foreign currency exchange risk as the underlying contracts to pay employees or vendors in these locations are generally denominated in the local currencies. A decline in the value of the U.S. dollar relative to these currencies would increase our cost of doing business in these locations. We are subject to foreign currency transaction gains or losses on our contracts denominated in foreign currencies. To date, foreign currency transaction gains and losses have not been material to our financial statements, and we have not had a formal hedging program with respect to foreign currency. A 10% increase or decrease in current exchange rates would not have a material effect on our financial position or results of operations or cash flows.

Item 8. Financial Statements and Supplementary Data.

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Aligos Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Aligos Therapeutics, Inc. (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations and comprehensive loss, changes in redeemable convertible preferred stock and stockholders' equity and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

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.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

Redwood City, California
March 10, 2022

Consolidated balance sheets
(In thousands, except share and per share data)

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 186,816	$ 220,383
Restricted cash	164	560
Short-term investments	3,918	23,130
Other current assets	13,526	5,944
Total current assets	204,424	250,017
Operating lease right-of-use assets	8,789	6,901
Property and equipment, net	6,180	8,007
Long-term investments	15,110	—
Other assets	866	377
Total assets	$ 235,369	$ 265,302
LIABILITIES, PREFERRED STOCK, AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,015	$ 3,313
Accrued liabilities	25,394	16,564
Operating lease liabilities, current	2,769	2,442
Finance lease liabilities, current	138	64
Deferred Revenue from collaborations, current	7,641	7,891
Total current liabilities	38,957	30,274
Operating lease liabilities, net of current portion	11,287	10,371
Finance lease liabilities, net of current portion	261	130
Long term liabilities	133	379
Deferred revenue from collaborations	—	4,109
Total liabilities	$ 50,638	$ 45,263
Commitments and contingencies (Note 13)		
Stockholders' equity:		
Preferred Stock, $0.0001 par value; 10,000,000 shares authorized as of December 31, 2021 and 2020, respectively; no shares issued and outstanding as of December 31, 2021 and 2020, respectively.	—	—
Common stock, $0.0001 par value; 320,000,000 shares authorized as of December 31, 2021 and 2020, respectively; 42,690,229 and 38,120,606 shares issued and outstanding as of December 31, 2021 and 2020, respectively	4	4
Additional paid-in capital	487,347	394,963
Accumulated deficit	(303,072)	(174,740)
Accumulated other comprehensive income (loss)	452	(188)
Total stockholders' equity	184,731	220,039
Total liabilities, redeemable convertible preferred stock, and stockholders' equity	$ 235,369	$ 265,302

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

Consolidated statements of operations and comprehensive loss
(In thousands, except share and per share data)

	Year Ended December 31, 2021	Year Ended December 31, 2020
Revenue from collaborations	$ 4,359	$ —
Operating expenses:		
Research and development	104,153	79,890
General and administrative	28,527	17,944
Total operating expenses	132,680	97,834
Loss from operations	(128,321)	(97,834)
Interest and other (expense) income, net	132	(10,548)
Loss before income tax expense	(128,189)	(108,382)
Income tax expense	(143)	(161)
Net loss	(128,332)	(108,543)
Other comprehensive (loss) and income:		
Gain (loss) on pension plans	749	(141)
(Loss) gain on available for sale investments	(109)	68
Comprehensive loss	$ (127,692)	$ (108,616)
Net loss per share, basic and diluted	$ (3.22)	$ (10.87)
Weighted average shares of common stock, basic and diluted	39,855,403	9,988,191

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

Consolidated statements of changes in redeemable convertible preferred stock and stockholders' equity (deficit)
(In thousands, except share and per share data)

	Series A Redeemable Convertible Preferred Stock		Series B-1 Redeemable Convertible Preferred Stock		Series B-2 Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Capital	Deficit	Income (Loss)	Equity (Deficit)
Balance as of December 31, 2019	10,819,843	$ 100,695	8,344,034	$ 81,384	—	$ —	3,927,803	$ 0	$ 1,421	$ (66,197)	$ (115)	$ (64,891)
Issuance of common stock upon exercise of stock options	—	—	—	—	—	—	188,594	0	261	—	—	261
Vesting of early exercised common stock	—	—	—	—	—	—	—	—	363	—	—	363
Issuance of Series A redeemable convertible stock upon exercise of Series A warrants	120,702	1,262	—	—	—	—	—	—	—	—	—	—
Issuance of redeemable convertible Series B-2 preferred stock	—	—	—	—	3,569,630	40,000	—	—	—	—	—	—
Reclassification of Series A warrant and convertible preferred stock liabilities to equity	—	620	—	—	—	14,560	—	—	—	—	—	—
Conversion of redeemable convertible preferred stock to common stock in connection with initial public offering	(10,940,545)	(102,577)	(8,344,034)	(81,384)	(3,569,630)	(54,560)	22,854,209	3	238,520	—	—	238,523
Issuance of common stock in connection with initial public offering, net of offering costs	—	—	—	—	—	—	10,000,000	1	139,499	—	—	139,500
Issuance of common stock in connection with Greenshoe initial public offering, net of offering costs	—	—	—	—	—	—	1,150,000	0	16,042	—	—	16,043
Costs related to the IPO and Greenshoe	—	—	—	—	—	—	—	—	(4,116)	—	—	(4,116)
Stock-based compensation	—	—	—	—	—	—	—	—	2,975	—	—	2,975
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	(73)	(73)
Net loss	—	—	—	—	—	—	—	—	—	(108,543)	—	(108,543)
Balance as of December 31, 2020	—	$ —	—	$ —	—	$ —	38,120,606	$ 4	$ 394,963	$ (174,740)	$ (188)	$ 220,039
Issuance of common stock upon exercise of stock options	—	—	—	—	—	—	124,013	—	394	—	—	394
Issuance of common stock under employee stock purchase plan							45,610	—	653	—	—	653
Issuance of common stock in connection with follow-on offering, net of offering costs	—	—	—	—	—	—	4,400,000	—	78,584	—	—	78,584
Costs related to the follow-on offering	—	—	—	—	—	—	—	—	(875)	—	—	(875)
Stock-based compensation expense related to employee stock awards	—	—	—	—	—	—	—	—	12,541	—	—	12,541
Stock-based compensation expense related to employee stock purchases							—	—	795	—	—	795
Vesting of early exercised common stock	—	—	—	—	—	—	—	—	292	—	—	292
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	640	640
Net loss	—	—	—	—	—	—	—	—	—	(128,332)	—	(128,332)
Balance as of December 31, 2021	—	$ —	—	$ —	—	$ —	42,690,229	$ 4	$ 487,347	$ (303,072)	$ 452	$ 184,731

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

Consolidated statements of cash flows
(In thousands)

	Year Ended December 31, 2021	Year Ended December 31, 2020
Cash flows from operating activities:		
Net loss	$ (128,332)	$ (108,543)
Adjustments to reconcile net loss to net cash used in operating activities:		
Accretion of discount on short term investments	86	234
Amortization of right of use assets	759	590
Depreciation expense	3,019	2,735
Stock-based compensation	13,457	2,975
Change in fair value of derivative liability	—	296
Change in fair value of convertible preferred stock liabilities	—	11,387
Changes in operating assets and liabilities:		
Other assets	(8,072)	(4,107)
Accounts payable	(313)	(130)
Accrued liabilities	9,742	9,566
Operating lease liabilities	(1,404)	(1,266)
Other liabilities	(245)	—
Deferred revenue from collaborations	(4,359)	12,000
Net cash and cash equivalents used in operating activities	$ (115,662)	$ (74,263)
Cash flows from investing activities:		
Purchases of short-term investments	(2,696)	(32,097)
Purchases of long-term investments	(16,390)	(13,184)
Maturities of short-term investments	23,000	80,100
Purchases of property and equipment	(892)	(2,064)
Net cash and cash equivalents provided by investing activities	$ 3,022	$ 32,755
Cash flows from financing activities:		
Payments on finance lease	(79)	(58)
Payments of deferred offering costs	(875)	(4,116)
Proceeds from issuance of common stock in connection with Follow-on Offering, net of costs	78,584	—
Proceeds from exercise of warrants for series A redeemable convertible preferred stock	—	1,125
Proceeds from issuance of redeemable convertible preferred stock Series B-1, net of $37 issuance costs paid	—	40,000
Payments of Series B-1 issuance cost	—	(405)
Proceeds from the issuance of common stock under employee stock plans	1,047	260
Proceeds from issuance of common stock in initial public offering, net of underwriting commissions	—	139,500
Proceeds from issuance of common stock in connection with the overallotment option, net of costs	—	16,042
Net cash and cash equivalents provided by financing activities	$ 78,677	$ 192,348
Net (decrease) increase in cash, cash equivalents, and restricted cash	$ (33,963)	$ 150,840
Cash, cash equivalents, and restricted cash, beginning of period	220,943	70,103
Cash, cash equivalents, and restricted cash, end of period	$ 186,980	$ 220,943

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

Consolidated statements of cash flows (Continued)
(In thousands)

	Year Ended December 31, 2021	Year Ended December 31, 2020
Reconciliation to amounts on the consolidated balance sheet:		
Cash and cash equivalents	$ 186,816	$ 220,383
Restricted cash	164	560
Total cash, cash equivalents, and restricted cash	$ 186,980	$ 220,943
Supplemental disclosures of cash flow information:		
Interest paid	$ —	$ —
Income taxes paid	$ —	$ —
Supplemental disclosures of noncash financing and investing activities:		
Leasehold improvement directly paid by landlord	$ —	$ 79
Liability in connection to the issuance of redeemable convertible preferred stock series B-1	$ —	$ 14,560
Mark to market adjustments for available-for-sale investments	$ (109)	$ 68
Equipment acquired through finance lease	$ 284	$ —
Vesting of early exercised options	$ 292	$ 363
Acquisition of right-of-use asset through operating lease obligation	$ 2,647	$ —
PP&E purchase still in accounts payable	$ 15	$ 82
Change in pension obligation	$ 749	$ (141)
Conversion of redeemable convertible preferred stock to common stock in connection with initial public offering	$ —	$ 238,522
Change in fair value of derivative liability upon exercise of warrants	$ —	$ 757

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

Unless otherwise indicated, financial information except share and per share data, including dollar values stated in the text of the notes to financial statements, is expressed in dollars.

1. Organization

Description of business

Aligos Therapeutics, Inc. (Aligos-US) was incorporated in the state of Delaware on February 5, 2018 (inception). On September 10, 2018, the Company formed Aligos Belgium BVBA (the Subsidiary or Aligos-Belgium). On March 30, 2020, the Company formed as a wholly owned subsidiary, Aligos Australia Pty LTD (Aligos-Australia), a proprietary limited company. On May 18, 2021, the Company formed as a wholly owned subsidiary, Aligos Therapeutics (Shanghai) Co. Ltd. (Aligos-Shanghai) and together with Aligos-US, Aligos-Belgium, and Aligos-Australia being the Company or Aligos.

Aligos is a clinical-stage biopharmaceutical company developing novel therapeutics to address unmet medical needs in viral and liver diseases, including chronic hepatitis B and coronaviruses and therapeutics for nonalcoholic steatohepatitis (NASH).

The Company is devoting substantially all of its efforts to the research and development of its drug candidates. The Company has not generated any product revenue to date. The Company is also subject to a number of risks similar to other companies in the biotechnology industry, including the uncertainty of success of its preclinical studies and clinical trials, regulatory approval of drug candidates, uncertainty of market acceptance of products, competition from substitute products and larger companies, the need to obtain additional financing, compliance with government regulations, protection of proprietary technology, dependence on third-parties, product liability, and dependence on key individuals.

Reverse stock split

On October 8, 2020, the Company's board of directors approved a 1-for-9.3197 reverse stock split (the Reverse Stock Split) of the Company's common stock and redeemable convertible preferred stock to be consummated prior to the effectiveness of the Company's planned initial public offering (IPO). The par value and authorized shares of the common stock and redeemable convertible preferred stock were not adjusted as a result of the reverse stock split. All issued and outstanding common stock, options to purchase common stock and per share amounts contained in the financial statements have been retroactively adjusted to give effect to the reverse stock split for all periods presented. The Company filed an amended and restated certificate of incorporation in Delaware on October 9, 2020 that automatically effectuated the Reverse Stock Split without any further action required.

Initial public offering

On October 20, 2020, the Company closed its IPO and issued 10,000,000 shares of its common stock at a public offering price of $15.00 per share for net proceeds of $135.4 million, after deducting underwriting discounts and commissions of $10.5 million and expenses of $4.1 million. In connection with the IPO, all shares of Series A redeemable convertible preferred stock (Series A), Series B-1 redeemable convertible preferred stock (Series B-1) and Series B-2 redeemable convertible preferred stock (Series B-2) converted into 19,761,870 shares of voting common stock and 3,092,338 shares of non-voting common stock. On November 5, 2020, the underwriters of the IPO partially exercised their overallotment option by purchasing an additional 1,150,000 shares from the Company, resulting in an additional $16.0 million in net proceeds, after deducting underwriting discounts and commissions of $1.2 million.

Liquidity

The Company has incurred losses and negative cash flows from operations since its inception. As of December 31, 2021 and 2020, the Company has an accumulated deficit of approximately $303.1 million and $174.7 million, respectively. Management expects to continue to incur additional substantial losses in the foreseeable future as a result of expanded research and development activities.

As of December 31, 2021, the Company has unrestricted cash, cash equivalent and investments of approximately $205.8 million, which is available to fund future operations. The Company expects to continue to spend substantial amounts to continue the nonclinical and clinical development of its current and future programs. If the Company is able to gain marketing approval for drug candidates that are being developed, it will require significant additional amounts of cash in order to launch and commercialize such drug candidates. In addition, other unanticipated costs may arise. Because the design and outcome of the Company's planned and anticipated clinical trials is highly uncertain, the Company cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of any drug candidate the Company may develop.

The Company expects to finance its cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. In addition, the Company may seek additional capital to take advantage of favorable market conditions or strategic opportunities even if the Company believes it has sufficient funds for its current or future operating plans. Based on the Company's research and development plans, it is expected that the Company's existing cash, cash equivalents and investments, will enable the Company to fund its operations for at least 12 months following the date the consolidated financial statements are issued. However, the Company's operating plan may change as a result of many factors currently unknown, and the Company may need to seek additional funds sooner than planned. Moreover, it is particularly difficult to estimate with certainty the Company's future expenses given the dynamic nature of its business, the COVID-19 pandemic and the macro-economic environment generally.

The Company's ability to raise additional funds will depend on financial, economic and other factors, many of which are beyond its control. In particular, the COVID-19 pandemic continues to rapidly evolve and has already resulted in a significant disruption of global financial markets. If the disruption persists or deepens, the Company could be unable to access additional capital, which could negatively affect its ability to consummate certain corporate development transactions or other important, beneficial or opportunistic investments. If additional funds are not available to the Company when needed, on terms that are acceptable to the Company, or at all, the Company may be required to: delay, limit, reduce or terminate nonclinical studies, clinical trials or other research and development activities or eliminate one or more of its development programs altogether; or delay, limit, reduce or terminate its efforts to establish manufacturing and sales and marketing capabilities or other activities that may be necessary to commercialize any future approved products, or reduce the Company's flexibility in developing or maintaining its sales and marketing strategy.

2. Summary of significant accounting policies

The accompanying consolidated financial statements have been prepared on a basis that contemplates the continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the normal course of business.

Risks and uncertainties

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. As a result, the Company is unable to predict the timing or amount of increased expenses or when or if the Company will be able to achieve or maintain profitability. Drug candidates currently under development will require significant additional research and development efforts, including extensive nonclinical and clinical testing and regulatory approval.

Moreover, it is particularly difficult to estimate with certainty the Company's future expenses given the dynamic nature of its business, the COVID-19 pandemic and the macro-economic environment generally.

Basis of presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) and include all adjustments necessary for the fair presentation of the

Company's financial position for the periods presented. Any reference in these notes to applicable accounting guidance is meant to refer to the authoritative U.S. GAAP included in the Accounting Standards Codification (ASC), and Accounting Standards Update (ASU) issued by the Financial Accounting Standards Board (FASB).

Principles of consolidation

The accompanying consolidated financial statements include Aligos-US and its wholly owned subsidiaries Aligos-Belgium, Aligos-Australia and Aligos-Shanghai. All intercompany balances and transactions have been eliminated.

Use of estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP generally requires management to make certain estimates and assumptions that affect the reported amounts in the consolidated financial statements and accompanying notes. The Company regularly evaluates estimates and assumptions related to assets and liabilities, at the dates of the consolidated financial statements and the reported amounts of expenses during the reporting period. Areas where management uses subjective judgments include, but are not limited to, right-of-use assets, lease obligations, impairment of long-lived assets, stock-based compensation, accrued research and development costs, revenue from collaborations, deferred revenue, redeemable convertible preferred stock liability and pension liabilities in the accompanying consolidated financial statements. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

Deferred offering costs

The Company capitalizes certain legal, professional accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated, including the Company's July 2021 follow-on offering and issuance of 4,400,000 shares of the Company's common stock at a price to the public of $19.00 per share for net proceeds of $77.7 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company. After consummation of the financing, these costs are recorded as a reduction of the proceeds received from the equity financing. If a planned equity financing is abandoned, the deferred offering costs are expensed immediately as a charge to operating expenses in the consolidated statements of operations and comprehensive loss. There were no deferred offering costs recorded within other assets on the Company's consolidated balance sheets as at each of December 31, 2021 and 2020.

Foreign currency

The Company's foreign subsidiaries use the U.S. dollar as their functional currency, and they initially measure the foreign currency denominated assets and liabilities at the transaction date. Monetary assets and liabilities are then re-measured at exchange rates in effect at the end of each period, and non-monetary assets and liabilities are converted at historical rates. A re-measurement loss was recognized during the year ended December 31, 2021 of $6,000, and a re-measurement gain was recognized during the year ended December 31, 2020 of $121,000, and are reflected within interest and other income (expense), net on the consolidated statements of operations and comprehensive loss.

Segment information

The Company has determined that the Chief Executive Officer is its Chief Operating Decision Maker. The Company's Chief Executive Officer reviews financial information presented on a consolidated basis for the purposes of assessing the performance and making decisions on how to allocate resources. Accordingly, the Company has determined that it operates in a single reportable segment. No revenue has been generated since inception.

The Company has $5.0 million and $1.2 million of fixed assets in Aligos-US and Aligos-Belgium, respectively, as of December 31, 2021 and $6.6 million and $1.4 million of fixed assets in Aligos-US and Aligos-Belgium, respectively as of December 31, 2020.

Cash equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents.

Restricted cash

As of December 31, 2021 and 2020, the restricted cash balance was $0.2 million and $0.6 million, respectively, and was used primarily to secure letters of credit in relation to the Company's operating leases and deposits on rental assets (Note 6), as well as employee withholdings for the employee stock purchase plan.

Investments

The Company generally invests its excess cash in money market funds and investment grade short-to-intermediate-term fixed income securities. Such investments are included in cash, cash equivalents, short-term and long-term investments on the consolidated Balance Sheets.

The Company determines the appropriate classification of short-term and long-term securities at the time of purchase and re-evaluates such designation as of each balance sheet date. Securities are classified as held-to-maturity when the Company has the positive intent and ability to hold the securities to maturity, otherwise securities are classified as available-for sale. Held-to-maturity securities are carried at amortized cost. Available-for-sale debt securities are measured and reported at fair value using quoted prices in active markets for similar securities. Unrealized gains and losses on available-for-sale securities are reported as a separate component of stockholders' equity. Premiums or discounts from par value are amortized to investment income over the life of the underlying investment. The cost of securities sold is determined on a specific identification basis, and realized gains and losses are included in interest and other income (expense), net within the consolidated statements of operations and comprehensive loss.

For both held-to-maturity and available-for-sale investments, the Company periodically reviews each individual security position that has an unrealized loss, or impairment, to determine if that impairment is other-than-temporary. If the Company believes an impairment of a security position is other than temporary, based on available quantitative and qualitative information as of the report date, the loss will be recognized as other income (expense), net, in the Company's consolidated statements of operations and a new cost basis in the investment is established. No impairment charges were recorded during the years ended December 31, 2021 and 2020.

As of December 31, 2021 and 2020, investments consisted of Certificates of Deposit and U.S. Treasury securities, with original maturities of up to 1.50 years.

Concentrations of credit risk and significant suppliers

The Company has no significant off-balance sheet risk, such as foreign exchange contracts, option contracts, or other foreign hedging arrangements. Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, restricted cash and investments. Periodically, the Company maintains deposits in accredited financial institutions in excess of federally insured limits. The Company deposits its cash in financial institutions that it believes have high credit quality and has not experienced any losses on such accounts and does not believe it is exposed to any unusual credit risk beyond the normal credit risk associated with commercial banking relationships. The Company generally invests its excess capital in money market funds, U.S. treasury bonds, U.S. treasury bills and certificates of deposit that are subject to minimal credit and market risks.

The Company is dependent on various third parties to manufacture compounds for the Company to conduct research and studies for its programs. These programs would be adversely delayed by a significant interruption in the supply of active pharmaceutical ingredients.

Leases

The Company determines if an arrangement is a lease at the inception of the lease. Operating leases are included in operating lease right-of-use (ROU) assets and operating lease liabilities in the consolidated balance sheet. Finance leases are included in property and equipment and finance lease liabilities in the consolidated balance sheet.

ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent the obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. When the

Company's leases do not provide an implicit rate, an incremental borrowing rate is used based on the information available at the commencement dates in determining the present value of lease payments. The Company uses the implicit rate when readily determinable. The operating lease ROU assets also include any lease payments made and excludes lease incentives when paid by the Company or on the Company's behalf. The Company's lease terms may include the period covered by options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating leases is recognized on a straight-line basis over the lease term.

The Company has lease agreements with lease and non-lease components. The Company elected to not separate lease and non-lease components for all of its building leases. For vehicle leases, lease and non-lease components are accounted for separately. The Company also made an accounting policy election to recognize lease expense for leases with a term of 12 months or less on a straight-line basis over the lease term and not recognize ROU assets or lease liabilities for such leases.

Property and equipment

Property and equipment is stated at cost less accumulated depreciation, and is depreciated using the straight-line method over the estimated useful life of the asset, which are as follows:

Lab equipment	3 years
Computer equipment	3 years
Furniture and office equipment	3-8 years
Vehicles	4 years
Leasehold improvements	Shorter of the useful life or remaining lease term

Expenditures for repairs and maintenance of assets are charged to expense as incurred. Upon retirement or sale, the cost and related accumulated depreciation of assets disposed of are removed from the accounts and any resulting gain or loss is included in loss from operations.

Impairment of long-lived assets

The Company regularly reviews the carrying amount of its property, equipment and intangible assets to determine whether indicators of impairment may exist which warrant adjustments to carrying values or estimated useful lives. If indications of impairment exist, projected future undiscounted cash flows associated with the asset are compared to the carrying amount to determine whether the asset's value is recoverable. If the carrying value of the asset exceeds such projected undiscounted cash flows, the asset will be written down to its estimated fair value. No impairment charges were recorded during the years ended December 31, 2021 or 2020.

Research and development expenses

Research and development costs are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities, including salaries, stock-based compensation and benefits, facilities costs, depreciation, and third-party license fees. Non-refundable prepayments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized.

In-process research and development (IPR&D) expense represents the costs to acquire technologies to be used in research and development that have not reached technological feasibility or have no alternative future uses and thus are expensed as incurred. IPR&D expense also includes upfront license fees and milestones paid to collaborators for technologies with no alternative use.

Collaborative arrangements

The Company enters into collaboration arrangements with pharmaceutical and other partners, under which the Company may grant licenses to its collaboration partners to research and develop potential drug candidates. Consideration under these contracts may include an upfront payment, development, regulatory, sales and other

milestone payments. Contractual payments received for research and development activities performed are recognized on a gross basis in revenue from collaboration arrangements.

The Company may also perform research and development activities under the collaboration agreements where the Company may be granted licenses from its collaboration partners. Contractual payments to the other party in collaboration agreements and costs incurred by the Company are recognized on a gross basis in research and development expenses. Royalties and license payments are recorded as due.

When the Company enters into collaboration arrangements, the Company assesses whether the arrangement falls within the scope of ASC 808, *Collaborative Arrangements* (ASC 808) based on whether the arrangement involves joint operating activities and whether both parties would be active participants and would be exposed to significant risks and rewards of the arrangement. To the extent that the arrangement falls within the scope of ASC 808, the Company assesses whether the payments between the parties fall within the scope of other accounting literature such as ASC 606, *Revenue from Contracts with Customers* (ASC 606).

During the year ended December 31, 2021, the Company made a milestone payment of $0.5 million. No royalties were due; therefore, the Company did not pay or expense any royalties. During the year ended December 31, 2020, a development milestone was met as the first patient dosing occurred and so the Company made a payment of $4.5 million. The milestone payments were included in research and development in the consolidated statement of operations. The upfront payment received during the year ended December 31, 2020 was recorded on the consolidated balance sheet as deferred revenue from collaborations.

Fair value measurements

Certain assets and liabilities of the Company are carried at fair value under U.S. GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.

Level 3—Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

Stock-based compensation

The Company's stock-based awards consist of restricted stock awards and stock options. For stock-based awards issued to employees and nonemployees, the Company measures the estimated fair value of the stock-based awards on the date of grant and recognizes compensation expense for those awards over the requisite service period, which is generally the vesting period of the respective awards. The Company records expense for awards with service-based vesting using the straight-line method. The Company accounts for forfeitures as they occur.

The Company classifies stock-based compensation expense in its consolidated statements of operations and comprehensive loss in the same manner in which the award recipient's cash compensation costs are classified.

The fair value of each restricted stock award is determined based on the number of shares granted and the value of the Company's common stock on the date of grant. The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option pricing model. The Black-Scholes option-pricing model requires the use of a number of assumptions including the fair value of the common stock, expected volatility, risk-free interest rate, expected dividends, and expected term of the option.

The Company determined the expected stock volatility using a weighted-average of the historical volatility of a group of guideline companies that issued options with substantially similar terms, and expects to continue to do so until such time as the Company has adequate historical data regarding the volatility of its own traded stock price.

The expected term of the Company's stock options has been determined utilizing the simplified method for awards that qualify as "plain-vanilla" options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. The Company has not paid, and does not anticipate paying, cash dividends on its common stock; therefore, the expected dividend yield is assumed to be zero.

The fair value of the Company's 2020 Employee Stock Purchase Plan (the ESPP) is determined on the date the offering period begins using a Black-Scholes option-pricing model and similar assumptions for stock options as described above.

See Note 9 for the assumptions used by the Company in determining the grant date fair value of stock-based awards granted, as well as a summary of the stock-based award activity under the Company's stock-based compensation plan for years ended December 31, 2021 and 2020.

Income taxes

Deferred tax assets and liabilities are determined on the basis of the differences between the consolidated financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established.

The Company accounts for uncertain tax positions recognized in the consolidated financial statements by prescribing a more-likely-than-not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related interest and penalties.

Net loss per share

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, without consideration for potentially dilutive securities.

Diluted net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common stock and potentially dilutive securities outstanding for the period. For purposes of the diluted net loss per share calculation, redeemable convertible preferred stock, stock options, common stock subject to repurchase related to early exercise of stock options, unvested restricted stock subject to repurchase, warrants and convertible notes are considered to be potentially dilutive securities.

Accordingly, in periods in which the Company reports a net loss, diluted net loss per share is the same as basic net loss per share, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Benefit plans

The Company has established a defined contribution savings plan for its employees in Aligos-US under Section 401(k) of the Internal Revenue Code, and a defined benefits plan for its employees in Aligos-Belgium.

The Company uses the standard method for the recognition of the actuarial results as described in ASC 715. This means application of a 10% corridor and amortization over the expected average remaining working lives of the employees. The plan contains benefits to the plan participant on the normal plan retirement date and benefits to the partner after death of the plan participant. This plan is recognized under ASC 715.

Recently issued accounting standards

In June 2016, the FASB issued ASU No. 2016-13. *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU 2016-13), which requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. Currently, U.S. GAAP delays recognition of the full amount of credit losses until the loss is probable of occurring. Under this ASU, the income statement will reflect an entity's current estimate of all expected credit losses. The measurement of expected credit losses will be based upon historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. In November 2018, the FASB issued ASU No. 2018-19,

Codification Improvements to Topic 326, Financial Instruments—Credit Losses (ASU 2018-19), which clarifies that receivables from operating leases are accounted for using the lease guidance and not as financial instruments. In April 2019, the FASB issued ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses* (ASU 2019-04), which clarifies the new expected credit loss methodology for loans, receivables and other financial assets, including recoveries and accrued interest on receivables. In November 2019, the FASB issued ASU No. 2019-11, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses* (ASU 2019-11), which clarifies guidance around how to report expected recoveries. The standard is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early adoption is permitted. The Company is evaluating the potential impact of this standard on its consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (ASU 2019-12). The guidance removes specific exceptions to the general principles in ASC 740, improves application of income tax-related guidance and reduces complexity related to the accounting for income taxes. The standard is effective for fiscal years beginning after December 15, 2021, and interim periods with fiscal years beginning after December 15, 2022. Early adoption is permitted. The Company is evaluating the potential impact of this standard on its consolidated financial statements.

From time to time, new accounting pronouncements are issued by FASB that the Company adopts as of the specified effective date. The Company qualifies as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 and has the option to not "opt out" of the extended transition related to complying with new or revised accounting standards. This means that when a standard is issued or revised and it has different application dates for public and nonpublic companies, the Company has the option to adopt the new or revised standard at the time nonpublic companies adopt the new or revised standard and can do so until such time that the Company either (i) irrevocably elects to "opt out" of such extended transition period or (ii) no longer qualifies as an emerging growth company.

3. Property and equipment

The components of property and equipment were as follows as of December 31, 2021 and 2020:

(in thousands)	2021	2020
Leasehold improvements	$ 5,940	$ 5,655
Lab equipment	5,709	4,833
Computer equipment	994	942
Furniture and office equipment	472	459
Vehicles	305	296
Asset under construction	22	65
Total, at cost	13,442	12,250
Accumulated depreciation	(7,262)	(4,243)
Total, net	$ 6,180	$ 8,007

During the years ended December 31, 2021 and December 31, 2020, depreciation expense was $3.0 million and $2.7 million, respectively. Finance leases for vehicles and lab equipment are also included in property and equipment on the consolidated balance sheets (Note 6).

4. Investments

As of December 31, 2021 and 2020, amortized cost, gross unrealized gains and losses, and estimated fair values of total fixed-maturity securities were as follows:

	December 31, 2020			
(in thousands)	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Estimated Fair Value
Held-to-maturity securities:				
U.S. Treasury bonds	$ 10,002	$ 14	$ -	$ 10,016
Available-for-sale securities:				
U.S. Treasury bonds	$ 13,060	$ 68	$ -	$ 13,128
	$ 23,062	$ 82	$ -	$ 23,144

	December 31, 2021			
(in thousands)	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Estimated Fair Value
Available-for-sale securities:				
U.S. Treasury bonds	$ 15,146	$ -	$ (36)	$ 15,110
Certificates of deposit	3,922	-	(4)	3,918
	$ 19,068	$ -	$ (40)	$ 19,028

Changes in fair value are related to changes in market interest rates. The Company expects to collect all contractual principal and interest payments.

Amortized cost and estimated fair value of fixed-maturity securities at December 31, 2021 by contractual maturity were as follows:

	2021	
(in thousands)	Amortized Cost	Estimated Fair Value
Amounts maturing in:		
One year or less	$ 3,922	$ 3,918
More than one year	15,146	15,110
Total investments	$ 19,068	$ 19,028

The Company recorded interest income of $0.2 million and $1.3 million, respectively, during the years ended December 31, 2021, and 2020, as a component of interest and other income (expense), net on the Company's consolidated statement of operations and comprehensive loss.

5. Accrued liabilities

Accrued liabilities consisted of the following as of December 31:

(in thousands)	2021	2020
Accrued compensation	$ 6,329	$ 7,274
Accrued payables	17,554	8,554
Liability for early exercised stock options	276	569
Other	1,235	167
Total	$ 25,394	$ 16,564

6. Leases

The Company has operating and finance leases for corporate offices, research and development facilities, and certain vehicles and lab equipment. These leases have remaining lease terms of four to six years, some of which

include options to extend the leases for five to eight years. The Company has determined that it is not reasonably certain to exercise the options under any leases. The lease of research and development facilities includes costs for utilities and common area maintenance which have been included in the calculation of lease payments. Differences between lease payments as measured at lease inception and variations in monthly payments will be recognized as operating expenses in the period in which the obligation is incurred. The Company entered into a new 5-year lease in the fourth quarter of 2021. The lease is for approximately 12,000 square feet of office space in South San Francisco to accommodate growth, with a renewal option for an additional 5-years, which we are not certain to renew at this time. The rental payments under the lease agreement are approximately $2.5 million over the lease term.

Leases with an initial term of 12 months or less are not recorded on the balance sheet, and the Company recognizes lease expense for these leases on a straight-line basis over the lease terms. Leases with terms greater than 12 months are included in operating lease ROU assets and operating lease liabilities in the Company's consolidated balance sheets as of December 31, 2021 and 2020. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Maturities of lease liabilities as of December 31, 2021, were as follows:

(in thousands)	Operating Lease	Finance Lease
Year ending December 31:		
2022	$ 3,116	$ 144
2023	3,361	109
2024	3,305	70
2025	3,418	68
2026	3,534	51
Thereafter	1,113	—
	17,847	442
Less: imputed interest	(3,791)	(43)
Present value of lease liabilities	14,056	399
Less: current portion	(2,769)	(138)
Lease liabilities net of current portion	$ 11,287	$ 261

The components of lease expense were as follows for the years ended December 31, 2021 and 2020:

(in thousands)	2021	2020
Operating lease cost	$ 1,990	$ 1,847
Finance lease cost:		
Amortization of right-of-use assets	107	60
Interest on lease liabilities	15	9
Total finance lease cost	$ 122	$ 69
Short-term lease cost	$ 89	$ 15

The Company made payments of $2.8 million and $2.5 million during the years ended December 31, 2021, and 2020, respectively, which are included as cash flow from operations on the consolidated statements of cash flows.

As of December 31, 2021 and 2020, $608,000 and $296,000 of finance lease ROU assets, respectively, were presented as part of property and equipment on the consolidated balance sheet with accumulated amortization of $214,000 and $107,000, respectively.

Additional information related to the Company's leases was as follows as of December 31:

	2021	2020
Operating Lease:		
Weighted-average remaining lease term (years)	5.18	5.97
Weighted-average discount rate	9.08%	9.35%
Finance Lease:		
Weighted-average remaining lease term (years)	3.83	2.68
Weighted-average discount rate	4.86%	3.15%

7. Derivative liabilities and redeemable convertible preferred stock liability

Warrants

In connection with the issuance of the Notes, Lenders were issued Warrants to purchase 134,112 shares of the Company's capital stock. The Warrants have a coverage percentage of 25% of the principal amount of the Notes and have a ten-year expiration date from the applicable closing date of April 20, 2018 or June 6, 2018.

The underlying shares issuable upon the exercise of the Warrants were eligible to be converted into the next round of equity financing. The Warrants became exercisable into shares of Series A for an exercise price of $9.32 per share.

The Company recorded the Warrants initially at fair value (Note 10) as derivative liabilities on the consolidated balance sheet with the remaining value being allocated to the Notes as a debt discount. The fair value of the Warrants upon issuance on April 20, 2018 and June 6, 2018, was $0.7 million and $238,000, respectively. Due to the IPO in October 2020, all outstanding warrants as of December 31, 2020 were automatically exercised for the issuance of Common Stock, and following that exercise, such warrants were no longer outstanding.

As Series A contains a conditional obligation for the Company to repurchase the shares for cash consideration, the Warrants remain outstanding as derivative liabilities with changes in fair value being recorded on the consolidated statements of operations and comprehensive loss. For the year ended December 31, 2020, the Company recorded a change in fair value of derivative liabilities $296,000.

Redeemable convertible preferred stock liability

In connection with the issuance of Series B-1 Redeemable Convertible Preferred Stock (the Series B-1) (Note 8), the Series B-1 preferred stockholders committed to purchase and the Company committed to sell 3,569,630 shares of Series B-2 Redeemable Convertible Preferred Stock (the Series B-2) at a price of $11.20563 per share in a subsequent closing, contingent upon the achievement of certain developmental milestones or a receipt of a waiver of achievement of the milestones. The Redeemable Convertible Preferred Stock Liability is considered a freestanding instrument that qualifies as a liability under ASC Topic 480, *Distinguishing Liabilities from Equity* (ASC 480) as the Company is committed to issue an instrument that ultimately may require a transfer of assets. The liability is accounted for at fair value and re-measured at each reporting date (Note 10). On the date of the initial closing, the Company recorded the Redeemable Convertible Preferred Stock Liability at a fair value of $3.2 million.

As of December 31, 2020, all Series B-2 shares were issued. As a result of the IPO, the Series B-2 shares converted to shares of common stock. The Company recorded a change in fair value of the liability of $11.4 million for the year ended December 31, 2020 included in interest and other (expense) income, net. The convertible preferred stock liability was retired as of the IPO.

8. Capital stock

Common stock

On October 20, 2020, the certificate of incorporation was amended to increase the total shares of Common Stock authorized for issuance to 320,000,000 and decrease the total shares of preferred stock authorized for issuance to 10,000,000 with a par value of $0.0001 per share. 300,000,000 shares of the Common Stock were designated as "Voting Common Stock" and 20,000,000 shares of the Common Stock were designated as "Non-Voting Common Stock".

The holders of shares of voting Common Stock are entitled to one vote for each share of Common Stock at all meetings of stockholders.

Redeemable convertible preferred stock

On August 16, 2018, the Company entered into the Series A Preferred Stock Purchase Agreement for the purchase and sale of Series A preferred stock for $9.32 per share. The Company received $75.0 million in cash proceeds from the initial purchasers. On September 19, 2018, the Company received an additional $20.0 million in cash proceeds from subsequent purchasers. Additionally, on the initial closing date, $5.6 million in convertible notes plus accrued interest converted into shares of Series A and the notes were subsequently cancelled. The Warrants associated with the convertible notes became exercisable into Series A. Each share of Series A is convertible into Common Stock on a one-for-one basis. In connection with the issuance of Series A, the Company incurred $194,000 in issuance costs which have offset amounts reported as temporary equity as of December 31, 2019. As of December 31, 2020, in connection with the Company's IPO, all shares of Series A converted into Common Stock.

On December 23, 2019, the Company entered into the Series B-1 and Series B-2 Preferred Stock Purchase Agreement, pursuant to which the investors committed to invest an aggregate amount of up to $125.0 million for the issuance and sale of shares of Series B-1 and Series B-2 (collectively, the Series B), at a price of $10.18690 and $11.20563 per share, respectively. The Company issued 8,344,034 shares of Series B-1 for cash proceeds of $85.0 million at the initial closing on December 23, 2019. The investors also committed to purchase and the Company committed to sell 3,569,630 shares of Series B-2 in a subsequent closing (the Second Closing), contingent upon achievement by the Company of certain development milestones or a receipt of a waiver of achievement of the milestones. No shares of Series B-2 were issued as of December 31, 2019. In connection with the issuance of Series B-1, the Company incurred $442,000 in issuance costs which have offset amounts reported as temporary equity as of December 31, 2019.

Prior to the IPO, the Company issued 3,569,630 shares of Series B-2, which upon the closing of the IPO converted into common stock. In connection with the Company's IPO, all shares of Series B-1 converted into common stock. As of December 31, 2020, there was 10,000,000 shares of preferred stock authorized and no preferred stock issued.

9. Stock-based compensation

2018 Equity incentive plan

The Company's 2018 Equity Incentive Plan (the 2018 Plan) allows the Company to issue restricted stock awards and restricted stock units, and to grant incentive stock options or non-qualified stock options. Incentive stock options may be granted only to the Company's employees including officers and members of the Board who are also employees. Restricted stock awards, restricted stock units and non-qualified stock options may be granted to employees, members of the Board, outside advisors, and consultants of the Company (the Participants). The Company is authorized to issue awards for 4,913,665 shares of Common Stock under the 2018 Plan. The Company has granted awards of common stock in the form of 4,279,693 shares as of December 31, 2021 with none remaining available for future grant. Following the Company's IPO in October 2020, all remaining shares from the 2018 Plan will be available for issuance under the 2020 Plan (as defined below).

2020 Incentive award plan

The Company adopted the 2020 Incentive Award Plan (the 2020 Plan) effective October 15, 2020. The 2020 Plan provides for a variety of stock-based compensation awards, including stock options, stock appreciation rights, or SARs, restricted stock awards, restricted stock unit awards, performance bonus awards, performance stock unit awards, dividend equivalents, or other stock or cash based awards. The Company has granted 3,867,000 shares subject to awards as of December 31, 2021 with 2,637,000 remaining available for future grant.

Following the effectiveness of the 2020 Plan, the Company will not make any further grants under the 2018 Plan. However, the 2018 Plan will continue to govern the terms and conditions of the outstanding awards granted under this plan. Shares of common stock subject to awards granted under the 2018 Plan that are forfeited or lapse unexercised and which following the effective date of the 2020 Plan are not issued under the 2018 Plan will be available for issuance under the 2020 Plan.

2020 Employee stock purchase plan

The Company adopted the 2020 Employee Stock Purchase Plan (the 2020 ESPP) effective on October 15, 2020. The 2020 ESPP enables eligible employees of the Company to purchase shares of common stock at a discount

to fair market value. The Company has initially reserved for issuance 368,901 shares of common stock pursuant to the 2020 ESPP. As of December 31, 2021, 45,610 grants of awards under this plan have been made.

During the year ended December 31, 2021, the Company's 2020 ESPP compensation expense was $0.9 million. The first purchase in connection with our employee stock purchase plan was in 2021, therefore there was no expense in 2020. The assumptions that the Company used to determine the grant-date fair value of shares granted to participants were as follows, disclosed on a grant date basis:

	2021
Expected term (in years)	0.5 - 2.0 years
Risk-free interest rate	0.03% - 0.54%
Dividend yield	—
Volatility	50.41% - 97.14%
Weighted-average estimated fair value of purchase rights	$4.13 - $13.49

Stock options

The exercise price for incentive stock options is at least 100% of the fair market value on the date of grant for stockholders owning less than 10% of the voting power of all classes of stock, or at least 110% of the fair market value for stockholders owning more than 10% of the voting power of all classes of stock. Options generally expire in 10 years and vest over periods determined by the Board, generally 48 months. Certain stock options referred to as “early exercise stock options” permit the holders to exercise the option in whole or in part prior to the full vesting of the option in exchange for unvested shares of Restricted Stock with respect to any unvested portion of the option so exercised.

During the years ended December 31, 2021 and December 31, 2020, the Company’s stock option compensation expense was approximately $12.2 million and $2.6 million, respectively, and there was no recognized tax benefit in either year. As of December 31, 2021, the unamortized expense balance was $33.6 million, to be amortized over a weighted-average period of 2.56 years.

The assumptions that the Company used to determine the grant-date fair value of stock options granted to Participants were as follows, presented on a weighted-average basis:

	2021	2020
Expected term (in years)	5.72	5.79
Risk-free interest rate	0.99 %	0.93 %
Dividend yield	—	—
Volatility	81.21 %	77.14 %

Stock option activity during the year ended December 31, 2021 and 2020 was as follows:

	Number of Options	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in $000)
Outstanding as of December 31, 2019	346,872	$ 1.30	9.01	$ 744
Granted	5,382,362	$ 11.42		
Exercised	(188,990)	$ 2.33		810
Forfeited	(52,096)	$ 1.76		
Outstanding as of December 31, 2020	5,488,148	$ 11.19	9.57	$ 90,335
Granted	482,380	$ 20.31		
Exercised	(123,621)	$ 3.16		2,338
Forfeited or expired	(154,393)	$ 13.66		
Outstanding as of December 31, 2021	5,692,514	$ 12.07	8.63	$ 16,763
Options vested and expected to vest as of December 31, 2021	5,652,622	$ 12.13	8.63	$ 16,427
Options vested and exercisable as of December 31, 2021	1,788,095	$ 9.48	8.40	$ 8,072

The weighted-average grant date fair value of stock options granted was $13.76 per share during the year ended December 31, 2021. The weighted-average grant date fair value of stock options granted was $7.50 per share during the year ended December 31, 2020.

During the year ended December 31, 2021 the Company did not issue shares for unvested stock options, and in the year ended December 31, 2020, the Company issued 371,939 shares of Common Stock upon the exercise of unvested stock options or purchases for unvested restricted stock awards. As of December 31, 2021 and 2020, there were 163,855 and 396,522 shares of Common Stock, respectively, held by employees subject to repurchase at an aggregate price of $0.3 million and $0.6 million, respectively. A corresponding liability was recorded and included in accrued expenses on the consolidated balance sheet as of December 31, 2021 and 2020.

Restricted stock awards

The Company may grant restricted stock purchase awards to the Participants to purchase restricted stock under the Company's Plan, which are subject to vesting conditions. The purchase prices of the restricted stock are determined by the Board. The Company has a right to repurchase the shares if the Participant's service period is not fulfilled or upon termination of service at the original per share issuance price. The right of repurchase lapses over a service period which is typically four years with 25% vesting on the first anniversary of the vesting commencement date and 1/48 each month thereafter.

Before the adoption of the Company's Plan, the Company granted 502,964 restricted stock awards to employees and founders. These restricted stock awards have similar characteristics to the restricted stock awards granted under the Company's Plan, other than the right of repurchase, which typically lapses over three years with 33% vesting on the first anniversary of the vesting commencement date and 1/36 each month thereafter.

During the years ended December 31, 2021 and December 31, 2020, the Company recorded a total stock-based compensation expense of $357,000 and $361,000, respectively, related to the restricted stock awards. As of December 31, 2021, unrecognized stock-based compensation costs related to outstanding unvested restricted stock awards that are expected to vest were approximately $95,000, expected to be recognized over a weighted-average period of 0.3 years.

The following table summarizes the Company's restricted common stock activity for years ended December 31, 2021 and 2020:

	Number of Awards	Weighted-Average Grant Date Fair Value per Share	Aggregate Fair Value (in $000)
Issued and unvested as of December 31, 2019	827,187	$ 1.01	$ 834
Restricted stock awards granted	—		—
Restricted stock awards vested	(418,776)	$ 0.86	(361)
Issued and unvested as of December 31, 2020	408,411	$ 1.16	$ 473
Restricted stock awards granted	—		—
Restricted stock awards vested	(319,357)	$ 1.12	(356)
Issued and unvested as of December 31, 2021	89,054	$ 1.30	$ 117

Stock-based compensation expense was allocated as follows for the years ended December 31, 2021 and December 31, 2020:

(in thousands)	2021	2020
Research and development	$ 7,554	$ 1,041
General and administrative	5,903	1,934
Total	$ 13,457	$ 2,975

10. Fair value measurements

The following tables present the fair value of the Company's financial instruments that are measured or disclosed at fair value on a recurring basis:

	Fair Value Measurements as of December 31, 2021		
(in thousands)	Level 1	Level 2	Level 3
Assets:			
Cash equivalents	$ 186,816	$ —	$ —
Certificates of deposit	3,918	—	—
U.S. Treasury bonds	15,110	—	—
	$ 205,844	$ —	$ —

	Fair Value Measurements as of December 31, 2020		
(in thousands)	Level 1	Level 2	Level 3
Assets:			
Cash and cash equivalents	$ 220,383	$ —	$ —
U.S. Treasury bonds	23,144	—	—
	$ 243,527	$ —	$ —

In order to determine the fair value of the Warrants, the Company utilized a probability-weighted multi-scenario Black-Scholes option-pricing model to determine the fair value of the Warrants by accounting for the probability of multiple possible outcomes, including deemed liquidation events, as best estimated by management.

Estimates and assumptions impacting the fair value measurement including the fair value of the underlying shares of Series A, the remaining contractual or expected term of the Warrants, risk-free interest rate, expected dividend yield and expected volatility of the price of the underlying preferred stock on an as converted basis. The Company considered the probability of a deemed liquidation event in determining the remaining expected term of the Warrants, which was used as an input to the probability-weighted multi-scenario Black-Scholes option-pricing model adopted in 2019. The Company lacked company-specific historical and implied volatility information of its stock since there was no market prior to the IPO. Therefore, it estimated its expected stock volatility based on the historical volatility of publicly traded guideline companies for a term equal to the remaining contractual or expected term of the Warrants. The risk-free interest rate was determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining contractual or expected term of the Warrants. The Company estimated no expected dividend yield based on the fact that the Company has never paid or declared dividends and does not intend to do so in the foreseeable future.

The Warrants were converted into shares of Series A stock immediately prior to the IPO and therefore they were retired as of December 31, 2020. The Warrants were measured at fair value under the following assumption immediately prior to retirement:

	2020
Exercise price	$ 9.32
Term (in years)	0.32
Risk-free interest rate	0.10%
Dividend yield	—
Volatility	120.00%

The following table sets forth a summary of changes in fair value of the Company's derivative liability for which fair value was determined by Level 3 inputs:

	Warrants	Redeemable Convertible Preferred Stock Liability
Balance as of December 31, 2019	$ 461	$ 3,174
Exercise of warrants	(137)	—
Change in fair value	296	11,386
Retirement of liability	(620)	(14,560)
Balance as of December 31, 2020	$ —	$ —

Immediately prior to the IPO, the Redeemable Convertible Preferred Stock Liability was converted in shares of Series B-2 Preferred Stock, which then converted into shares of common stock. As of December 31, 2020, the liability was retired.

The Redeemable Convertible Preferred Stock Liability was measured at fair value under the following assumptions through redemption on October 6, 2020:

	2020
Exercise price	$ 11.21
Term (in years)	0.02-0.75
Risk-free interest rate	0.08%-0.11%
Dividend yield	—
Volatility	—%

The significant unobservable inputs that were used in the fair value measurement of the Redeemable Convertible Preferred Stock Liability included the probability of milestone achievement and/or milestone achievement waiver, the Series B-2 value estimate under each scenario, the term, and the equity volatility, which was a statistical measure of the dispersion of returns for a given security. Significant increases (decreases) in the milestone achievement and/or milestone waiver would have resulted in a significantly higher (lower) fair value

measurement. Significant decreases (increases) in assumed current or future Series B-2 value would have resulted in a significantly lower (higher) fair value measurement. Significant increases (decreases) in the term would have resulted in a significantly higher (lower) fair value measurement. Significant increases (decreases) in the volatility would have resulted in significantly higher (lower) fair value measurements.

11. License and collaboration agreements

Agreement with Emory University (Emory)

In June 2018, the Company entered into a license agreement with Emory (the Emory License Agreement), pursuant to which Emory granted the Company a worldwide, sublicenseable license under certain of its intellectual property rights to make, have made, develop, use, offer to sell, sell, import and export products containing certain compounds relating to Emory's hepatitis B virus capsid assembly modulator technology, for all therapeutic and prophylactic uses. Such license is initially exclusive with respect to specified licensed patents owned by Emory and non-exclusive with respect to certain of Emory's specified know-how. Beginning in June 2022, the license to such patents will become non-exclusive with respect to all fields except for the treatment and prevention of HBV; however, the Company may select up to six compounds which will maintain exclusivity with respect to all therapeutic and prophylactic uses. With respect to all other compounds that are enabled by the licensed patents, those which are jointly invented by the Company and Emory or inventors in the Schinazi laboratory, or which are disclosed in a specified licensed patent, are licensed to the Company exclusively including as to Emory; whereas all other such compounds are licensed to the Company non-exclusively. Under the terms of the Emory License Agreement, the Company is obligated to use commercially reasonable efforts to bring licensed products to market in accordance with a mutually agreed upon development plan. Unless terminated earlier by either party in accordance with the provisions thereof, the Emory License Agreement shall continue until the expiration of the last–to-expire of the patents licensed to the Company thereunder.

In June 2020, the Company amended the license agreement with Emory. Pursuant to the amended license agreement, Emory granted the Company additional patent rights to certain compounds targeting the treatment or prevention of HBV. As consideration for the additional rights, the Company made a one-time, non-refundable payment to Emory in the amount of $150,000, with an additional obligation to pay up to a maximum of $35,000. On the same date, the Company entered into a collaboration agreement with Emory, with the initial research plan pertaining to the synthesis and evaluation of the compounds licensed through the additional patent rights granted in the amended license agreement. The research plan terminates one year from the effective date, with the Company having an option to extend for a second year. In connection with the research plan, the Company will provide Emory funding up to $270,000 per year.

The Company has agreed to pay Emory up to an aggregate of $125.0 million upon the achievement of specified development, regulatory, and commercial milestones, and all ongoing patent costs. During the year ended December 31, 2021, the Company had $195,000 expenses related to milestone payments. During the year ended December 31, 2020, the Company made a payment of $4.5 million in relation to the first patient dosing in a clinical trial which was the first development milestone per the contract. The Company also agreed to pay Emory tiered single-digit royalties on worldwide annual net sales of licensed products, on a quarterly basis and calculated on a product-by-product basis. With respect to licensed products containing any of a specified subset of the licensed compounds, such royalties range from a mid-single digit to a high-single digit percentage rate. With respect to licensed products which do not contain such compounds, the royalties span a range of percentage rates within the mid-single digits if a Phase 1 clinical trial is initiated for the product within three years of the effective date of the Emory License Agreement, and range from a low-single digit to a mid-single digit rate if a Phase 1 clinical trial is initiated more than three years after the effective date. During the years ended December 31, 2021 and December 31, 2020, the Company made no payments associated with royalties.

Agreement with Luxna Biotech Co., Ltd. (Luxna)

On December 19, 2018, the Company entered into a license agreement with Luxna, pursuant to which Luxna granted the Company an exclusive, worldwide, sublicenseable license under certain of Luxna's intellectual property rights to research, develop, make, have made, and commercialize for all therapeutic and prophylactic uses, (i) products containing oligonucleotides targeting the hepatitis B virus genome, (ii) products containing certain oligonucleotides targeting up to three genes which contribute to NASH, which the Company may select at any time during the first eight years of the term, to the extent not licensed to a third party, and (iii) products containing

oligonucleotides targeting up to three genes which contribute to hepatocellular carcinoma, which the Company may select at any time during the first three years of the term. As consideration for this agreement, the Company paid an upfront license fee of $600,000.

In April 2020, the Company amended the license agreement with Luxna. Pursuant to the amended license agreement, Luxna granted the Company an exclusive, worldwide license under the licensed patents to research, develop, make, have made and commercialize products containing oligonucleotides targeting three families of viruses: orthomyxoviridae, paramyxoviridae, and coronaviridae (a family which includes SARS-CoV-2). As consideration for the amended license agreement, the Company paid Luxna a one-time non-refundable fee of $200,000 on April 2020.

The Company is obligated to make payments to Luxna, in aggregate, totaling up to but no more than $55.5 million upon the achievement of specified development, regulatory, and commercial milestones. During the year ended December 31, 2021, the Company recognized $500,000 related to milestone payments, and in the year ended December 31, 2020, the Company recognized no milestone payments. The Company is also required to pay Luxna a low-single digit royalty percentage on net sale of applicable products, if any. During the years ended December 31, 2021 and December 31, 2020, the Company made no payments associated with royalties.

Agreement with Katholieke Universiteit Leuven (KU Leuven)

On June 25, 2020, the Company entered into a Research, Licensing and Commercialization Agreement (KU Leuven Agreement) with KU Leuven, under which the Company is collaborating with KU Leuven's Rega Institute for Medical Research, as well as its Centre for Drug Design and Discovery, to research and develop potential protease inhibitors for the treatment, diagnosis or prevention of coronaviruses, including of SARS-CoV-2. Unless terminated earlier by either party in accordance with provisions in the agreement, the collaboration period will terminate at the earlier of completion of all collaboration activities or 2.5 years. In connection with the KU Leuven Agreement, KU Leuven and the Company granted each other exclusive cross-licenses to use certain know-how and existing patents of the other party as well as certain joint know-how and joint patents to carry out research and development collaboration activities during the collaboration period. KU Leuven granted to the Company an exclusive (including as to KU Leuven), worldwide license under certain of KU Leuven's know-how and existing patents, and certain joint patents and joint know-how, to manufacture and commercialize the licensed products for the treatment, diagnosis or detection of viral infections in humans. KU Leuven reserved the right to use all KU Leuven knowhow, existing KU Leuven patents, joint patents and joint know-how for academic and non-commercial research and teaching purposes. As consideration for this license, the Company is obligated to make payments to KU Leuven, in aggregate, totaling up to but no more than $30.0 million upon the achievement of certain commercial sales milestones. For each licensed product developed through KU Leuven and the Company's collaborative effort, the Company is obligated to make payments to KU Leuven, in aggregate, totaling up to $32.0 million upon the achievement of certain development and regulatory milestones. The Company is also required to pay KU Leuven a low-to-mid-single digit royalty percentage, subject to certain adjustments, on net sales of applicable products, if any. Unless terminated earlier by either party, the agreement shall continue until the expiration of the last to expire royalty term, which is the later of the expiration or termination of the last valid patent claim covering the manufacture, use, sale or importation of the licensed product in a particular country or 10 years after the first commercial sale of a licensed product. During the years ended December 31, 2021 and December 31, 2020, the Company recognized no expenses related to milestone payments.

Agreement with Merck

In December 2020, the Company and Merck & Co. entered into an exclusive License and Research Collaboration Agreement under which Merck and the Company agreed to apply the Company's oligonucleotide platform technology to discover, research, optimize and develop oligonucleotides directed against a NASH target and up to one additional liver-targeted cardiometabolic and/or fibrosis target. Under the terms of the agreement, the Company received an upfront payment from Merck and may receive an additional upfront payment after finalization of a research plan for such additional target. With respect to each collaboration target, the Company will be eligible for up to $458.0 million in development and commercialization milestones as well as tiered royalties on net sales. The Company will be primarily responsible for designing, preparing and evaluating the oligonucleotide molecules and delivering optimized lead molecules, and Merck will be responsible for subsequent research, clinical development and commercialization efforts. The Company determined that the Merck agreement falls within the scope of ASC 808 and we analogized to ASC 606 for the accounting of payments such as upfront payments and other milestones. Revenue is recognized based on percentage of completion of the overall project. During the year

ended December 31, 2021, the Company recognized $4.4 million in revenue from collaborative arrangements related to milestone payments. During the year ending December 31, 2020 the Company recognized no revenue from collaborative arrangements related to milestone payments. The unrecognized portion of the upfront payment received during 2020 is recorded on the consolidated balance sheet as Deferred Revenue from Collaborations.

12. Income taxes

The components of the current provision for income taxes were as follows for the years ended December 31, 2021 and 2020:

(in thousands)	2021	2020
Current:		
State	$ —	$ 1
Federal	—	—
Foreign	143	160
Total current provision for income taxes	$ 143	$ 161
Deferred:		
State	$ —	$ —
Federal	—	—
Foreign	—	—
Total deferred provision for income taxes	$ —	$ —

The Company did not have any deferred provision for income taxes for the years ended December 31, 2021 and 2020.

A reconciliation of the expected income tax (benefit) computed using the federal statutory income tax rate to the Company's effective income tax rate is as follows for the years ended December 31, 2021 and 2020:

	2021	2020
Income tax computed at federal statutory rate	21.00%	21.00%
State taxes, net of federal benefit	6.91%	6.90%
R&D credit carryovers	0.90%	1.40%
Change in valuation allowance	-27.42%	-27.24%
Stock based compensation	-1.19%	-0.24%
Permanent differences	-0.31%	0.27%
Change in fair value of derivatives	0.00%	-2.25%
Effective income tax rate	-0.11%	-0.15%

The components of the deferred tax assets and liabilities were as follows at December 31:

(in thousands)	2021	2020
Deferred tax assets:		
Net operating loss carryforward	$ 72,425	$ 41,930
Operating lease liabilities	4,622	4,453
Tax credits	6,177	4,639
Other accruals and reserves	1,461	1,558
Stock-based compensation	1,216	209
Deferred revenue	2,140	—
Other	22	10
	88,063	52,799
Valuation allowance	(84,288)	(49,133)
Net deferred tax assets	$ 3,775	$ 3,666
Deferred tax liabilities:		
Right of use assets	$ (3,205)	$ (2,857)
Stock-based compensation	—	—
Property and equipment	(570)	(809)
Total deferred tax liabilities	$ (3,775)	$ (3,666)
Total deferred income taxes	$ —	$ —

Management believes that, based on a number of factors, including the Company's historical operating performance and accumulated deficit, it is more likely than not that the deferred tax assets will not be utilized, such that a full valuation allowance has been recorded against the Company's deferred tax assets. In assessing the reliability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized on a jurisdiction by jurisdiction basis. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The valuation allowance increased by $35.2 million and $29.7 million during the years ended December 31, 2021 and 2020, respectively.

As of December 31, 2021, the Company had $255.9 million of federal and $263.0 million of state net operating loss (NOL) carryforwards available to offset future taxable income. The Company's federal NOL carryforwards can be carried forward indefinitely while state NOL carryforwards, if not utilized, will begin expiring in 2038. As of December 31, 2021, the Company had $1.5 million of Australia NOL carryforwards, which carryforward indefinitely. As of December 31, 2021, the Company had research and development credit carryforwards of $6.1 million and $3.0 million available to reduce future taxable income, if any, for federal and state income tax purposes, respectively. If not utilized, the federal credit carryforwards will begin expiring in 2038. The California credit carryforwards have no expiration. Under Sections 382 and 383 of the Code, and corresponding provisions of state law, if a corporation undergoes an "ownership change" (generally defined as a greater than 50 percentage point change (by value) in its equity ownership over a rolling three-year period), the Company's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income may be limited. We performed an IRC Section 382 analysis in 2021 and determined there was an ownership change that resulted in Section 382 limitations. The ownership change limited our ability to utilize net operating losses against future taxable income but will not result in the expiration of any NOLs. We may in the future experience ownership changes as a result of changes in our stock ownership (some of which are not in our control). In addition, under current tax law, federal NOL carryforwards generated in periods after December 31, 2017, may be carried forward indefinitely but, in taxable years beginning after December 31, 2020, may only be used to offset 80% of our taxable income. For these reasons, our ability to utilize our NOL carryforwards and other tax attributes to reduce future tax liabilities may be limited.

The Company adopted the provisions of FASB Accounting Standards Codification (ASC 740-10), *Accounting for Uncertainty in Income Taxes*, upon the date of incorporation. ASC 740-10 prescribes a comprehensive model for the recognition, measurement, presentation and disclosure in financial statements of any uncertain tax positions that have been taken or expected to be taken on a tax return. It is the Company's policy to include penalties and interest expense related to income taxes as a component of other expense and interest expense, respectively, as necessary.

During the years ended December 31, 2021 and 2020, the Company had not recognized any tax-related penalties or interest. No liability related to uncertain tax positions is recorded on the financial statements related to uncertain tax positions. It is the Company's policy to include penalties and interest expense related to income taxes as a component of other expense and interest expense, respectively, as necessary:

(in thousands)	2021	2020
Balance, beginning of the period	$ 1,536	$ 637
Increase related to prior year positions	63	131
Increase related to current year positions	842	768
Balance, ending of the period	$ 2,441	$ 1,536

The Company does not expect that its uncertain tax positions will materially change in the next twelve months. The reversal of the uncertain tax benefits would not impact the Company's effective tax rate as the Company continues to maintain a full valuation allowance against its deferred tax assets.

The Company files income tax returns in the United States, including California, and other states, Australia, Belgium, and China. The Company is not currently under examination by income tax authorities in federal, state or other jurisdictions. All tax returns will remain open for examination by the federal, state and foreign authorities for three or four years, from the date of utilization of any net operating loss or credits.

In January 2018, the FASB released guidance on the accounting for tax on the global intangible low-taxed income (GILTI) provisions of the Tax Reform Act. The GILTI provisions impose a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. The guidance allows companies to make an accounting policy election to either (i) account for GILTI as a component of tax expense in the period in which they are subject to the rules (the period cost method), or (ii) account for GILTI in the Company’s measurement of deferred taxes (the deferred method). After completing the analysis of the GILTI provisions, the Company elected to account for GILTI using the period cost method.

On March 27, 2020, the “Coronavirus Aid, Relief and Economic Security (CARES) Act” (the “Act”) was signed into law. The Act includes provisions relating to refundable payroll tax credits, deferment of the employer portion of certain payroll taxes, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. The Company analyzed the provisions of the Act and determined there was no significant impact to its income taxes for the year ended December 31, 2021.

On June 29, 2020, the California Governor signed Assembly Bill 85 (A.B. 85), which now becomes California law. A.B. 85, which includes several tax measures, provides for a three-year suspension of the use of net operating losses for medium and large businesses and a three-year cap on the use of business incentive tax credits to offset no more than $5 million of tax per year. Generally, A.B. 85 suspends the use of net operating losses for taxable years 2020, 2021, and 2022 for taxpayers with taxable income of $1 million or more.” Since the Company is not expected to generate California source taxable income of more than $1 million, no material impact is anticipated at this time.

On December 27, 2020, the “Consolidated Appropriations Act, 2021” (the CAA) was signed into law. The CAA includes provisions meant to clarify and modify certain items put forth in CARES Act, while providing aid to businesses affected by the pandemic. The CAA allows deductions for expenses paid for by Paycheck Protection Program (PPP) and Economic Injury Disaster Loan (EIDL) Program, clarifies forgiveness of EIDL advances, and other business provisions. The Company analyzed the provisions of the CAA and determined there was no significant impact to its 2021 tax provision.

13. Commitments and contingencies

From time to time, the Company may have certain contingent liabilities, including legal matters that arise in the ordinary course of its business activities. The Company accrues a liability for such matters when it is probable that future expenditures will be made, and such expenditures can be reasonably estimated. The Company had no contingent liabilities requiring accrual as of December 31, 2021 and 2020. The Company enters into contracts in the normal course of business that includes arrangements with clinical research organizations, vendors for preclinical research and vendors for manufacturing. These agreements generally allow for cancellation with notice. As of December 31, 2021, the Company had non-cancellable purchase commitments of approximately $1.9 million related

to the discontinued development of STOPS™ drug candidate. Refer to note 16, *Subsequent Events*, for further details.

14. Benefit plans

Defined contribution plans

The Company established a defined contribution savings plan under Section 401(k) of the Internal Revenue Code. This plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. The Company made matching contributions of $690,000 and $432,000 to the plan during the years ended December 31, 2021 and 2020, respectively.

Defined benefit plans—regular pension plan

ASC Topic 715, *Compensation—Retirement Benefits*, requires an employer to: (a) recognize in its statement of financial position an asset for a plan's overfunded status or a liability for a plan's under-funded status; (b) measure a plan's assets and its obligations that determine its funded status as of the end of the employer's fiscal year; and (c) recognize changes in the funded status of a defined benefit post retirement plan in the year in which the changes occur. Accordingly, the Company is required to report changes in its funded status on its consolidated statement of stockholders' deficit and consolidated statement of operations and comprehensive loss.

Aligos-Belgium offers its employees a regular pension plan in the form of a defined contribution plan (the Regular Pension Plan), which contains a 1.75% legally required minimum rate of return for the participants. The Regular Pension Plan does not meet all the requirements that are needed for recognition of the plans as a defined contribution plan. The Company therefore recognizes the Regular Pension Plan as a defined benefit plan.

The Company measures the fair value of the Regular Plan assets by using Level 3 inputs, unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of assets, including pricing models, discounted cash flow methodologies and similar techniques.

The net periodic benefit cost of the Pension Plan was $249,000 and $268,000, and is recognized in accrued liabilities on the consolidated balance sheet as of December 31, 2021 and 2020, respectively. At December 31, 2021, the projected benefit obligation was $1.0 million, the plan assets were $886,000 and the net pension liability was $116,000. As of December 31, 2020, the projected benefit obligation was $897,000, the plan assets were $636,000, and the net pension liability was $261,000. The Company has recorded the unfunded amount as a liability in its consolidated balance sheet at December 31, 2021 and 2020, under the accrued liabilities caption. The unrealized actuarial gain and loss on pension benefits, net of tax, at December 31, 2021 and 2020 was $127,000 and $84,000, respectively. These amounts were reflected in other comprehensive loss under the caption gain (loss) on pension plans. The Company expects to make contributions to the Pension Plan of approximately $272,000 during 2022. The Company estimates future benefit payments from 2022 to 2026 to be $411,000, and from 2027 thereafter to be $538,000.

Defined benefit plans—Top Hat Plan

In Aligos-Belgium, the Company established a pension bonus complementary plan (the Top Hat Plan), where the bonus payments to each participant are added to the Top Hat Plan. The annual contributions to this plan are based on performance and determined on a discretionary basis by the Company. The Top Hat Plan contains a legal yield guarantee of 1.75%. The Top Hat Plan became effective as of January 1, 2019.

In 2019, the Company accounted for the Top Hat Plan in accordance with ASC 715—*Compensation—Retirement Benefits*, once it became effective. The Top Hat Plan does not meet all the requirements that are needed for recognition as a defined contribution plan. The Company therefore recognizes the Top Hat Plan as a defined benefit plan.

The net periodic benefit cost of the Top Hat Plan was $389,000 and $916,000, and is recognized in accrued liabilities on the consolidated balance sheet as of December 31, 2021 and 2020, respectively. At December 31, 2021, the projected benefit obligation was $1.7 million, the plan assets were $1.2 million and the net pension liability was $463,000. As of December 31, 2020, the projected benefit obligation was $1.7 million, the plan assets were $629,000, and the net pension liability was $1.1 million. The Company has recorded the unfunded amount as a liability in its consolidated balance sheet at December 31, 2021 and 2020, under the accrued liabilities caption. The

unrealized actuarial gain and loss on pension benefits, net of tax, at December 31, 2021 and 2020 was $472,000 and $52,000, respectively. These amounts were reflected in other comprehensive loss under the caption gain (loss) on pension plans. The Company expects to make contributions to the Pension Plan of approximately $382,000 during 2022. The Company estimates future benefit payments from 2022 to 2026 to be $79,000, and from 2027 thereafter to be $281,000.

15. Net loss per share

The following table summarizes the computation of basic and diluted net loss per share of the Company:

	Year Ended December 31,	
	2021	2020
Net loss	$ (128,332)	$ (108,543)
Weighted average common stock outstanding, basic and diluted	39,855,403	9,988,191
Net loss per share – basic and diluted	$ (3.22)	$ (10.87)

The Company's potentially dilutive securities, which include redeemable convertible preferred stock, forward contracts to issue Preferred Stock, options to purchase common stock and unvested restricted stock, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted-average number of shares of Common Stock outstanding used to calculate both basic and diluted net loss per share is the same. The Company excluded the following potential shares of Common Stock, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect:

	Year Ended December 31,	
	2021	2020
Options to purchase common stock	5,692,514	3,344,765
Unvested restricted stock	89,054	408,396
	5,781,568	3,753,161

16. Subsequent events

Discontinued Development of STOPS™ drug candidate

On January 6, 2022, the Company announced that it had halted further development of its STOPS™ drug candidate, ALG-010133, in development to address chronic hepatitis B (CHB). This decision was based on emerging data from the Phase 1 Study ALG-010133-101, that indicated that at the projected efficacious dose (400 mg, estimated to achieve liver exposures >3 x EC90 for HBsAg inhibition) there was no meaningful HBsAg reduction. Furthermore, higher dosage levels (maximum feasible dose is 600 mg) that were planned to be evaluated in a subsequent cohort are very unlikely to reach the 1 log10 IU/mL HBsAg reduction level that the Company had previously defined as necessary to advance the program. No dose limiting safety findings have been identified in CHB subjects dosed at any dose level. In early January, based on this information, the Company's management reviewed the data with members of the study's Study Review Committee, and jointly concluded that the data was not sufficient to support further development of ALG-010133. The halt of ALG-010133 will result in a charge of approximately $1.9 million related to non-cancelable purchase obligations to be recognized in the first quarter of 2022.

Merck Collaboration Agreement

In January 2022, the Company and Merck & Co. entered into a First Amendment to the Exclusive License and Research Collaboration Agreement. The agreement was expanded to include the in-license by Merck of an early-stage program with respect to a second undisclosed NASH target, on which the Company had previously been working independently on. In addition, under this expanded arrangement, Merck has the ability to add an additional

third target of interest in the cardiometabolic/fibrosis space to the collaboration. Under the expanded agreement, the Company will receive a payment from Merck for the in-license of the program directed at a second undisclosed NASH target. Moreover, the Company will receive an additional payment if a third target is designated for the collaboration. With respect to each target in the collaboration, the Company will be eligible to receive up to approximately $460.0 million in development and commercialization milestones as well as tiered royalties on net sales.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of disclosure controls and procedures

Our management has evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, our principal executive officer and principal financial officer, respectively, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this Annual Report on Form 10-K. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures have been designed to provide reasonable assurance of achieving their objectives. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2021, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's annual report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of our internal control over financial reporting based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013 framework). Based on our evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2021.

Changes in internal control over financial reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

As a result of the COVID-19 pandemic, in March 2020, substantially all of our employees began working remotely. We have not identified any material changes in our internal control over financial reporting as a result of these changes to the working environment, in part because our internal control over financial reporting was designed to operate in a remote working environment. We are continually monitoring and assessing the COVID-19 situation to determine any potential impacts on the design and operating effectiveness of our internal controls over financial reporting.

Inherent limitation on the effectiveness over financial reporting

The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, 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. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

We have adopted a code of ethics for directors, officers (including our principal executive officer, principal financial officer and principal accounting officer) and employees, known as the Code of Business Conduct and Ethics. This code is publicly available on our website at investor.aligos.com under the Governance section. If we make any amendments to this code other than technical, administrative or other non-substantive amendments, or grant any waivers, including implicit waivers, from a provision of this code we will disclose the nature of the amendment or waiver, its effective date and to whom it applies on our website at aligos.com or in a Current Report on Form 8-K filed with the SEC.

The remaining information required by this item, including information about our Directors, Executive Officers and Audit Committee, is incorporated by reference to the definitive Proxy Statement for our 2022 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2021.

Item 11. Executive Compensation.

The information required by this Item will be set forth in the section headed “Executive Compensation” in our Proxy Statement and is incorporated in this Annual Report by reference.

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

The information required by this Item will be set forth in the section headed “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement and is incorporated in this Annual Report by reference.

Information regarding our equity compensation plans will be set forth in the section headed “Executive Compensation” in our Proxy Statement and is incorporated in this Annual Report by reference.

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

The information required by this Item will be set forth in the section headed “Transactions with Related Persons” in our Proxy Statement and is incorporated in this Annual Report by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this Item will be set forth in the section headed “—Ratification of Selection of Independent Registered Public Accounting Firm” in our Proxy Statement and is incorporated in this Annual Report by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) Documents filed as a part of this Annual Report on Form 10-K:

1. Financial Statements

The following financial statements are included in Part II, Item 8 of this Annual Report on Form 10-K:

2. All other schedules have been omitted because they are not required, not applicable, or the required information is otherwise included.

3. The exhibits listed in the Exhibit Index below are filed or incorporated by reference as part of this Annual Report.

Item 16. Form 10-K Summary.

None.

Exhibit Index

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
3.1	Amended and Restated Certificate of Incorporation.	8-K	10/20/2020	3.1	
3.2	Amended and Restated Bylaws.	8-K	10/20/2020	3.2	
4.1	Reference is made to Exhibits 3.1 and 3.2.				
4.2	Form of Common Stock Certificate.	S-1/A	10/9/2020	4.2	
4.3	Description of Securities.	10-K	3/23/2021	4.3	
10.1(a)†	Aligos Therapeutics/Emory University License Agreement by and between Aligos Therapeutics, Inc. and Emory University, dated June 26, 2018.	S-1	9/25/2020	10.1(a)	
10.1(b)†	First Amendment to License Agreement by and between Aligos Therapeutics, Inc. and Emory University, dated June 18, 2020.	S-1	9/25/2020	10.1(b)	
10.2(a)†	License Agreement by and between Aligos Therapeutics, Inc. and Luxna Biotech Co., Ltd., dated December 19, 2018.	S-1	9/25/2020	10.2(a)	
10.2(b)†	Amendment to License Agreement by and between Aligos Therapeutics, Inc. and Luxna Biotech Co., Ltd., dated April 8, 2020.	S-1	9/25/2020	10.2(b)	
10.3	Lease between Aligos Therapeutics, Inc. and Britannia Biotech Gateway Limited Partnership, dated June 21, 2018.	S-1	9/25/2020	10.3	
10.4	Amended and Restated Investors' Rights Agreement dated October 9, 2020.	S-1/A	10/9/2020	10.4	
10.5(a)#	2018 Equity Incentive Plan, as amended.	S-1	9/25/2020	10.5(a)	
10.5(b)#	Form of Stock Option Grant Notice and Stock Option Agreement under 2018 Equity Incentive Plan, as amended.	S-1	9/25/2020	10.5(b)	
10.5(c)#	Form of Early Exercise Stock Option Grant Notice and Stock Option Agreement under 2018 Equity Incentive Plan, as amended.	S-1	9/25/2020	10.5(c)	
10.5(d)#	Form of International Stock Option Grant Notice and Stock Option Agreement under 2018 Equity Incentive Plan, as amended.	S-1	9/25/2020	10.5(d)	
10.6(a)#	2020 Incentive Award Plan.	S-1/A	10/9/2020	10.6(a)	
10.6(b)#	Form of Stock Option Grant Notice and Stock Option Agreement under the 2020 Incentive Award Plan.	S-1/A	10/9/2020	10.6(b)	
10.6(c)#	Form of Restricted Stock Award Agreement under the 2020 Incentive Award Plan.	S-1/A	10/9/2020	10.6(c)	
10.6(d)#	Form of Restricted Stock Unit Award Grant Notice under the 2020 Incentive Award Plan.	S-1/A	10/9/2020	10.6(d)	
10.7#	2020 Employee Stock Purchase Plan.	S-1/A	10/9/2020	10.7	
10.8#	Confirmatory Employment Letter by and between Aligos Therapeutics, Inc. and Lucinda Quan, J.D., dated May 14, 2019.	S-1/A	10/9/2020	10.10	
10.9#	Non-Employee Director Compensation Program.	S-1/A	10/9/2020	10.11	
10.10	Form of Indemnification Agreement for directors and officers.	S-1/A	10/9/2020	10.12	
10.11#	Amended and Restated Employment Agreement, effective as of February 10, 2021, by and between the Company and Leonid Beigelman.	10-Q	5/10/2021	10.1	

10.12#	Amended and Restated Employment Agreement, effective as of February 10, 2021, by and between the Company and Lawrence M. Blatt.	10-Q	5/10/2021	10.2	
10.13#	Employment Agreement by and between Aligos Therapeutics, Inc. and Julian Symons, D.Phil., effective as of May 14, 2019.	10-Q	5/10/2021	10.3	
10.14#	Form of Change in Control and Severance Agreement.	10-Q	5/10/2021	10.4	
10.15#	Consulting agreement by and between Aligos Therapeutics, Inc. and Kathleen Glaub, dated June 17, 2021.	10-Q	8/5/2021	10.1	
10.16	Lease Agreement between 601 & 651 GATEWAY CENTER LP and ALIGOS THERAPEUTICS, INC., dated December 9, 2021				X
21.1	Subsidiaries of Registrant.				X
23.1	Consent of Independent Registered Public Accounting Firm.				X
24.1	Power of Attorney (included on signature page to this Form 10-K).				X
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1*	Certification of Principal 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 Principal 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 Taxonomy Extension Schema Document.				X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.				X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.				X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.				X
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2021 has been formatted in Inline XBRL				X

† Portions of the exhibit, marked by brackets, have been omitted because the omitted information (i) is not material and (ii) is the type of information that the registrant both customarily and actually treats as private and confidential.
# Indicates management contract or compensatory plan.
* The certifications attached as Exhibits 32.1 and 32.2 that accompany this Annual Report on Form 10-K, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Aligos Therapeutics, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.

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**.**

Aligos Therapeutics, Inc.

Date: March 10, 2022

By: /s/ Lawrence M. Blatt
Lawrence M. Blatt, Ph.D.
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Lawrence M. Blatt, Ph.D., Lesley Ann Calhoun and Lucinda Quan, J.D., and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution, for him in any and all capacities, to sign any and all amendments to this annual report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Lawrence M. Blatt Lawrence M. Blatt, Ph.D.	Chief Executive Officer and Director *(Principal Executive Officer)*	March 10, 2022
/s/ Lesley Ann Calhoun Lesley Ann Calhoun	Executive Vice President, Chief Financial Officer *(Principal Financial and Accounting Officer)*	March 10, 2022
/s/ Leonid Beigelman Leonid Beigelman, Ph.D.	President and Director	March 10, 2022
/s/ K. Peter Hirth K. Peter Hirth, Ph.D.	Director	March 10, 2022
/s/ Jack B. Nielsen Jack B. Nielsen	Director	March 10, 2022
/s/ Carole Nuechterlein Carole Nuechterlein	Director	March 10, 2022
/s/ Thomas Woiwode Thomas Woiwode, Ph.D.	Director	March 10, 2022
/s/ James Scopa James Scopa	Director	March 10, 2022
/s/ Bridget Martell Bridget Martell, M.D.	Director	March 10, 2022

Exhibit 10.16

LEASE AGREEMENT

THIS LEASE AGREEMENT (this "**Lease**") is made this 9th day of December, 2021, between **601 & 651 GATEWAY CENTER LP**, a Delaware limited partnership ("**Landlord**"), and **ALIGOS THERAPEUTICS, INC.**, a Delaware corporation ("**Tenant**").

Building: 601 Gateway Boulevard, South San Francisco, California 94080

Premises: That portion of the Building, commonly known as Suite 900, containing approximately 11,846 rentable square feet, as determined by Landlord, as shown on **Exhibit A**.

Project: The real property on which the Building in which the Premises are located, together with all improvements thereon and appurtenances thereto as described on **Exhibit B**. The Project shall also include the buildings located at 611, 651, 681, 685 and 701 Gateway Boulevard, South San Francisco and any additional buildings and land that Landlord may elect to include in the future.

Base Rent: $4.20 per rentable square foot of the Premises per month, subject to adjustment pursuant to Section 4 hereof.

Rentable Area of Premises: 11,846 sq. ft.

Rentable Area of Building: 221,804 sq. ft.

Rentable Area of Project: 1,091,674 sq. ft.

Tenant's Share of Excess Operating Expenses: 5.34%

Building Share of Operating Expenses of Project: 20.32**%**

Security Deposit: $55,996.66

Rent Adjustment Percentage: 3%

Base Year: 2022

Base Term: Beginning on the Commencement Date and ending 63 months from the first day of the first full month following the Rent Commencement Date. For clarity, if the Rent Commencement Date occurs on the first day of a month, the expiration of the Base Term shall be measured from that date. If the Rent Commencement Date occurs on a day other than the first day of a month, the expiration of the Base Term shall be measured from the first day of the following month.

Permitted Use: Office and related uses consistent with the character of the Project and otherwise in compliance with the provisions of Section 7 hereof.

Address for Rent Payment:
Gateway Portfolio Holdings LLC
P.O. Box 102430
Pasadena, CA 91189-2430

Landlord's Notice Address:
26 North Euclid Avenue
Pasadena, CA 91101
Attention: Corporate Secretary

Tenant's Notice Address
Prior to Commencement Date:
Aligos Therapeutics, Inc.
One Corporate Drive, 2nd Floor
South San Francisco, California 94080
Attention: General Counsel

Tenant's Notice Address
After Commencement Date:
601 Gateway Boulevard, Suite 900
South San Francisco, California 94080
Attention: General Counsel

The following Exhibits and Addenda are attached hereto and incorporated herein by this reference:

[X] **EXHIBIT A** - PREMISES DESCRIPTION
[X] **EXHIBIT B** - DESCRIPTION OF PROJECT
[X] **EXHIBIT C** – WORK LETTER
[X] **EXHIBIT D** - COMMENCEMENT DATE
[X] **EXHIBIT E** - RULES AND REGULATIONS
[X] **EXHIBIT F** - TENANT'S PERSONAL PROPERTY

1. **Lease of Premises**. Upon and subject to all of the terms and conditions hereof, Landlord hereby leases the Premises to Tenant and Tenant hereby leases the Premises from Landlord. The portions of the Project which are for the non-exclusive use of tenants of the Project are collectively referred to herein as the "**Common Areas**." The Common Areas shall include, without limitation, any amenities now or hereafter located in, on or otherwise serving the Project, if any, as may exist from time to time (as determined by Landlord, in Landlord's sole and absolute discretion) and made available, except for temporary interruptions and/or Force Majeure (as defined in Section 34), for use by Tenant and one or more other tenants of the Project and/or third parties (each, a "**Project Amenity**" and collectively, the "**Project Amenities**"). Landlord reserves the right to modify Common Areas, provided that such modifications do not materially adversely affect Tenant's use of the Premises for the Permitted Use. From and after the Commencement Date through the expiration of the Term, Tenant shall have access to the Building and the Premises 24 hours a day, 7 days a week, except in the case of emergencies, as the result of Legal Requirements, the performance by Landlord of any installation, maintenance or repairs, or any other temporary interruptions, and otherwise subject to the terms of this Lease.

2. **Delivery; Acceptance of Premises; Commencement Date**.

The "**Commencement Date**" shall be one business day after the mutual execution of this Lease by the parties. Landlord shall deliver the Premises to Tenant on the Commencement Date for Tenant's construction of the Tenant Improvements (as defined in the Work Letter) under the Work Letter. The "**Rent Commencement Date**" shall be the earlier of: (i) 180 days after the Commencement Date and (ii) the date Tenant conducts any business in the Premises or any part thereof. Upon request of Landlord, Tenant shall execute and deliver a written acknowledgment of the Commencement Date, the Rent Commencement Date and the expiration date of the Term when such are established in the form of the "Acknowledgement of Commencement Date" attached to this Lease as **Exhibit D**; provided, however, Tenant's failure to execute and deliver such acknowledgment shall not affect Landlord's rights hereunder. The "**Term**" of this Lease shall be the Base Term, as defined above on the first page of this Lease and the Extension Term which Tenant may elect pursuant to Section 39hereof.

Except as set forth in the Work Letter: (i) Tenant shall accept the Premises in their condition as of the Commencement Date; (ii) Landlord shall have no obligation for any defects in the Premises, except as set forth in the next succeeding paragraph; and (iii) Tenant's taking possession of the Premises shall be conclusive evidence that Tenant accepts the Premises and that the Premises were in good condition at the time possession was taken.

For the period of 30 consecutive days after the Commencement Date, Landlord shall, at its sole cost and expense (which shall not constitute an Operating Expense), be responsible for any repairs that are required to be made to the Building Systems (as defined in Section 13) serving the Premises, unless Tenant or any Tenant Party was responsible for the cause of such repair, in which case Tenant shall pay the cost.

Tenant agrees and acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of all or any portion of the Premises or the Project, and/or the suitability of the Premises or the Project for the conduct of Tenant's business, and Tenant waives any implied warranty that the Premises or the Project are suitable for the Permitted Use. This Lease constitutes the complete agreement of Landlord and Tenant

with respect to the subject matter hereof and supersedes any and all prior representations, inducements, promises, agreements, understandings and negotiations which are not contained herein. Landlord in executing this Lease does so in reliance upon Tenant's representations, warranties, acknowledgments and agreements contained herein.

3. **Rent**.

a. **Base Rent**. Base Rent for the month in which the Rent Commencement Date occurs (or, if the Rent Commencement Date does not occur on the first day of a calendar month, Base Rent for the first full calendar month following the Rent Commencement Date) and the Security Deposit shall be due and payable concurrently with Tenant's delivery of an executed copy of this Lease to Landlord. Tenant shall pay to Landlord in advance, without demand, abatement (except for any abatement as may be expressly provided in this Lease), deduction or set-off, monthly installments of Base Rent on or before the first day of each calendar month during the Term hereof after the Rent Commencement Date, in lawful money of the United States of America, at the office of Landlord for payment of Rent set forth above, or to such other person or at such other place as Landlord may from time to time designate in writing, or via federally insured wire transfer (including ACH) pursuant to the wire instructions provided by Landlord. Payments of Base Rent for any fractional calendar month shall be prorated. The obligation of Tenant to pay Base Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Tenant shall have no right at any time to abate, reduce, or set-off any Rent (as defined in Section 5) due hereunder except for any abatement as may be expressly provided in this Lease.

Notwithstanding anything to the contrary contained in this Lease, so long as Tenant is not in Default under this Lease, Tenant shall not be required to pay Base Rent for the period of 90 consecutive calendar days immediately following the Rent Commencement Date (the "**Base Rent Abatement Period**"). Tenant shall commence paying Base Rent on the calendar day following the Base Rent Abatement Period.

b. **Additional Rent**. In addition to Base Rent, Tenant agrees to pay to Landlord as additional rent ("**Additional Rent**"): (i) commencing on January 1, 2023, Tenant's Share of "Excess Operating Expenses" (as defined in Section 5), and (ii) any and all other amounts Tenant assumes or agrees to pay under the provisions of this Lease, including, without limitation, any and all other sums that may become due by reason of any default of Tenant or failure to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after any applicable notice and cure period.

4. **Base Rent Adjustments**.

a. Base Rent shall be increased on each annual anniversary of the Rent Commencement Date (provided, however, that if the Rent Commencement Date occurs on a day other than the first day of a calendar month, then Base Rent shall be increased on each annual anniversary of the first day of the first full calendar month immediately following the Rent Commencement Date) (each an "**Adjustment Date**") by multiplying the Base Rent payable immediately before such Adjustment Date by the Rent Adjustment Percentage and adding the resulting amount to the Base Rent payable immediately before such Adjustment Date. Base Rent, as so adjusted, shall thereafter be due as provided herein. Base Rent adjustments for any fractional calendar month shall be prorated.

b. **Additional TI Allowance**. In addition to the Tenant Improvement Allowance (as defined in the Work Letter), Landlord, shall, subject to the terms of the Work Letter, make available to Tenant the Additional Tenant Improvement Allowance (as defined in the Work Letter). Commencing on the Rent Commencement Date and continuing thereafter on the first day of each month during the Base Term, Tenant shall pay the amount necessary to fully amortize the portion of the Additional Tenant Improvement Allowance actually funded by Landlord, if any, in equal monthly payments with interest at a rate of 7% per annum over the Base Term, which interest shall begin to accrue on the date that Landlord first disburses such Additional Tenant Improvement Allowance or any portion(s) thereof ("**TI Rent**"). Any TI Rent remaining unpaid as of the expiration or earlier termination of this Lease shall be paid to Landlord in a lump sum at the expiration or earlier termination of this Lease.

5. **Operating Expense Payments**. Landlord shall deliver to Tenant a written estimate of Operating Expenses for each calendar year during the Term (the "**Annual Estimate**"), which may be revised by Landlord from time to time during such calendar year. Commencing on January 1, 2023, and continuing thereafter on the first day of each month during the Term, Tenant shall pay Landlord an amount equal to 1/12th of Tenant's Share of the Excess Operating Expenses. Payments for any fractional calendar month shall be prorated. The term "**Excess Operating Expenses**" means Operating Expenses for the applicable year in excess of Operating Expenses for the Base Year. Notwithstanding anything to the contrary contained in this Lease, Landlord shall have the right to pass through any new line item or category of costs or expenses arising during the Term which were not included in the Base Year (including subsidies) without reference to a base year.

The term "**Operating Expenses**" means all costs and expenses of any kind or description whatsoever incurred or accrued each calendar year by Landlord with respect to the Building (including the Building's Share of all costs and expenses of any kind or description incurred or accrued by Landlord with respect to the Project which are not specific to the Building or any other building located in the Project) including, without duplication, (i) Taxes (as defined in Section 9), (ii) the cost of upgrades to the Building or Project or enhanced services provided at the Building and/or Project which are intended to encourage social distancing, promote and protect health and physical well-being and/or intended to limit the spread of communicable diseases and/or viruses of any kind or nature (collectively, "**Infectious Conditions**"),(iii) the cost (including, without limitation, any commercially reasonable subsidies which Landlord may provide in connection with the Project Amenities) of the Project Amenities now or hereafter located at or outside the Project, (iv) capital repairs, improvements and replacements amortized over the lesser of 10 years and the useful life of such capital repairs, improvements and replacements, (v) costs related to any parking structure or parking areas serving the Project and costs for transportation services (including the cost of the Shuttle Services (as defined in Section 40(r)) and (vi) the costs of Landlord's third party property manager or, if there is no third party property manager, administration rent in the amount of 3% of Base Rent, excluding only:

a. the original construction costs of the Project and renovation prior to the date of this Lease and costs of correcting defects in such original construction or renovation;

b. capital expenditures for expansion of the Project;

c. interest, principal payments of Mortgage (as defined in Section 27) debts of Landlord, financing costs and amortization of funds borrowed by Landlord, whether secured or unsecured and all payments of base rent (but not taxes or operating expenses) under any ground lease or other underlying lease of all or any portion of the Project.

d. depreciation of the Project (except for capital improvements, the cost of which are includable in Operating Expenses);

e. advertising, legal and space planning expenses and leasing commissions and other costs and expenses incurred in procuring and leasing space to tenants for the Project, including any leasing office maintained in the Project, free rent and construction allowances for tenants;

f. legal and other expenses incurred in the negotiation or enforcement of leases;

g. completing, fixturing, improving, renovating, painting, redecorating or other work, which Landlord pays for or performs for other tenants within their premises, and costs of correcting defects in such work;

h. costs to be reimbursed by other tenants of the Project or Taxes to be paid directly by Tenant or other tenants of the Project, whether or not actually paid;

i. salaries, wages, benefits and other compensation paid to officers and employees of Landlord who are not assigned in whole or in part to the operation, management, maintenance or repair of the Project;

j. general organizational, administrative and overhead costs relating to maintaining Landlord's existence, either as a corporation, partnership, or other entity, including general corporate, legal and accounting expenses;

k. costs (including attorneys' fees and costs of settlement, judgments and payments in lieu thereof) incurred in connection with disputes with tenants, other occupants, or prospective tenants, and costs and expenses, including legal fees, incurred in connection with negotiations or disputes with employees, consultants, management agents, leasing agents, purchasers or mortgagees of the Building;

l. costs incurred by Landlord due to the violation by Landlord, its employees, agents or contractors or any tenant of the terms and conditions of any lease of space in the Project or any Legal Requirement (as defined in Section 7);

m. penalties, fines or interest incurred as a result of Landlord's inability or failure to make payment of Taxes and/or to file any tax or informational returns when due, or from Landlord's failure to make any payment of Taxes required to be made by Landlord hereunder before delinquency;

n. 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 the costs of such goods and/or services rendered by unaffiliated third parties on a competitive basis;

o. costs of Landlord's charitable or political contributions, or of fine art maintained at the Project;

p. costs in connection with services (including electricity), items or other benefits of a type which are not standard for the Project and which are not available to Tenant without specific charges therefor, but which are provided to another tenant or occupant of the Project, whether or not such other tenant or occupant is specifically charged therefor by Landlord;

q. costs incurred in the sale or refinancing of the Project;

r. net income taxes of Landlord or the owner of any interest in the Project, franchise, capital stock, gift, estate or inheritance taxes or any federal, state or local documentary taxes imposed against the Project or any portion thereof or interest therein;

s. costs incurred as a result of the gross negligence or willful misconduct of Landlord or its agents and employees;

t. any expenses otherwise includable within Operating Expenses to the extent actually reimbursed under insurance policies required to be maintained by Landlord in accordance with Section 17 or would have been reimbursed by insurance required to be carried by Landlord pursuant to Section 17;

u. costs reimbursable to Landlord under any warranty or guarantee carried by Landlord for the Building or Project or any portion thereof;

v. any costs incurred to remove, test or remediate or otherwise related to the presence of Hazardous Materials (including the removal, enclosure, encapsulation and handling of such Hazardous Materials) in or about the Building or the Project, for which Tenant is not responsible under this Lease;

w. reserves other than for the payment of Taxes;

x. any bad debt loss, rent loss or reserve for bad debt loss; and

y. any expenses otherwise includable within Operating Expenses to the extent actually reimbursed by persons other than tenants of the Project under leases for space in the Project.

In addition, notwithstanding anything to the contrary contained in this Lease, Operating Expenses incurred or accrued by Landlord with respect to any capital improvements which are reasonably expected by Landlord to reduce overall Operating Expenses (for example, without limitation, by reducing energy usage at the Project) (the "**Energy Savings Costs**") shall be amortized over a period of years equal to the least of (A) 10 years, (B) the useful life of such capital items, or (C) the quotient of (i) the Energy Savings Costs, divided by (ii) the annual amount of Operating Expenses reasonably expected by Landlord to be saved as a result of such capital improvements.

Within 90 days after the end of each calendar year (or such longer period as may be reasonably required), Landlord shall furnish to Tenant a statement (an "**Annual Statement**") showing in reasonable detail: (a) the total of and Tenant's Share of actual Excess Operating Expenses for the previous calendar year, and (b) the total of Tenant's payments in respect of Excess Operating Expenses for such year. If Tenant's Share of actual Excess Operating Expenses for such year exceeds Tenant's payments of Excess Operating Expenses for such year, the excess shall be due and payable by Tenant as Rent within 30 days after delivery of such Annual Statement to Tenant. If Tenant's payments of Excess Operating Expenses for such year exceed Tenant's Share of actual Excess Operating Expenses for such year Landlord shall pay the excess to Tenant within 30 days after delivery of such Annual Statement, except that after the expiration, or earlier termination of the Term or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. Landlord's and Tenant's obligations to pay any overpayments or deficiencies due pursuant to this paragraph shall survive the expiration or earlier termination of this Lease.

The Annual Statement shall be final and binding upon Tenant unless Tenant, within 30 days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reason therefor. If, during such 30 day period, Tenant reasonably and in good faith questions or contests the accuracy of Landlord's statement of Tenant's Share of Excess Operating Expenses, Landlord will provide Tenant with access to Landlord's books and records relating to the operation of the Project and such information as Landlord reasonably determines to be responsive to Tenant's questions (the "**Expense Information**"). If after Tenant's review of such Expense Information, Landlord and Tenant cannot agree upon the amount of Tenant's Share of Excess Operating Expenses, then Tenant shall have the right to have an independent regionally or nationally recognized public accounting firm selected by Tenant and approved by Landlord (which approval shall not be unreasonably withheld or delayed),

working pursuant to a fee arrangement other than a contingent fee (at Tenant's sole cost and expense), audit and/or review the Expense Information for the year in question (the "**Independent Review**"). The results of any such Independent Review shall be binding on Landlord and Tenant. If the Independent Review shows that the payments actually made by Tenant with respect to Excess Operating Expenses for the calendar year in question exceeded Tenant's Share of Excess Operating Expenses for such calendar year, Landlord shall at Landlord's option either (i) credit the excess amount to the next succeeding installments of estimated Excess Operating Expenses or (ii) pay the excess to Tenant within 30 days after delivery of such statement, except that after the expiration or earlier termination of this Lease or if Tenant is delinquent in its obligation to pay Rent, Landlord shall pay the excess to Tenant after deducting all other amounts due Landlord. If the Independent Review shows that Tenant's payments with respect to Excess Operating Expenses for such calendar year were less than Tenant's Share of Excess Operating Expenses for the calendar year, Tenant shall pay the deficiency to Landlord within 30 days after delivery of such statement. If the Independent Review shows that Tenant has overpaid with respect to Excess Operating Expenses by more than 5% then Landlord shall reimburse Tenant for all costs incurred by Tenant for the Independent Review. Excess Operating Expenses for the calendar years in which Tenant's obligation to share therein begins and ends shall be prorated. Notwithstanding anything set forth herein to the contrary, if the Building is not at least 95% occupied on average during any year of the Term, Tenant's Share of Excess Operating Expenses for such year shall be computed as though the Building had been 95% occupied on average during such year.

"**Tenant's Share**" shall be the percentage set forth on the first page of this Lease as Tenant's Share as reasonably adjusted by Landlord for changes in the physical size of the Premises or the Project occurring thereafter. Landlord may equitably increase Tenant's Share for any item of expense or cost reimbursable by Tenant that relates to a repair, replacement, or service that benefits only the Premises or only a portion of the Project that includes the Premises or that varies with occupancy or use. Base Rent, Tenant's Share of Excess Operating Expenses and all other amounts payable by Tenant to Landlord hereunder are collectively referred to herein as "**Rent**."

6. **Security Deposit**. Tenant shall deposit with Landlord, upon delivery of an executed copy of this Lease to Landlord, a security deposit (the "**Security Deposit**") for the performance of all of Tenant's obligations hereunder in the amount set forth on page 1 of this Lease, which Security Deposit shall be in the form of an unconditional and irrevocable letter of credit (the "**Letter of Credit**"): (i) in form and substance satisfactory to Landlord, (ii) naming Landlord as beneficiary, (iii) expressly allowing Landlord to draw upon it at any time from time to time by delivering to the issuer notice that Landlord is entitled to draw thereunder, (iv) issued by an FDIC-insured financial institution satisfactory to Landlord, and (v) redeemable by presentation of a sight draft in the state of Landlord's choice. If Tenant does not provide Landlord with a substitute Letter of Credit complying with all of the requirements hereof at least 10 days before the stated expiration date of any then current Letter of Credit, Landlord shall have the right to draw the full amount of the current Letter of Credit and hold the funds drawn in cash without obligation for interest thereon as the Security Deposit. The Security Deposit shall be held by Landlord as security for the performance of Tenant's obligations under this Lease. The Security Deposit is not an advance rental deposit or a measure of Landlord's damages in case of Tenant's default. Upon each occurrence of a Default (as defined in Section 20), Landlord may use all or any part of the Security Deposit to pay delinquent payments due under this Lease, future rent damages under California Civil Code Section 1951.2, and the cost of any damage, injury, expense or liability caused by such Default, without prejudice to any other remedy provided herein or provided by law. Landlord's right to use the Security Deposit under this Section 6includes the right to use the Security Deposit to pay future rent damages following the termination of this Lease pursuant to Section 21(c)below. Upon any use of all or any portion of the Security Deposit, Tenant shall pay Landlord on demand the amount that will restore the Security Deposit to the amount set forth on Page 1 of this Lease. Tenant hereby waives the provisions of any law, now or hereafter in force, including, without limitation, California Civil Code Section 1950.7, 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. Upon bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for periods prior to the filing of such proceedings. If Tenant shall fully perform every provision of this Lease to be performed by Tenant, the Security Deposit, or any balance thereof (i.e., after deducting therefrom all amounts to which Landlord is entitled under the provisions of this Lease), shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within 90 days after the expiration or earlier termination of this Lease.

If Landlord transfers its interest in the Project or this Lease, Landlord shall either (a) transfer any Security Deposit then held by Landlord to a person or entity assuming Landlord's obligations under this Section 6, or (b) return to Tenant any Security Deposit then held by Landlord and remaining after the deductions permitted herein. Upon such transfer to such transferee or the return of the Security Deposit to Tenant, Landlord shall have no further obligation with respect to the Security Deposit, and Tenant's right to the return of the Security Deposit shall apply solely against Landlord's

transferee. Landlord's obligation respecting the Security Deposit is that of a debtor, not a trustee, and no interest shall accrue thereon.

7. **Use**. The Premises shall be used solely for the Permitted Use set forth in the basic lease provisions on page 1 of this Lease, and in compliance with all laws, orders, judgments, ordinances, regulations, codes, directives, permits, licenses, covenants and restrictions now or hereafter applicable to the Premises, and to the use and occupancy thereof, including, without limitation, the Americans With Disabilities Act, 42 U.S.C. § 12101, et seq. (together with the regulations promulgated pursuant thereto, "**ADA**") (collectively, "**Legal Requirements**" and each, a "**Legal Requirement**"). Tenant shall, upon 5 days' written notice from Landlord, discontinue any use of the Premises which is declared by any Governmental Authority (as defined in Section 9) having jurisdiction to be a violation of a Legal Requirement. Tenant will not use or permit the Premises to be used for any purpose or in any manner that would void Tenant's or Landlord's insurance, increase the insurance risk, or cause the disallowance of any sprinkler or other credits. Tenant shall not permit any part of the Premises to be used as a "place of public accommodation", as defined in the ADA or any similar legal requirement. Tenant shall reimburse Landlord promptly upon demand for any additional premium charged for any such insurance policy by reason of Tenant's failure to comply with the provisions of this Section or otherwise caused by Tenant's use and/or occupancy of the Premises. Tenant will use the Premises in a careful, safe and proper manner and will not commit or permit waste, overload the floor or structure of the Premises, subject the Premises to use that would damage the Premises or obstruct or interfere with the rights of Landlord or other tenants or occupants of the Project, including conducting or giving notice of any auction, liquidation, or going out of business sale on the Premises, or using or allowing the Premises to be used for any unlawful purpose. Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations from the Premises from extending into Common Areas, or other space in the Project. Tenant shall not place any machinery or equipment which will overload the floor in or upon the Premises or transport or move such items through the Common Areas of the Project or in the Project elevators without the prior written consent of Landlord. Except as may be provided under the Work Letter, Tenant shall not, without the prior written consent of Landlord, use the Premises in any manner which will require ventilation, air exchange, heating, gas, steam, electricity or water beyond the existing capacity of the Project as proportionately allocated to the Premises based upon Tenant's Share as usually furnished for the Permitted Use.

Tenant shall be responsible for any and all demands, claims, liabilities, losses, costs, expenses, actions, causes of action, damages or judgments, and all reasonable expenses incurred in investigating or resisting the same (including, without limitation, reasonable attorneys' fees, charges and disbursements and costs of suit) (collectively, "**Claims**") arising out of or in connection with Legal Requirements related to Tenant's use or occupancy of the Premises or Tenant's Alterations, and Tenant shall indemnify, defend, hold and save Landlord harmless from and against any and all Claims arising out of or in connection with any failure of the Premises to comply with any Legal Requirement related to Tenant's use or occupancy of the Premises or Tenant's Alterations.

Tenant acknowledges that Landlord may, but shall not be obligated to, seek to obtain Leadership in Energy and Environmental Design (LEED), WELL Building Standard, or other similar "green" certification with respect to the Project and/or the Premises, and Tenant agrees to reasonably cooperate with Landlord, and to provide such information and/or documentation as Landlord may reasonably request, in connection therewith.

8. **Holding Over**. If, with Landlord's express written consent, Tenant retains possession of the Premises after the termination of the Term, (i) unless otherwise agreed in such written consent, such possession shall be subject to immediate termination by Landlord at any time, (ii) all of the other terms and provisions of this Lease (including, without limitation, the adjustment of Base Rent pursuant to Section 4 hereof) shall remain in full force and effect (excluding any expansion or renewal option or other similar right or option) during such holdover period, (iii) Tenant shall continue to pay Base Rent in the amount payable upon the date of the expiration or earlier termination of this Lease, or such other amount as the parties may mutually agree upon in such written consent and (iv) all other payments shall continue under the terms of this Lease. If Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without the express written consent of Landlord, (A) Tenant shall become a tenant at sufferance upon the terms of this Lease except that the monthly rental shall be equal to 150% of Rent in effect during the last 30 days of the Term, and (B) Tenant shall be responsible for all damages suffered by Landlord resulting from or occasioned by Tenant's holding over, including consequential damages. No holding over by Tenant, whether with or without consent of Landlord, shall operate to extend this Lease except as otherwise expressly provided, and this Section 8 shall not be construed as consent for Tenant to retain possession of the Premises. Acceptance by Landlord of Rent after the expiration of the Term or earlier termination of this Lease shall not result in a renewal or reinstatement of this Lease.

9. **Taxes**. Landlord shall pay, as part of Operating Expenses, all taxes, levies, fees, assessments and governmental charges of any kind, existing as of the Commencement Date or thereafter enacted (collectively referred to as "**Taxes**"), imposed by any federal, state, regional, municipal, local or other governmental authority or agency, including, without

limitation, quasi-public agencies (collectively, "**Governmental Authority**") during the Term, including, without limitation, all Taxes: (i) imposed on or measured by or based, in whole or in part, on rent payable to (or gross receipts received by) Landlord under this Lease and/or from the rental by Landlord of the Project or any portion thereof, or (ii) based on the square footage, assessed value or other measure or evaluation of any kind of the Premises or the Project, or (iii) assessed or imposed by or on the operation or maintenance of any portion of the Premises or the Project, including parking, or (iv) assessed or imposed by, or at the direction of, or resulting from Legal Requirements, or interpretations thereof, promulgated by any Governmental Authority, or (v) imposed as a license or other fee, charge, tax, or assessment on Landlord's business or occupation of leasing space in the Project. Landlord may contest by appropriate legal proceedings the amount, validity, or application of any Taxes or liens securing Taxes. Taxes shall not include any net income taxes imposed on Landlord except to the extent such net income taxes are in substitution for any Taxes payable hereunder. If any such Tax is levied or assessed directly against Tenant, then Tenant shall be responsible for and shall pay the same at such times and in such manner as the taxing authority shall require. Tenant shall pay, prior to delinquency, any and all Taxes levied or assessed against any personal property or trade fixtures placed by Tenant in the Premises, whether levied or assessed against Landlord or Tenant. If any Taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property, or if the assessed valuation of the Project is increased by a value attributable to improvements in or alterations to the Premises, whether owned by Landlord or Tenant and whether or not affixed to the real property so as to become a part thereof, higher than the base valuation on which Landlord from time-to-time allocates Taxes to all tenants in the Project, Landlord shall have the right, but not the obligation, to pay such Taxes. Landlord's determination of any excess assessed valuation shall be binding and conclusive, absent manifest error. The amount of any such payment by Landlord shall constitute Additional Rent due from Tenant to Landlord immediately upon demand.

10. **Parking**. Subject to all applicable Legal Requirements, Force Majeure, and any Taking (as defined in Section 19 below), Tenant shall have the right, at no additional cost to Tenant during the Base Term, in common with other tenants of the Project pro rata in accordance with the rentable area of the Premises and the rentable areas of the Project occupied by such other tenants, to park in those areas designated for non-reserved parking, subject in each case to Landlord's rules and regulations. Commencing on the Commencement Date, Tenant's pro rata share of parking spaces is equal to 3.3 parking spaces per 1,000 rentable square feet of the Premises. Landlord may allocate parking spaces among Tenant and other tenants in the Project pro rata as described above if Landlord determines that such parking facilities are becoming crowded. Landlord shall not be responsible for enforcing Tenant's parking rights against any third parties, including other tenants of the Project.

11. **Utilities, Services**.

The hours of operation of the Building are 8:00 a.m. to 6:00 p.m., Monday through Friday and 8:00 a.m. to 1:00 p.m. on Saturday, legal holidays excepted ("**Business Hours**"). During such periods, Landlord shall provide, subject to the terms of this Section 11, water, electricity, heat, light, power, sewer, and other utilities (including gas and fire sprinklers to the extent the Project is plumbed for such services), refuse and trash collection and janitorial services (collectively, "**Utilities**"). Upon reasonable advance notice from Tenant to Landlord, Landlord shall make available after-hours HVAC. Commencing on the Commencement Date, Tenant shall be required to pay to Landlord a fee at the rate of $130.00 per operating hour for providing such after-hours HVAC, which fee may be amended by Landlord from time to time upon reasonable advance written notice to Tenant. The minimum use of after-hours HVAC shall be determined by Landlord and may thereafter be amended by Landlord as the same may change from time to time upon reasonable advance notice to Tenant. Landlord shall pay, as Operating Expenses or subject to Tenant's reimbursement obligation below, for all Utilities used on the Premises, all maintenance charges for Utilities, and any storm sewer charges or other similar charges for Utilities imposed by any Governmental Authority or Utility provider, and any taxes, penalties, surcharges or similar charges thereon. Landlord may cause, at Landlord's expense (except to the extent necessary as a result of Tenant's disproportionate use of Utilities), any Utilities to be separately metered or charged directly to Tenant by the provider. Tenant shall pay directly to the Utility provider, prior to delinquency, any separately metered Utilities and services which may be furnished to Tenant or the Premises during the Term. Commencing on the Commencement Date, Tenant shall pay, as part of Operating Expenses, its share of all charges for jointly metered Utilities based upon consumption, as reasonably determined by Landlord. No interruption or failure of Utilities, from any cause whatsoever other than Landlord's willful misconduct, shall result in eviction or constructive eviction of Tenant, termination of this Lease or the abatement of Rent. Tenant agrees to limit use of water and sewer with respect to Common Areas to normal restroom use.

Notwithstanding anything to the contrary set forth herein, if (i) a stoppage of an Essential Service (as defined below) to the Premises shall occur and such stoppage is due solely to the gross negligence or willful misconduct of Landlord and not due in any part to any act or omission on the part of Tenant or any Tenant Party or any matter beyond Landlord's reasonable control (any such stoppage of an Essential Service being hereinafter referred to as a "**Service Interruption**"), and (ii) such Service Interruption continues for more than 5 consecutive business days after Landlord shall have received

written notice thereof from Tenant, and (iii) as a result of such Service Interruption, the conduct of Tenant's normal operations in the Premises are materially and adversely affected, then there shall be an abatement of one day's Base Rent for each day during which such Service Interruption continues after such 5 business day period; provided, however, that if any part of the Premises is reasonably useable for Tenant's normal business operations or if Tenant conducts all or any part of its operations in any portion of the Premises notwithstanding such Service Interruption, then the amount of each daily abatement of Base Rent shall only be proportionate to the nature and extent of the interruption of Tenant's normal operations or ability to use the Premises. The rights granted to Tenant under this paragraph shall be Tenant's sole and exclusive remedy resulting from a failure of Landlord to provide services, and Landlord shall not otherwise be liable for any loss or damage suffered or sustained by Tenant resulting from any failure or cessation of services. For purposes hereof, the term "**Essential Services**" shall mean the following services: HVAC service, water, sewer, electricity and elevators, but in each case only to the extent that Landlord has an obligation to provide same to Tenant under this Lease.

Tenant agrees to provide Landlord with access to Tenant's water and/or energy usage data on a monthly basis, either by providing Tenant's applicable utility login credentials to Landlord's Measurabl online portal, or by another delivery method reasonably agreed to by Landlord and Tenant. The costs and expenses incurred by Landlord in connection with receiving and analyzing such water and/or energy usage data (including, without limitation, as may be required pursuant to applicable Legal Requirements) shall be included as part of Operating Expenses.

12. **Alterations and Tenant's Property**. The construction of the Tenant Improvements shall be governed by the terms of the Work Letter and not the terms of this Section 12. Any alterations, additions, or improvements made to the Premises by or on behalf of Tenant, including additional locks or bolts of any kind or nature upon any doors or windows in the Premises, but excluding installation, removal or realignment of furniture systems (other than removal of furniture systems owned or paid for by Landlord) not involving any modifications to the structure or connections (other than by ordinary plugs or jacks) to Building Systems (as defined in Section 13) ("**Alterations**") shall be subject to Landlord's prior written consent, which may be given or withheld in Landlord's sole discretion if any such Alteration affects the structure or Building Systems and shall not be otherwise unreasonably withheld. Tenant may construct nonstructural Alterations in the Premises without Landlord's prior approval if the aggregate cost of all such work in any 12 month period does not exceed $25,000.00 (a "**Notice-Only Alteration**"), provided Tenant notifies Landlord in writing of such intended Notice-Only Alteration, and such notice shall be accompanied by plans, specifications, work contracts and such other information concerning the nature and cost of the Notice-Only Alteration as may be reasonably requested by Landlord, which notice and accompanying materials shall be delivered to Landlord not less than 15 business days in advance of any proposed construction. If Landlord approves any Alterations, Landlord may impose such conditions on Tenant in connection with the commencement, performance and completion of such Alterations as Landlord may deem appropriate in Landlord's reasonable discretion. Any request for approval shall be in writing, delivered not less than 15 business days in advance of any proposed construction, and accompanied by plans, specifications, bid proposals, work contracts and such other information concerning the nature and cost of the alterations as may be reasonably requested by Landlord, including the identities and mailing addresses of all persons performing work or supplying materials. Landlord's right to review plans and specifications and to monitor construction shall be solely for its own benefit, and Landlord shall have no duty to ensure that such plans and specifications or construction comply with applicable Legal Requirements. Tenant shall cause, at its sole cost and expense, all Alterations to comply with insurance requirements and with Legal Requirements and shall implement at its sole cost and expense any alteration or modification required by Legal Requirements as a result of any Alterations. Tenant shall pay to Landlord, as Additional Rent, on demand an amount equal to 5% of all charges incurred by Tenant or its contractors or agents in connection with any Alteration to cover Landlord's overhead and expenses for plan review, coordination, scheduling and supervision. Before Tenant begins any Alteration, Landlord may post on and about the Premises notices of non-responsibility pursuant to applicable law. Tenant shall reimburse Landlord for, and indemnify and hold Landlord harmless from, any expense incurred by Landlord by reason of faulty work done by Tenant or its contractors, delays caused by such work, or inadequate cleanup.

Tenant shall furnish security or make other arrangements satisfactory to Landlord to assure payment for the completion of all Alterations work costing more than $50,0000 free and clear of liens, and for all Alterations, shall provide (and cause each contractor or subcontractor to provide) certificates of insurance for workers' compensation and other coverage in amounts and from an insurance company satisfactory to Landlord protecting Landlord against liability for personal injury or property damage during construction. Upon completion of any Alterations, Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and subcontractors who did the work and final lien waivers from all such contractors and subcontractors; and (ii) "as built" plans for any such Alteration.

Except for Removable Installations (as hereinafter defined), all Installations (as hereinafter defined) shall be and shall remain the property of Landlord during the Term and following the expiration or earlier termination of the Term, shall not be removed by Tenant at any time during the Term, and shall remain upon and be surrendered with the Premises as a part thereof. Notwithstanding the foregoing, Landlord may, at the time its approval of any such Installation is requested,

or at the time it receives notice of a Notice-Only Alteration, notify Tenant that Landlord requires that Tenant remove such Installation upon the expiration or earlier termination of the Term, in which event Tenant shall remove such Installation in accordance with the immediately succeeding sentence. Upon the expiration or earlier termination of the Term, Tenant shall remove (i) all wires, cables or similar equipment which Tenant has installed in the Premises or in the risers or plenums of the Building, (ii) any Installations for which Landlord has given Tenant notice of removal in accordance with the immediately preceding sentence, and (iii) all of Tenant's Property (as hereinafter defined), and Tenant shall restore and repair any damage caused by or occasioned as a result of such removal, including, without limitation, capping off all such connections behind the walls of the Premises and repairing any holes. During any restoration period beyond the expiration or earlier termination of the Term, Tenant shall pay Rent to Landlord as provided herein as if said space were otherwise occupied by Tenant. If Landlord is requested by Tenant or any lender, lessor or other person or entity claiming an interest in any of Tenant's Property to waive any lien Landlord may have against any of Tenant's Property, and Landlord consents to such waiver, then Landlord shall be entitled to reimbursement from Tenant for its actual, reasonable out-of-pocket costs incurred in connection with the preparation and negotiation of each such waiver of lien.

For purposes of this Lease, (x) "**Removable Installations**" means any items listed on **Exhibit F** attached hereto and any items agreed by Landlord in writing to be included on **Exhibit F**in the future, (y) "**Tenant's Property**" means Removable Installations and, other than Installations, any personal property or equipment of Tenant that may be removed without material damage to the Premises, and (z) "**Installations**" means all property of any kind paid for with the TI Fund, all Alterations, all fixtures, and all partitions, hardware, built-in machinery, built-in casework and cabinets and other similar additions, equipment, property and improvements built into the Premises so as to become an integral part of the Premises.

Notwithstanding anything to the contrary contained herein, Tenant shall not be required to remove or restore the Tenant Improvements constructed pursuant to this Work Letter at the expiration or earlier termination of the Term, nor shall Tenant have the right to remove any such Tenant Improvement at any time.

13. **Landlord's Repairs**. Landlord, as an Operating Expense, shall maintain all of the structural, exterior, parking and other Common Areas of the Project, including HVAC, plumbing, fire sprinklers, elevators and all other building systems serving the Premises and other portions of the Project ("**Building Systems**"), in good repair, reasonable wear and tear and uninsured losses and damages caused by Tenant, or by any of Tenant's assignees, sublessees, licensees, agents, servants, employees, invitees and contractors (or any of Tenant's assignees, sublessees and/or licensees respective agents, servants, employees, invitees and contractors) (collectively, "**Tenant Parties**") excluded. Losses and damages caused by Tenant or any Tenant Party shall be repaired by Landlord, to the extent not covered by insurance, at Tenant's sole cost and expense. Landlord reserves the right to stop Building Systems services when necessary (i) by reason of accident or emergency, or (ii) for planned repairs, alterations or improvements, which are, in the judgment of Landlord, desirable or necessary to be made, until said repairs, alterations or improvements shall have been completed. Landlord shall have no responsibility or liability for failure to supply Building Systems services during any such period of interruption; provided, however, that Landlord shall, except in case of emergency, make a commercially reasonable effort to give Tenant 24 hours advance notice of any planned stoppage of Building Systems services for routine maintenance, repairs, alterations or improvements. Landlord shall use reasonable efforts to minimize interference with Tenant's operations in the Premises in connection with Landlord's performance of such planned stoppages of building system services. Tenant shall promptly give Landlord written notice of any repair required by Landlord pursuant to this Section, after which Landlord shall make a commercially reasonable effort to effect such repair. Landlord shall not be liable for any failure to make any repairs or to perform any maintenance unless such failure shall persist for an unreasonable time after Tenant's written notice of the need for such repairs or maintenance. Tenant waives its rights under any state or local law to terminate this Lease or to make such repairs at Landlord's expense and agrees that the parties' respective rights with respect to such matters shall be solely as set forth herein. Repairs required as the result of fire, earthquake, flood, vandalism, war, or similar cause of damage or destruction shall be controlled by Section 18.

14. **Tenant's Repairs**. Subject to Section 13hereof, Tenant, at its expense, shall repair, replace and maintain in good condition all portions of the Premises, including, without limitation, entries, doors, ceilings, interior windows, interior walls, and the interior side of demising walls. Should Tenant fail to make any such repair or replacement or fail to maintain the Premises, Landlord shall give Tenant notice of such failure. If Tenant fails to commence cure of such failure within 10 days of Landlord's notice, and thereafter diligently prosecute such cure to completion, Landlord may perform such work and shall be reimbursed by Tenant within 10 days after demand therefor; provided, however, that if such failure by Tenant creates or could create an emergency, Landlord may immediately commence cure of such failure and shall thereafter be entitled to recover the costs of such cure from Tenant. Subject to Sections 17and 18, Tenant shall bear the full uninsured cost of any repair or replacement to any part of the Project that results from damage caused by Tenant or any Tenant Party and any repair that benefits only the Premises.

15. **Mechanic's Liens**. Tenant shall discharge, by bond or otherwise, any mechanic's lien filed against the Premises or against the Project for work claimed to have been done for, or materials claimed to have been furnished to, Tenant within 10 days after the filing thereof, at Tenant's sole cost and shall otherwise keep the Premises and the Project free from any liens arising out of work performed, materials furnished or obligations incurred by Tenant. Should Tenant fail to discharge any lien described herein, Landlord shall have the right, but not the obligation, to pay such claim or post a bond or otherwise provide security to eliminate the lien as a claim against title to the Project and the cost thereof shall be immediately due from Tenant as Additional Rent. If Tenant shall lease or finance the acquisition of office equipment, furnishings, or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code Financing Statement filed as a matter of public record by any lessor or creditor of Tenant will upon its face or by exhibit thereto indicate that such Financing Statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Project be furnished on the statement without qualifying language as to applicability of the lien only to removable personal property, located in an identified suite held by Tenant.

16. **Indemnification**. Tenant hereby indemnifies and agrees to defend, save and hold Landlord, its officers, directors, employees, managers, agents, sub-agents, constituent entities and lease signators (collectively, "**Landlord Indemnified Parties**") harmless from and against any and all Claims for injury or death to persons or damage to property occurring within or about the Premises or the Project arising directly or indirectly out of use or occupancy of the Premises or the Project (including, without limitation, any act, omission or neglect by Tenant or any Tenant's Parties in or about the Premises or at the Project) or a breach or default by Tenant in the performance of any of its obligations hereunder, except to the extent caused by the willful misconduct or gross negligence of Landlord Indemnified Parties. Landlord shall not be liable to Tenant for, and Tenant assumes all risk of damage to, personal property (including, without limitation, loss of records kept within the Premises). Tenant further waives any and all Claims for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property (including, without limitation, any loss of records). Landlord Indemnified Parties shall not be liable for any damages arising from any act, omission or neglect of any tenant in the Project or of any other third party or Tenant Parties.

17. **Insurance**. Landlord shall maintain all risk property and, if applicable, sprinkler damage insurance covering the full replacement cost of the Project. Landlord shall further procure and maintain commercial general liability insurance with a single loss limit of not less than $2,000,000 for bodily injury and property damage with respect to the Project. Landlord may, but is not obligated to, maintain such other insurance and additional coverages as it may deem necessary, including, but not limited to, flood, environmental hazard and earthquake, loss or failure of building equipment, errors and omissions, rental loss during the period of repair or rebuilding, workers' compensation insurance and fidelity bonds for employees employed to perform services and insurance for any improvements installed by Tenant or which are in addition to the standard improvements customarily furnished by Landlord without regard to whether or not such are made a part of the Project. All such insurance shall be included as part of the Operating Expenses. The Project may be included in a blanket policy (in which case the cost of such insurance allocable to the Project will be determined by Landlord based upon the insurer's cost calculations).

Tenant, at its sole cost and expense, shall maintain during the Term: special form property insurance with business interruption and extra expense coverage, covering the full replacement cost of all property and improvements installed or placed in the Premises by Tenant at Tenant's expense; workers' compensation insurance with no less than the minimum limits required by law; employer's liability insurance with employers liability limits of $1,000,000 bodily injury by accident – each accident, $1,000,000 bodily injury by disease – policy limit, and $1,000,000 bodily injury by disease – each employee; and commercial general liability insurance, with a minimum limit of not less than $2,000,000 per occurrence for bodily injury and property damage with respect to the Premises. The commercial general liability insurance maintained by Tenant shall name Alexandria Real Estate Equities, Inc. and Landlord, its officers, directors, employees, managers, agents, sub-agents, constituent entities, joint venture partners and lease signators (collectively, "**Landlord Insured Parties**"), as additional insureds; insure on an occurrence and not a claims-made basis; be issued by insurance companies which have a rating of not less than policyholder rating of A and financial category rating of at least Class X in "Best's Insurance Guide"; not contain a hostile fire exclusion; contain a contractual liability endorsement; and provide primary coverage to Landlord Insured Parties (any policy issued to Landlord Insured Parties providing duplicate or similar coverage shall be deemed excess over Tenant's policies, regardless of limits). Tenant shall (i) provide Landlord with 30 days advance written notice of cancellation of such commercial general liability policy, and (ii) request Tenant's insurer to endeavor to provide 30 days advance written notice to Landlord of cancellation of such commercial general liability policy (or 10 days in the event of a cancellation due to non-payment of premium). Certificates of insurance showing the limits of coverage required hereunder and showing Landlord as an additional insured, along with reasonable evidence of the payment of premiums for the applicable period, shall be delivered to Landlord by Tenant (i) concurrent with Tenant's delivery to Landlord of a copy of this Lease executed by Tenant, and (ii) prior to each renewal of said insurance. Tenant's policy may be a "blanket policy" with an aggregate per location endorsement which specifically provides that the amount

of insurance shall not be prejudiced by other losses covered by the policy. Tenant shall, at least 5 days prior to the expiration of such policies, furnish Landlord with renewal certificates.

In each instance where insurance is to name Landlord as an additional insured, Tenant shall upon written request of Landlord also designate and furnish certificates so evidencing Landlord as additional insured to: (i) any lender of Landlord holding a security interest in the Project or any portion thereof, (ii) the landlord under any lease wherein Landlord is tenant of the real property on which the Project is located, if the interest of Landlord is or shall become that of a tenant under a ground or other underlying lease rather than that of a fee owner, and/or (iii) any management company retained by Landlord to manage the Project.

The property insurance obtained by Landlord and Tenant shall include a waiver of subrogation by the insurers and all rights based upon an assignment from its insured, against Landlord or Tenant, and their respective officers, directors, employees, managers, agents, invitees and contractors ("**Related Parties**"), in connection with any loss or damage thereby insured against. Neither party nor its respective Related Parties shall be liable to the other for loss or damage caused by any risk insured against under property insurance required to be maintained hereunder, and each party waives any claims against the other party, and its respective Related Parties, for such loss or damage. The failure of a party to insure its property shall not void this waiver. Landlord and its respective Related Parties shall not be liable for, and Tenant hereby waives all claims against such parties for, business interruption and losses occasioned thereby sustained by Tenant or any person claiming through Tenant resulting from any accident or occurrence in or upon the Premises or the Project from any cause whatsoever. If the foregoing waivers shall contravene any law with respect to exculpatory agreements, the liability of Landlord or Tenant shall be deemed not released but shall be secondary to the other's insurer.

Landlord may require insurance policy limits to be raised to conform with requirements of Landlord's lender and/or to bring coverage limits to levels then being generally required of new tenants within the Project; provided, however, that the increased amount of coverage is consistent with coverage amounts then being required by institutional owners of similar projects with tenants occupying similar size premises in the geographical area in which the Project is located.

18. **Restoration**. If, at any time during the Term, the Project or the Premises are damaged or destroyed by a fire or other insured casualty, Landlord shall notify Tenant within 60 days after discovery of such damage as to the amount of time Landlord reasonably estimates it will take to restore the Project or the Premises, as applicable (the "**Restoration Period**"). If the Restoration Period is estimated to exceed 12 months (the "**Maximum Restoration Period**"), Landlord may, in such notice, elect to terminate this Lease as of the date that is 75 days after the date of discovery of such damage or destruction; provided, however, that notwithstanding Landlord's election to restore, Tenant may elect to terminate this Lease by written notice to Landlord delivered within 5 business days of receipt of a notice from Landlord estimating a Restoration Period for the Premises longer than the Maximum Restoration Period. Unless either Landlord or Tenant so elects to terminate this Lease, Landlord shall, subject to receipt of sufficient insurance proceeds (with any deductible to be treated as a current Operating Expense), promptly restore the Premises (excluding the improvements installed by Tenant or by Landlord and paid for by Tenant), subject to delays arising from the collection of insurance proceeds, from Force Majeure events; provided, however, that if repair or restoration of the Premises is not substantially complete as of the end of the Maximum Restoration Period or, if longer, the Restoration Period, Landlord may, in its sole and absolute discretion, elect not to proceed with such repair and restoration, or Tenant may by written notice to Landlord delivered within 5 business days of the expiration of the Maximum Restoration Period or, if longer, the Restoration Period, elect to terminate this Lease, in which event Landlord shall be relieved of its obligation to make such repairs or restoration and this Lease shall terminate as of the date that is 75 days after discovery of such damage or destruction, but Landlord shall retain any Rent paid and the right to any Rent payable by Tenant prior to such termination by Landlord or Tenant.

Tenant, at its expense, shall promptly perform, subject to delays arising from the collection of insurance proceeds, from Force Majeure events, all repairs or restoration not required to be done by Landlord and shall promptly re-enter the Premises and commence doing business in accordance with this Lease. Notwithstanding the foregoing, either Landlord or Tenant may terminate this Lease upon written notice to the other if the Premises are damaged during the last 12 months of the Term and Landlord reasonably estimates that it will take more than 2 months to repair such damage; provided, however, that such notice is delivered within 10 business days after the date that Landlord provides Tenant with written notice of the estimated Restoration Period. Notwithstanding anything to the contrary contained herein, Landlord shall also have the right to terminate this Lease if insurance proceeds are not available for such restoration. Rent shall be abated from the date of discovery of the damage or destruction until the Premises are repaired and restored, in the proportion which the area of the Premises, if any, which is not usable by Tenant bears to the total area of the Premises, unless Landlord provides Tenant with other space during the period of repair that is suitable for the temporary conduct of Tenant's business. Such abatement shall be the sole remedy of Tenant, and except as provided in this Section 18, Tenant waives any right to terminate this Lease by reason of damage or casualty loss.

The provisions of this Lease, including this Section 18, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, or any other portion of the Project, and any statute or regulation which is now or may hereafter be in effect shall have no application to this Lease or any damage or destruction to all or any part of the Premises or any other portion of the Project, the parties hereto expressly agreeing that this Section 18 sets forth their entire understanding and agreement with respect to such matters.

19. **Condemnation**. If the whole or any material part of the Premises or the Project is taken for any public or quasi-public use under governmental law, ordinance, or regulation, or by right of eminent domain, or by private purchase in lieu thereof (a "**Taking**" or "**Taken**"), and the Taking would in Landlord's reasonable judgment, either prevent or materially interfere with Tenant's use of the Premises or materially interfere with or impair Landlord's ownership or operation of the Project, then upon written notice by Landlord this Lease shall terminate and Rent shall be apportioned as of said date. If part of the Premises shall be Taken, and this Lease is not terminated as provided above, Landlord shall promptly restore the Premises and the Project as nearly as is commercially reasonable under the circumstances to their condition prior to such partial Taking and the rentable square footage of the Building, the rentable square footage of the Premises, Tenant's Share of Excess Operating Expenses and the Rent payable hereunder during the unexpired Term shall be reduced to such extent as may be fair and reasonable under the circumstances. Upon any such Taking, Landlord shall be entitled to receive the entire price or award from any such Taking without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award. Tenant shall have the right, to the extent that same shall not diminish Landlord's award, to make a separate claim against the condemning authority (but not Landlord) for such compensation as may be separately awarded or recoverable by Tenant for moving expenses and damage to Tenant's trade fixtures, if a separate award for such items is made to Tenant. Tenant hereby waives any and all rights it might otherwise have pursuant to any provision of state law to terminate this Lease upon a partial Taking of the Premises or the Project.

20. **Events of Default**. Each of the following events shall be a default ("**Default**") by Tenant under this Lease:

a. **Payment Defaults**. Tenant shall fail to pay any installment of Rent or any other payment hereunder when due; provided, however, that Landlord will give Tenant notice and an opportunity to cure any failure to pay Rent within 3 days of any such notice not more than once in any 12 month period and Tenant agrees that such notice shall be in lieu of and not in addition to, or shall be deemed to be, any notice required by law.

b. **Insurance**. Any insurance required to be maintained by Tenant pursuant to this Lease shall be canceled or terminated or shall expire or shall be reduced or materially changed, or Landlord shall receive a notice of nonrenewal of any such insurance and Tenant shall fail to obtain replacement insurance before the expiration of the current coverage.

c. **Abandonment**. Tenant shall abandon the Premises.

d. **Improper Transfer**. Tenant shall assign, sublease or otherwise transfer or attempt to transfer all or any portion of Tenant's interest in this Lease or the Premises except as expressly permitted herein, or Tenant's interest in this Lease shall be attached, executed upon, or otherwise judicially seized and such action is not released within 90 days of the action.

e. **Liens**. Tenant shall fail to discharge or otherwise obtain the release of any lien placed upon the Premises in violation of this Lease within 10 days after any such lien is filed against the Premises.

f. **Insolvency Events**. Tenant or any guarantor or surety of Tenant's obligations hereunder shall: (A) make a general assignment for the benefit of creditors; (B) commence any case, proceeding or other action seeking to have an order for relief entered on its behalf as a debtor or to adjudicate it a bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, liquidation, dissolution or composition of it or its debts or seeking appointment of a receiver, trustee, custodian or other similar official for it or for all or of any substantial part of its property (collectively a "**Proceeding for Relief**"); (C) become the subject of any Proceeding for Relief which is not dismissed within 90 days of its filing or entry; or (D) die or suffer a legal disability (if Tenant, guarantor, or surety is an individual) or be dissolved or otherwise fail to maintain its legal existence (if Tenant, guarantor or surety is a corporation, partnership or other entity).

g. **Estoppel Certificate or Subordination Agreement**. Tenant fails to execute any document required from Tenant under Sections 23 or 27 within 5 days after a second notice requesting such document.

h. **Other Defaults**. Tenant shall fail to comply with any provision of this Lease other than those specifically referred to in this Section 20, and, except as otherwise expressly provided herein, such failure shall continue for a period of 30 days after written notice thereof from Landlord to Tenant.

Any notice given under Section 20(h) hereof shall: (i) specify the alleged default, (ii) demand that Tenant cure such default, (iii) be in lieu of, and not in addition to, or shall be deemed to be, any notice required under any provision of applicable law, and (iv) not be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice; provided that if the nature of Tenant's default pursuant to Section 20(h) is such that it cannot be cured by the payment of money and reasonably requires more than 30 days to cure, then Tenant shall not be deemed to be in default if Tenant commences such cure within said 30 day period and thereafter diligently prosecutes the same to completion; provided, however, that such cure shall be completed no later than 60 days from the date of Landlord's notice.

21. **Landlord's Remedies**.

a. **Payment By Landlord; Interest**. Upon a Default by Tenant hereunder, Landlord may, without waiving or releasing any obligation of Tenant hereunder, make such payment or perform such act. All sums so paid or incurred by Landlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to 12% per annum or the highest rate permitted by law (the "**Default Rate**"), whichever is less, shall be payable to Landlord on demand as Additional Rent. Nothing herein shall be construed to create or impose a duty on Landlord to mitigate any damages resulting from Tenant's Default hereunder.

b. **Late Payment Rent**. Late payment by Tenant to Landlord of Rent and other sums due will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult and impracticable to ascertain. Such costs include, but are not limited to, processing and accounting charges and late charges which may be imposed on Landlord under any Mortgage covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within 5 days after the date such payment is due, Tenant shall pay to Landlord an additional sum equal to 6% of the overdue Rent as a late charge. The parties agree that this late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. In addition to the late charge, Rent not paid when due shall bear interest at the Default Rate from the 5th day after the date due until paid.

c. **Remedies**. Upon the occurrence of a Default, Landlord, at its option, without further notice or demand to Tenant, shall have in addition to all other rights and remedies provided in this Lease, 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.

i. Terminate this Lease, or at Landlord's option, Tenant's right to possession only, 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;

ii. Upon any termination of this Lease, whether pursuant to the foregoing Section 21(c)(i) or otherwise, Landlord may recover from Tenant the following:

1. The worth at the time of award of any unpaid rent which has been earned at the time of such termination; plus

2. 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

3. The worth at the time of award of the amount by which the unpaid rent for the balance of the Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

4. 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; and

5. 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 21 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 21(c)(ii)(A) and (B),

above, the "**worth at the time of award**" shall be computed by allowing interest at the Default Rate. As used in Section 21(c)(ii)(C) 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 1%.

iii. Landlord may continue this Lease in effect after Tenant's Default and recover rent as it becomes due (Landlord and Tenant hereby agreeing that Tenant has the right to sublet or assign hereunder, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease following a Default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies hereunder, including the right to recover all Rent as it becomes due.

iv. Whether or not Landlord elects to terminate this Lease following a 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. Upon Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

d. **Effect of Exercise**. Exercise by Landlord of any remedies hereunder or otherwise available shall not be deemed to be an acceptance of surrender of the Premises and/or a termination of this Lease by Landlord, it being understood that such surrender and/or termination can be effected only by the express written agreement of Landlord and Tenant. Any law, usage, or custom to the contrary notwithstanding, Landlord shall have the right at all times to enforce the provisions of this Lease in strict accordance with the terms hereof; and the failure of Landlord at any time to enforce its rights under this Lease strictly in accordance with same shall not be construed as having created a custom in any way or manner contrary to the specific terms, provisions, and covenants of this Lease or as having modified the same and shall not be deemed a waiver of Landlord's right to enforce one or more of its rights in connection with any subsequent default. A receipt by Landlord of Rent or other payment with knowledge of the breach of any covenant hereof shall not be deemed a waiver of such breach, and no waiver by Landlord of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by Landlord. To the greatest extent permitted by law, Tenant waives the service of notice of Landlord's intention to re-enter, re-take or otherwise obtain possession of the Premises as provided in any statute, or to institute legal proceedings to that end, and also waives all right of redemption in case Tenant shall be dispossessed by a judgment or by warrant of any court or judge. Any reletting of the Premises or any portion thereof shall be on such terms and conditions as Landlord in its sole discretion may determine. Landlord shall not be liable for, nor shall Tenant's obligations hereunder be diminished because of, Landlord's failure to relet the Premises or collect rent due in respect of such reletting or otherwise to mitigate any damages arising by reason of Tenant's Default.

22. **Assignment and Subletting**.

a. **General Prohibition**. Without Landlord's prior written consent subject to and on the conditions described in this Section 22, Tenant shall not, directly or indirectly, voluntarily or by operation of law, assign this Lease or sublease the Premises or any part thereof or mortgage, pledge, or hypothecate its leasehold interest or grant any concession or license within the Premises, and any attempt to do any of the foregoing shall be void and of no effect. If Tenant is a corporation, partnership or limited liability company, the shares or other ownership interests thereof which are not actively traded upon a stock exchange or in the over-the-counter market, a transfer or series of transfers whereby 50% or more of the issued and outstanding shares or other ownership interests of such corporation are, or voting control is, transferred (but excepting transfers upon deaths of individual owners) from a person or persons or entity or entities which were owners thereof at time of execution of this Lease to persons or entities who were not owners of shares or other ownership interests of the corporation, partnership or limited liability company at time of execution of this Lease, shall be deemed an assignment of this Lease requiring the consent of Landlord as provided in this Section 22. Notwithstanding the foregoing, any public offering of shares or other ownership interest in Tenant shall not be deemed an assignment

b. **Permitted Transfers**. If Tenant desires to assign, sublease, hypothecate or otherwise transfer this Lease or sublet the Premises, then at least 15 business days, but not more than 45 business days, before the date Tenant desires the assignment or sublease to be effective (the "**Assignment Date**"), Tenant shall give Landlord a notice (the "**Assignment Notice**") containing such information about the proposed assignee or sublessee, including the proposed use of the Premises and any Hazardous Materials proposed to be used, stored handled, treated, generated in or released or disposed of from the Premises, the Assignment Date, any relationship between Tenant and the proposed assignee or sublessee, and all material terms and conditions of the proposed assignment or sublease, including a copy of any proposed assignment or sublease in its final form, and such other information as Landlord may deem reasonably necessary or appropriate to its consideration whether to grant its consent. Landlord may, by giving written notice to Tenant within 15 business days after receipt of the Assignment Notice: (i) grant such consent (provided that Landlord shall

further have the right to review and approve or disapprove the proposed form of sublease prior to the effective date of any such subletting), (ii) refuse such consent, in its reasonable discretion; or (iii) terminate this Lease with respect to the space described in the Assignment Notice as of the Assignment Date (an "**Assignment Termination**"). **Among other reasons, it shall be reasonable for Landlord to withhold its consent in any of these instances: (1) the proposed assignee or subtenant is a governmental agency; (2) in Landlord's reasonable judgment, the use of the Premises by the proposed assignee or subtenant would entail any alterations that would lessen the value of the leasehold improvements in the Premises, or would require increased services by Landlord; (3)** in Landlord's reasonable judgment, the proposed assignee or subtenant lacks the creditworthiness to support the financial obligations it will incur under the proposed assignment or sublease**; (4) in Landlord's reasonable judgment, the character, reputation, or business of the proposed assignee or subtenant is inconsistent with the desired tenant-mix or the quality of other tenancies in the Project or is inconsistent with the type and quality of the nature of the Building; (5) reserved; (6) Landlord has experienced previous defaults by or is in litigation with the proposed assignee or subtenant; (7) the use of the Premises by the proposed assignee or subtenant will violate any applicable Legal Requirement; (8) the proposed assignee or subtenant, or any entity that, directly or indirectly, controls, is controlled by, or is under common control with the proposed assignee or subtenant, is then an occupant of the Project and Landlord has comparable space available to meet the transferee's needs; (9) the proposed assignee or subtenant is an entity with whom Landlord is then currently negotiating to lease space in the Project; or (10) the assignment or sublease is prohibited by Landlord's lender.** If Landlord delivers notice of its election to exercise an Assignment Termination, Tenant shall have the right to withdraw such Assignment Notice by written notice to Landlord of such election within 5 business days after Landlord's notice electing to exercise the Assignment Termination. If Tenant withdraws such Assignment Notice, this Lease shall continue in full force and effect. If Tenant does not withdraw such Assignment Notice, this Lease, and the term and estate herein granted, shall terminate as of the Assignment Date with respect to the space described in such Assignment Notice. No failure of Landlord to exercise any such option to terminate this Lease, or to deliver a timely notice in response to the Assignment Notice, shall be deemed to be Landlord's consent to the proposed assignment, sublease or other transfer. Tenant shall pay to Landlord a fee equal to Two Thousand Five Hundred Dollars ($2,500) in connection with its consideration of any Assignment Notice and/or its preparation or review of any consent documents. Notwithstanding the foregoing, Landlord's consent to an assignment of this Lease or a subletting of any portion of the Premises to any entity controlling, controlled by or under common control with Tenant (a "**Control Permitted Assignment**") shall not be required, provided that Landlord shall have the right to approve the form of any such sublease or assignment (which approval shall not unreasonably withheld or delayed).

In addition, Tenant shall have the right to assign this Lease, upon 15 days prior written notice to Landlord but without obtaining Landlord's prior written consent, to a corporation or other entity which is a successor-in-interest to Tenant, by way of merger, consolidation or corporate reorganization, or by the purchase of all or substantially all of the assets or the ownership interests of Tenant provided that (i) such merger or consolidation, or such acquisition or assumption, as the case may be, is for a good business purpose and not principally for the purpose of transferring this Lease, and (ii) the net worth (as determined in accordance with generally accepted accounting principles ("**GAAP**")) of the assignee is not less than the net worth (as determined in accordance with GAAP) of Tenant as of the date of Tenant's most current quarterly or annual financial statements, and (iii) such assignee shall agree in writing to assume all of the terms, covenants and conditions of this Lease (a "**Corporate Permitted Assignment**").

Control Permitted Assignments and Corporate Permitted Assignments are hereinafter referred to as "**Permitted Assignments**."

c. **Additional Conditions**. As a condition to any such assignment or subletting, whether or not Landlord's consent is required, Landlord may require that any assignee or subtenant agree, in writing at the time of such assignment or subletting, that if Landlord gives such party notice that Tenant is in default under this Lease, such party shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments will be received by Landlord without any liability except to credit such payment against those due under this Lease, and any such third party shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, in no event shall Landlord or its successors or assigns be obligated to accept such attornment.

d. **No Release of Tenant, Sharing of Excess Rents**. Notwithstanding any assignment or subletting, Tenant and any guarantor or surety of Tenant's obligations under this Lease shall at all times remain fully and primarily responsible and liable for the payment of Rent and for compliance with all of Tenant's other obligations under this Lease. Other than in connection with a Permitted Assignment, if the Rent due and payable by a sublessee or assignee (or a combination of the rental payable under such sublease or assignment plus any bonus or other consideration therefor or incident thereto in any form) exceeds the sum of the rental payable under this Lease (excluding however, any Rent payable under this Section, and actual and reasonable and customary brokerage fees, legal costs and any design or construction fees directly related to and required pursuant to the terms of any such sublease, in each case amortized over the remaining

Term of the Lease) ("**Excess Rent**"), then Tenant shall be bound and obligated to pay Landlord as Additional Rent hereunder 50% of such Excess Rent within 10 days following receipt thereof by Tenant. If Tenant shall sublet the Premises or any part thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all rent from any such subletting, and Landlord as assignee and as attorney-in-fact for Tenant, or a receiver for Tenant appointed on Landlord's application, may collect such rent and apply it toward Tenant's obligations under this Lease; except that, until the occurrence of a Default, Tenant shall have the right to collect such rent.

e. **No Waiver**. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignees of this Lease or any sublessees of the Premises from obtaining the consent of Landlord to any further assignment or subletting nor shall it release Tenant or any assignee or sublessee of Tenant from full and primary liability under this Lease. The acceptance of Rent hereunder, or the acceptance of performance of any other term, covenant, or condition thereof, from any other person or entity shall not be deemed to be a waiver of any of the provisions of this Lease or a consent to any subletting, assignment or other transfer of the Premises.

23. **Estoppel Certificate**. Tenant shall, within 10 business days of written notice from Landlord, execute, acknowledge and deliver a statement in writing in any form reasonably requested by a proposed lender or purchaser, (i) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect) and the dates to which the rental and other charges are paid in advance, if any, (ii) acknowledging that there are not any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (iii) setting forth such further information with respect to the status of this Lease or the Premises as may be reasonably requested thereon. Any such statement may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the real property of which the Premises are a part. Tenant's failure to deliver such statement within 5 days after Tenant's receipt of a second written notice from Landlord shall, at the option of Landlord, constitute a Default under this Lease, and, in any event, shall be conclusive upon Tenant that this Lease is in full force and effect and without modification except as may be represented by Landlord in any certificate prepared by Landlord and delivered to Tenant for execution.

24. **Quiet Enjoyment**. So long as Tenant is not in Default under this Lease, Tenant shall, subject to the terms of this Lease, at all times during the Term, have peaceful and quiet enjoyment of the Premises against any person claiming by, through or under Landlord.

25. **Prorations**. All prorations required or permitted to be made hereunder shall be made on the basis of a 360 day year and 30 day months.

26. **Rules and Regulations**. Tenant shall, at all times during the Term and any extension thereof, comply with all reasonable rules and regulations at any time or from time to time established by Landlord covering use of the Premises and the Project. Such rules and regulations may include, without limitation, rules and regulations relating to the use of the Project Amenities and/or rules and regulations which are intended to encourage social distancing, promote and protect health and physical well-being within the Building and the Project and/or intended to limit the spread of Infectious Conditions. The current rules and regulations are attached hereto as **Exhibit E**. If there is any conflict between said rules and regulations and other provisions of this Lease, the terms and provisions of this Lease shall control. Landlord shall not have any liability or obligation for the breach of any rules or regulations by other tenants in the Project and shall not enforce such rules and regulations in a discriminatory manner.

27. **Subordination**. This Lease and Tenant's interest and rights hereunder are hereby made and shall be subject and subordinate at all times to the lien of any Mortgage now existing or hereafter created on or against the Project or the Premises, and all amendments, restatements, renewals, modifications, consolidations, refinancing, assignments and extensions thereof, without the necessity of any further instrument or act on the part of Tenant; provided, however that so long as there is no Default hereunder, Tenant's right to possession of the Premises shall not be disturbed by the Holder of any such Mortgage. Tenant agrees, at the election of the Holder of any such Mortgage, to attorn to any such Holder. Tenant agrees upon demand to execute, acknowledge and deliver such instruments, confirming such subordination, and such instruments of attornment as shall be requested by any such Holder, provided any such instruments contain appropriate non-disturbance provisions assuring Tenant's quiet enjoyment of the Premises as set forth in Section 24 hereof. Notwithstanding the foregoing, any such Holder may at any time subordinate its Mortgage to this Lease, without Tenant's consent, by notice in writing to Tenant, and thereupon this Lease shall be deemed prior to such Mortgage without regard to their respective dates of execution, delivery or recording and in that event such Holder shall have the same rights with respect to this Lease as though this Lease had been executed prior to the execution, delivery and recording of such Mortgage and had been assigned to such Holder. The term "**Mortgage**" whenever used in this Lease shall be deemed to include deeds of trust, security assignments and any other encumbrances, and any reference to the "**Holder**" of a Mortgage shall be deemed to include the beneficiary under a deed of trust.

28. **Surrender**. Upon the expiration of the Term or earlier termination of Tenant's right of possession, Tenant shall surrender the Premises to Landlord in the same condition as received subject to any Alterations or Installations permitted by Landlord to remain in the Premises, free of Hazardous Materials brought upon, kept, used, stored, handled, treated, generated in, or released or disposed of from, the Premises by Tenant or any Tenant Parties, broom clean, ordinary wear and tear and casualty loss and condemnation covered by Sections 18 and 19 excepted.

Tenant shall immediately return to Landlord all keys and/or access cards to parking, the Project, restrooms or all or any portion of the Premises furnished to or otherwise procured by Tenant. If any such access card or key is lost, Tenant shall pay to Landlord, at Landlord's election, either the cost of replacing such lost access card or key or the cost of reprogramming the access security system in which such access card was used or changing the lock or locks opened by such lost key. Any Tenant's Property, Alterations and property not so removed by Tenant as permitted or required herein shall be deemed abandoned and may be stored, removed, and disposed of by Landlord at Tenant's expense, and Tenant waives all claims against Landlord for any damages resulting from Landlord's retention and/or disposition of such property. All obligations of Tenant hereunder not fully performed as of the termination of the Term, including the obligations of Tenant under Section 30 hereof, shall survive the expiration or earlier termination of the Term, including, without limitation, indemnity obligations, payment obligations with respect to Rent and obligations concerning the condition and repair of the Premises.

29. **Waiver of Jury Trial**. TO THE EXTENT PERMITTED BY LAW, TENANT AND LANDLORD WAIVE ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT, OR OTHERWISE, BETWEEN LANDLORD AND TENANT ARISING OUT OF THIS LEASE OR ANY OTHER INSTRUMENT, DOCUMENT, OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO.

30. **Environmental Requirements**.

a. **Prohibition/Compliance**. Except for Hazardous Material contained in products customarily used by tenants in de minimis quantities for ordinary cleaning and office purposes, Tenant shall not permit or cause any party to bring any Hazardous Material upon the Premises or the Project or use, store, handle, treat, generate, manufacture, transport, release or dispose of any Hazardous Material in, on or from the Premises or the Project without Landlord's prior written consent which may be withheld in Landlord's sole discretion. Tenant, at its sole cost and expense, shall operate its business in the Premises in strict compliance with all Environmental Requirements and shall remove or remediate in a manner satisfactory to Landlord any Hazardous Materials released on or from the Project by Tenant or any Tenant Party. Tenant shall complete and certify disclosure statements as requested by Landlord from time to time relating to Tenant's use, storage, handling, treatment, generation, manufacture, transportation, release or disposal of Hazardous Materials on or from the Premises. The term "**Environmental Requirements**" means all applicable present and future statutes, regulations, ordinances, rules, codes, judgments, orders or other similar enactments of any Governmental Authority regulating or relating to health, safety, or environmental conditions on, under, or about the Premises or the Project, or the environment, including without limitation, the following: the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; and all state and local counterparts thereto, and any regulations or policies promulgated or issued thereunder. The term "**Hazardous Materials**" means and includes any substance, material, waste, pollutant, or contaminant listed or defined as hazardous or toxic, or regulated by reason of its impact or potential impact on humans, animals and/or the environment under any Environmental Requirements, asbestos and petroleum, including crude oil or any fraction thereof, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). As defined in Environmental Requirements, Tenant is and shall be deemed to be the "**operator**" of Tenant's "**facility**" and the "**owner**" of all Hazardous Materials brought on the Premises by Tenant or any Tenant Party, and the wastes, by-products, or residues generated, resulting, or produced therefrom.

b. **Indemnity**. Tenant hereby indemnifies and shall defend and hold Landlord, its officers, directors, employees, agents and contractors harmless from any and all actions (including, without limitation, remedial or enforcement actions of any kind, administrative or judicial proceedings, and orders or judgments arising out of or resulting therefrom), costs, claims, damages (including, without limitation, punitive damages and damages based upon diminution in value of the Premises or the Project, or the loss of, or restriction on, use of the Premises or any portion of the Project), expenses (including, without limitation, attorneys', consultants' and experts' fees, court costs and amounts paid in settlement of any claims or actions), fines, forfeitures or other civil, administrative or criminal penalties, injunctive or other relief (whether or not based upon personal injury, property damage, or contamination of, or adverse effects upon, the environment, water tables or natural resources), liabilities or losses which arise during or after the Term as a result of such contamination. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal, or restoration work required by any federal, state or local Governmental Authority

because of Hazardous Materials present in the air, soil or ground water above, on, or under the Premises. Without limiting the foregoing, if the presence of any Hazardous Materials on the Premises, the Building, the Project or any adjacent property caused or permitted by Tenant or any Tenant Party results in any contamination of the Premises, the Building, the Project or any adjacent property, Tenant shall promptly take all actions at its sole expense and in accordance with applicable law as are necessary to return the Premises, the Building, the Project or any adjacent property to the condition existing prior to the time of such contamination, provided that Landlord's approval of such action shall first be obtained, which approval shall not unreasonably be withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Premises, the Building or the Project. Notwithstanding anything to the contrary contained in this Section 30, Tenant shall not be responsible for, and the indemnification and hold harmless obligation set forth in this paragraph shall not apply to (i) contamination in the Premises which Tenant can prove existed in the Premises immediately prior to the Commencement Date, or (ii) the presence of any Hazardous Materials in the Premises which Tenant can prove migrated from outside of the Premises into the Premises, unless in either case, the presence of such Hazardous Materials (x) is the result of a breach by Tenant of any of its obligations under this Lease, or (y) was caused, contributed to or exacerbated by Tenant or any Tenant Party.

c. **Testing**. Landlord shall have the right to conduct annual tests of the Premises to determine whether any contamination of the Premises or the Project has occurred as a result of Tenant's use. Tenant shall be required to pay the cost of such annual test of the Premises if there is violation of this Section 30 or if contamination for which Tenant is responsible under this Section 30 is identified; provided, however, that if Tenant conducts its own tests of the Premises using third party contractors and test procedures acceptable to Landlord which tests are certified to Landlord, Landlord shall accept such tests in lieu of the annual tests to be paid for by Tenant. In addition, at any time, and from time to time, prior to the expiration or earlier termination of the Term, Landlord shall have the right to conduct appropriate tests of the Premises and the Project to determine if contamination has occurred as a result of Tenant's use of the Premises. In connection with such testing, upon the request of Landlord, Tenant shall deliver to Landlord or its consultant such non-proprietary information concerning the use of Hazardous Materials in or about the Premises by Tenant or any Tenant Party. If contamination has occurred for which Tenant is liable under this Section 30, Tenant shall pay all costs to conduct such tests. If no such contamination is found, Landlord shall pay the costs of such tests (which shall not constitute an Operating Expense). Landlord shall provide Tenant with a copy of all third party, non-confidential reports and tests of the Premises made by or on behalf of Landlord during the Term without representation or warranty and subject to a confidentiality agreement. Tenant shall, at its sole cost and expense, promptly and satisfactorily remediate any environmental conditions identified by such testing in accordance with all Environmental Requirements. Landlord's receipt of or satisfaction with any environmental assessment in no way waives any rights which Landlord may have against Tenant.

d. **Tenant's Obligations**. Tenant's obligations under this Section 30 shall survive the expiration or earlier termination of this Lease. During any period of time after the expiration or earlier termination of this Lease required by Tenant or Landlord to complete the removal from the Premises of any Hazardous Materials, Tenant shall continue to pay the full Rent in accordance with this Lease for any portion of the Premises not relet by Landlord in Landlord's sole discretion, which Rent shall be prorated daily.

31. **Tenant's Remedies/Limitation of Liability**. Landlord shall not be in default hereunder unless Landlord fails to perform any of its obligations hereunder within 30 days after written notice from Tenant specifying such failure (unless such performance will, due to the nature of the obligation, require a period of time in excess of 30 days, then after such period of time as is reasonably necessary). Upon any default by Landlord, Tenant shall give notice by registered or certified mail to any Holder of a Mortgage covering the Premises and to any landlord of any lease of property in or on which the Premises are located and Tenant shall offer such Holder and/or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Project by power of sale or a judicial action if such should prove necessary to effect a cure; provided Landlord shall have furnished to Tenant in writing the names and addresses of all such persons who are to receive such notices. All obligations of Landlord hereunder shall be construed as covenants, not conditions; and, except as may be otherwise expressly provided in this Lease, Tenant may not terminate this Lease for breach of Landlord's obligations hereunder.

All obligations of Landlord under this Lease will be binding upon Landlord only during the period of its ownership of the Premises and not thereafter. The term "**Landlord**" in this Lease shall mean only the owner for the time being of the Premises. Upon the transfer by such owner of its interest in the Premises, such owner shall thereupon be released and discharged from all obligations of Landlord thereafter accruing, but such obligations shall be binding during the Term upon each new owner for the duration of such owner's ownership.

32. **Inspection and Access**. Landlord and its agents, representatives, and contractors may enter the Premises at any reasonable time to inspect the Premises and to make such repairs as may be required or permitted pursuant to this Lease

and for any other business purpose. Landlord and Landlord's representatives may enter the Premises during business hours on not less than 48 hours advance written notice (except in the case of emergencies in which case no such notice shall be required and such entry may be at any time) for the purpose of effecting any such repairs, inspecting the Premises, showing the Premises to prospective purchasers and, during the last 18 months of the Term, to prospective tenants or for any other business purpose. Landlord may erect a suitable sign on the Premises stating the Premises are available to let or that the Project is available for sale. Landlord may grant easements, make public dedications, designate Common Areas and create restrictions on or about the Premises, provided that no such easement, dedication, designation or restriction materially, adversely affects Tenant's use or occupancy of the Premises for the Permitted Use. At Landlord's request, Tenant shall execute such instruments as may be necessary for such easements, dedications or restrictions. Tenant shall at all times, except in the case of emergencies, have the right to escort Landlord or its agents, representatives, contractors or guests while the same are in the Premises, provided such escort does not materially and adversely affect Landlord's access rights hereunder.

33. **Security**. Tenant acknowledges and agrees that security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and that Landlord is not providing any security services with respect to the Premises. Tenant agrees that Landlord shall not be liable to Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant in connection with any unauthorized entry into the Premises or any other breach of security with respect to the Premises. Tenant shall be solely responsible for the personal safety of Tenant's officers, employees, agents, contractors, guests and invitees while any such person is in, on or about the Premises and/or the Project. Tenant shall at Tenant's cost obtain insurance coverage to the extent Tenant desires protection against such criminal acts.

34. **Force Majeure**. Except for the payment of Rent, neither Landlord nor Tenant shall be responsible or liable for delays in the performance of its obligations hereunder when caused by, related to, or arising out of acts of God, sinkholes or subsidence, strikes, lockouts, or other labor disputes, embargoes, quarantines, weather, national, regional, or local disasters, calamities, or catastrophes, inability to obtain labor or materials (or reasonable substitutes therefor) at reasonable costs or failure of, or inability to obtain, utilities necessary for performance, governmental restrictions, orders, limitations, regulations, or controls, national emergencies, local, regional or national epidemic or pandemic, delay in issuance or revocation of permits, enemy or hostile governmental action, terrorism, insurrection, riots, civil disturbance or commotion, fire or other casualty, and other causes or events beyond their reasonable control ("**Force Majeure**").

35. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with this transaction and that no Broker brought about this transaction other than Newmark and CBRE. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Newmark and CBRE, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this leasing transaction.

36. **Limitation on Landlord's Liability**. NOTWITHSTANDING ANYTHING SET FORTH HEREIN OR IN ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT TO THE CONTRARY: (A) LANDLORD SHALL NOT BE LIABLE TO TENANT OR ANY OTHER PERSON FOR (AND TENANT AND EACH SUCH OTHER PERSON ASSUME ALL RISK OF) LOSS, DAMAGE OR INJURY, WHETHER ACTUAL OR CONSEQUENTIAL TO: TENANT'S PERSONAL PROPERTY OF EVERY KIND AND DESCRIPTION, INCLUDING, WITHOUT LIMITATION TRADE FIXTURES, EQUIPMENT, INVENTORY, SCIENTIFIC RESEARCH, SCIENTIFIC EXPERIMENTS, LABORATORY ANIMALS, PRODUCT, SPECIMENS, SAMPLES, AND/OR SCIENTIFIC, BUSINESS, ACCOUNTING AND OTHER RECORDS OF EVERY KIND AND DESCRIPTION KEPT AT THE PREMISES AND ANY AND ALL INCOME DERIVED OR DERIVABLE THEREFROM; (B) THERE SHALL BE NO PERSONAL RECOURSE TO LANDLORD FOR ANY ACT OR OCCURRENCE IN, ON OR ABOUT THE PREMISES OR ARISING IN ANY WAY UNDER THIS LEASE OR ANY OTHER AGREEMENT BETWEEN LANDLORD AND TENANT WITH RESPECT TO THE SUBJECT MATTER HEREOF AND ANY LIABILITY OF LANDLORD HEREUNDER SHALL BE STRICTLY LIMITED SOLELY TO LANDLORD'S INTEREST IN THE PROJECT OR ANY PROCEEDS FROM SALE OR CONDEMNATION THEREOF AND ANY INSURANCE PROCEEDS PAYABLE IN RESPECT OF LANDLORD'S INTEREST IN THE PROJECT OR IN CONNECTION WITH ANY SUCH LOSS; AND (C) IN NO EVENT SHALL ANY PERSONAL LIABILITY BE ASSERTED AGAINST LANDLORD IN CONNECTION WITH THIS LEASE NOR SHALL ANY RECOURSE BE HAD TO ANY OTHER PROPERTY OR ASSETS OF LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS. UNDER NO CIRCUMSTANCES SHALL LANDLORD OR ANY OF LANDLORD'S OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR CONTRACTORS BE LIABLE FOR INJURY TO TENANT'S BUSINESS OR FOR ANY LOSS OF INCOME OR PROFIT THEREFROM.

Tenant acknowledges and agrees that measures and/or services implemented at the Project, if any, intended to encourage social distancing, promote and protect health and physical well-being and/or intended to limit the spread of

Infectious Conditions, may not prevent the spread of such Infectious Conditions. Neither Landlord nor any Landlord Indemnified Parties shall have any liability and Tenant waives any claims against Landlord and the Landlord Indemnified Parties with respect to any loss, damage or injury in connection with (x) the implementation, or failure of Landlord or any Landlord Indemnified Parties to implement, any measures and/or services at the Project intended to encourage social distancing, promote and protect health and physical well-being and/or intended to limit the spread of Infectious Conditions, or (y) the failure of any measures and/or services implemented at the Project, if any, to limit the spread of any Infectious Conditions.

37. **Severability**. If any clause or provision of this Lease is illegal, invalid or unenforceable under present or future laws, then and in that event, it is the intention of the parties hereto that the remainder of this Lease shall not be affected thereby. It is also the intention of the parties to this Lease that in lieu of each clause or provision of this Lease that is illegal, invalid or unenforceable, there be added, as a part of this Lease, a clause or provision as similar in effect to such illegal, invalid or unenforceable clause or provision as shall be legal, valid and enforceable.

38. **Signs; Exterior Appearance**. Tenant shall not, without the prior written consent of Landlord, which may be granted or withheld in Landlord's sole discretion: (i) attach any awnings, exterior lights, decorations, balloons, flags, pennants, banners, painting or other projection to any outside wall of the Project, (ii) use any curtains, blinds, shades or screens other than Landlord's standard window coverings, (iii) coat or otherwise sunscreen the interior or exterior of any windows, (iv) place any bottles, parcels, or other articles on the window sills, (v) place any equipment, furniture or other items of personal property on any exterior balcony, or (vi) paint, affix or exhibit on any part of the Premises or the Project any signs, notices, window or door lettering, placards, decorations, or advertising media of any type which can be viewed from the exterior of the Premises. Building standard suite entry signage and the directory tablet shall be inscribed, painted or affixed for Tenant by Landlord at the sole cost and expense of Landlord, and shall be of a size, color and type acceptable to Landlord. Nothing may be placed on the exterior of corridor walls or corridor doors other than Landlord's standard lettering. The directory tablet shall be provided exclusively for the display of the name and location of tenants.

39. **Right to Extend Term**. Tenant shall have the right to extend the Term of this Lease upon the following terms and conditions:

a. **Extension Rights**. Tenant shall have 1 consecutive right (the "**Extension Right**") to extend the term of this Lease for 60 months (the "**Extension Term**") on the same terms and conditions as this Lease (other than with respect to Base Rent and the Work Letter) by giving Landlord written notice of its election to exercise the Extension Right (the "**Exercise Notice**") at least 9 months prior, and no earlier than 12 months prior to the expiration of the Base Term of this Lease.

Upon the commencement of the Extension Term, Base Rent shall be payable at the Market Rate (as defined below). Base Rent shall thereafter be adjusted on each annual anniversary of the commencement of such Extension Term by a percentage as determined by Landlord and agreed to by Tenant at the time the Market Rate is determined. As used herein, "**Market Rate**" shall mean the rate that comparable landlords of comparable buildings have accepted in current transactions from non-equity (i.e., not being offered equity in the buildings) and nonaffiliated tenants of similar financial strength for space of comparable size, quality (including all Tenant Improvements, Alterations and other improvements) and floor height in Class A office buildings in the South San Francisco area for a comparable term, with the determination of the Market Rate to take into account all relevant factors, including tenant inducements, views, Project Amenities, parking costs, leasing commissions, allowances or concessions, if any. Notwithstanding the foregoing, the Market Rate shall in no event be less than the Base Rent payable as of the date immediately preceding the commencement of such Extension Term. In addition, Landlord may impose a market rent for the parking rights provided hereunder.

Tenant shall exercise the Extension Right, if at all, as follows: (i) Tenant shall deliver written notice to Landlord (the "**Interest Notice**") not more than 15 months nor less than 12 months prior to the expiration of the Base Term of the Lease stating that Tenant may be interested in exercising its Extension Right; (ii) Landlord shall deliver written notice (the "**Option Rent Notice**") to Tenant within 30 days after Landlord's receipt of the Interest Notice setting forth Landlord's good faith determination of the Market Rate; and (iii) if Tenant wishes to exercise its Extension Right, Tenant shall, on or before the date which is 9 months prior to the expiration of the Base Term of this Lease, exercise the Extension Right by delivering an Exercise Notice to Landlord. Concurrently with Tenant's delivery of the Exercise Notice to Landlord, Tenant may object, in writing (the "**Objection Notice**"), to Landlord's determination of the Market Rate set forth in the Option Rent Notice, in which event such Market Rate shall be determined by arbitration pursuant to Section 39(b) below. If Tenant does not deliver an Objection Notice pursuant to the immediately preceding sentence, Tenant shall be deemed to have accepted the Market Rate set forth in the Option Rent Notice. Tenant acknowledges and agrees that, if Tenant has delivered an Exercise Notice to Landlord pursuant to this Section 39(a), Tenant shall have no right thereafter to rescind such Exercise Notice or elect not to extend the term of this Lease for the Extension Term.

b. **Arbitration**.

i. Within 10 days of Tenant's notice to Landlord of its election (or deemed election) to arbitrate Market Rate and escalations, each party shall deliver to the other a proposal containing the Market Rate and escalations that the submitting party believes to be correct ("**Extension Proposal**"). If either party fails to timely submit an Extension Proposal, the other party's submitted proposal shall determine the Base Rent and escalations for the Extension Term. If both parties submit Extension Proposals, then Landlord and Tenant shall meet within 7 days after delivery of the last Extension Proposal and make a good faith attempt to mutually appoint a single Arbitrator (as defined below) to determine the Market Rate and escalations. If Landlord and Tenant are unable to agree upon a single Arbitrator, then each shall, by written notice delivered to the other within 10 days after the meeting, select an Arbitrator. If either party fails to timely give notice of its selection for an Arbitrator, the other party's submitted proposal shall determine the Base Rent for the Extension Term. The 2 Arbitrators so appointed shall, within 5 business days after their appointment, appoint a third Arbitrator. If the 2 Arbitrators so selected cannot agree on the selection of the third Arbitrator within the time above specified, then either party, on behalf of both parties, may request such appointment of such third Arbitrator by application to any state court of general jurisdiction in the jurisdiction in which the Premises are located, upon 10 days prior written notice to the other party of such intent.

ii. The decision of the Arbitrator(s) shall be made within 30 days after the appointment of a single Arbitrator or the third Arbitrator, as applicable. The decision of the single Arbitrator shall be final and binding upon the parties. The average of the two closest Arbitrators in a three Arbitrator panel shall be final and binding upon the parties. Each party shall pay the fees and expenses of the Arbitrator appointed by or on behalf of such party and the fees and expenses of the third Arbitrator shall be borne equally by both parties. If the Market Rate and escalations are not determined by the first day of the Extension Term, then Tenant shall pay Landlord Base Rent in an amount equal to the Base Rent in effect immediately prior to the Extension Term and increased by the Rent Adjustment Percentage until such determination is made. After the determination of the Market Rate and escalations, the parties shall make any necessary adjustments to such payments made by Tenant. Landlord and Tenant shall then execute an amendment recognizing the Market Rate and escalations for the Extension Term.

iii. An "**Arbitrator**" shall be any person appointed by or on behalf of either party or appointed pursuant to the provisions hereof and: (i) shall be (A) a member of the American Institute of Real Estate Appraisers with not less than 10 years of experience in the appraisal of improved office and high tech industrial real estate in the greater San Francisco Bay area, or (B) a licensed commercial real estate broker with not less than 15 years' experience representing landlords and/or tenants in the leasing of high tech or life sciences space in the greater San Francisco Bay area, (ii) devoting substantially all of their time to professional appraisal or brokerage work, as applicable, at the time of appointment and (iii) be in all respects impartial and disinterested

c. **Rights Personal**. The Extension Right is personal to Tenant and is not assignable without Landlord's consent, which may be granted or withheld in Landlord's sole discretion separate and apart from any consent by Landlord to an assignment of Tenant's interest in this Lease, except that it may be assigned in connection with any Permitted Assignment of this Lease .

d. **Exceptions**. Notwithstanding anything set forth above to the contrary, the Extension Right shall, at Landlord's option, not be in effect and Tenant may not exercise any the Extension Right:

i. during any period of time that Tenant is in Default under any provision of this Lease; or

ii. if Tenant has been in Default under any provision of this Lease 3 or more times, whether or not the Defaults are cured, during the 12 month period immediately prior to the date that Tenant intends to exercise the Extension Right, whether or not the Defaults are cured.

e. **No Extensions**. The period of time within which the Extension Right may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Extension Right.

f. **Termination**. The Extension Right shall, at Landlord's option, terminate and be of no further force or effect even after Tenant's due and timely exercise of the Extension Right, if, after such exercise, but prior to the commencement date of the Extension Term, (i) Tenant fails to timely cure any default by Tenant under this Lease; or (ii) Tenant has Defaulted 3 or more times during the period from the date of the exercise of the Extension Right to the date of the commencement of the Extension Term, whether or not such Defaults are cured.

40. **Miscellaneous**.

a. **Notices**. All notices or other communications between the parties shall be in writing and shall be deemed duly given upon delivery or refusal to accept delivery by the addressee thereof if delivered in person, or upon actual receipt if delivered by reputable overnight guaranty courier, addressed and sent to the parties at their addresses set forth above. Landlord and Tenant may from time to time by written notice to the other designate another address for receipt of future notices.

b. **Joint and Several Liability**. If and when included within the term "**Tenant**," as used in this instrument, there is more than one person or entity, each shall be jointly and severally liable for the obligations of Tenant.

c. **Financial Information**. Tenant shall furnish to Landlord with true and complete copies of (i) upon Landlord's written request on an annual basis, Tenant's most recent audited annual financial statements, provided, however, that Tenant shall not be required to deliver to Landlord such annual financial statements for any particular year sooner than the date that is 90 days after the end of each of Tenant's fiscal years during the Term, (ii) upon Landlord's written request on a quarterly basis, Tenant's most recent unaudited quarterly financial statements; provided, however, that Tenant shall not be required to deliver to Landlord such quarterly financial statements for any particular quarter sooner that the date that is 45 days after the end of each of Tenant's fiscal quarters during the Term, (iii) upon Landlord's written request from time to time, updated business plans, including cash flow projections and/or pro forma balance sheets and income statements, all of which shall be treated by Landlord as confidential information belonging to Tenant, (iv) upon Landlord's written request from time to time, corporate brochures and/or profiles prepared by Tenant for prospective investors, and (v) upon Landlord's written request from time to time, any other financial information or summaries that Tenant typically provides to its lenders or shareholders. Notwithstanding anything to the contrary contained in this Lease, Landlord's written request for financial information pursuant to this Section 40(c) may delivered to Tenant via email. So long as Tenant is a "public company" and its financial information is publicly available, then the foregoing delivery requirements of this Section 40(c)shall not apply.

d. **Recordation**. Neither this Lease nor a memorandum of lease shall be filed by or on behalf of Tenant in any public record. Landlord may prepare and file, and upon request by Landlord Tenant will execute, a memorandum of lease.

e. **Interpretation**. The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Lease or any exhibits or amendments hereto. Words of any gender used in this Lease shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The captions inserted in this Lease are for convenience only and in no way define, limit or otherwise describe the scope or intent of this Lease, or any provision hereof, or in any way affect the interpretation of this Lease.

f. **Not Binding Until Executed**. The submission by Landlord to Tenant of this Lease shall have no binding force or effect, shall not constitute an option for the leasing of the Premises, nor confer any right or impose any obligations upon either party until execution of this Lease by both parties.

g. **Limitations on Interest**. It is expressly the intent of Landlord and Tenant at all times to comply with applicable law governing the maximum rate or amount of any interest payable on or in connection with this Lease. If applicable law is ever judicially interpreted so as to render usurious any interest called for under this Lease, or contracted for, charged, taken, reserved, or received with respect to this Lease, then it is Landlord's and Tenant's express intent that all excess amounts theretofore collected by Landlord be credited on the applicable obligation (or, if the obligation has been or would thereby be paid in full, refunded to Tenant), and the provisions of this Lease immediately shall be deemed reformed and the amounts thereafter collectible hereunder reduced, without the necessity of the execution of any new document, so as to comply with the applicable law, but so as to permit the recovery of the fullest amount otherwise called for hereunder.

h. **Choice of Law**. Construction and interpretation of this Lease shall be governed by the internal laws of the state in which the Premises are located, excluding any principles of conflicts of laws.

i. **Time**. Time is of the essence as to the performance of Tenant's obligations under this Lease.

j. **OFAC**. Tenant and all beneficial owners of Tenant are currently (a) in compliance with and shall at all times during the Term of this Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of this Lease be listed on, the Specially Designated Nationals and Blocked Persons List, Foreign Sanctions Evaders List, or the Sectoral Sanctions Identification List, which are all maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing

statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

k. **Incorporation by Reference**. All exhibits and addenda attached hereto are hereby incorporated into this Lease and made a part hereof. If there is any conflict between such exhibits or addenda and the terms of this Lease, such exhibits or addenda shall control.

l. **Entire Agreement**. This Lease, including the exhibits attached hereto, constitutes the entire agreement between Landlord and Tenant pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements, understandings, letters of intent, negotiations and discussions, whether oral or written, of the parties, and there are no warranties, representations or other agreements, express or implied, made to either party by the other party in connection with the subject matter hereof except as specifically set forth herein.

m. **No Accord and Satisfaction**. No payment by Tenant or receipt by Landlord of a lesser amount than the monthly installment of Base Rent or any Additional Rent will be other than on account of the earliest stipulated Base Rent and Additional Rent, nor will any endorsement or statement on any check or letter accompanying a check for payment of any Base Rent or Additional Rent be an accord and satisfaction. Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or to pursue any other remedy provided in this Lease.

n. **Redevelopment of Project**. Tenant acknowledges that Landlord, in its sole discretion, may from time to time expand, renovate and/or reconfigure the Project as the same may exist from time to time and, in connection therewith or in addition thereto, as the case may be, from time to time without limitation: (a) change the shape, size, location, number and/or extent of any improvements, buildings, structures, lobbies, hallways, entrances, exits, parking and/or parking areas relative to any portion of the Project; (b) modify, eliminate and/or add any buildings, improvements, and parking structure(s) either above or below grade, to the Project, the Common Areas and/or any other portion of the Project and/or make any other changes thereto affecting the same; and (c) make any other changes, additions and/or deletions in any way affecting the Project and/or any portion thereof as Landlord may elect from time to time, including without limitation, additions to and/or deletions from the land comprising the Project, the Common Areas and/or any other portion of the Project. Tenant acknowledges and agrees that construction noise, vibrations and dust associated with normal construction activities in connection with any redevelopment of the Project are to be expected during the course of such construction. Notwithstanding anything to the contrary contained in this Lease, Tenant shall have no right to seek damages (including abatement of Rent) or to cancel or terminate this Lease because of any proposed changes, expansion, renovation or reconfiguration of the Project nor shall Tenant have the right to restrict, inhibit or prohibit any such changes, expansion, renovation or reconfiguration; provided, however, Landlord shall not change the size, dimensions, location or Tenant's Permitted Use of the Premises.

o. **EV Charging Stations**. Landlord shall not unreasonably withhold its consent to Tenant's written request to install 1 or more electric vehicle car charging stations ("**EV Stations**") in the parking area serving the Project; provided, however, that Tenant complies with all reasonable requirements, standards, rules and regulations which may be imposed by Landlord, at the time Landlord's consent is granted, in connection with Tenant's installation, maintenance, repair and operation of such EV Stations, which may include, without limitation, the charge to Tenant of a reasonable monthly rental amount for the parking spaces used by Tenant for such EV Stations, Landlord's designation of the location of Tenant's EV Stations, and Tenant's payment of all costs whether incurred by Landlord or Tenant in connection with the installation, maintenance, repair and operation of each Tenant's EV Station(s). Nothing contained in this paragraph is intended to increase the number of parking spaces which Tenant is otherwise entitled to use at the Project under Section 10 of this Lease nor impose any additional obligations on Landlord with respect to Tenant's parking rights at the Project.

p. **California Accessibility Disclosure**. For purposes of Section 1938(a) of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that the Project has 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, 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 Legal Requirements; and (ii) if the waiver set forth in clause (i) hereinabove is not enforceable pursuant to Legal Requirements, then Landlord and Tenant hereby agree as follows (which constitutes 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; (B) any CASp inspection timely requested by Tenant shall be conducted (1) at a time mutually agreed to by Landlord and Tenant, (2) 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 (3) 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) the CASp Reports shall be delivered by the CASp simultaneously to Landlord and Tenant; (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 this Lease, then Landlord shall perform such improvements, alterations, modifications and/or repairs as and to the extent required by Legal Requirements to correct such violations, and Tenant shall reimburse Landlord for the cost of such improvements, alterations, modifications and/or repairs within 10 business days after Tenant's receipt of an invoice therefor from Landlord.

q. **Counterparts**. This Lease may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Lease and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

r. **Shuttle Services**. Genentech Inc., a Delaware corporation ("**Genentech**"), an employer located in South San Francisco, California and in the vicinity of the Project, is a party to a shuttle service agreement with SFO Airporter, Inc. and/or other provider(s) (collectively, "**Operator**") (the "**Shuttle Agreement**"). Genentech has agreed to extend shuttle services ("**Shuttle Services**") under the Shuttle Agreement to tenants at the Project.

Tenant acknowledges that as an amenity to Tenant, Landlord plans to offer the Shuttle Services to Tenant and other tenants at the Project; provided, however, that neither Landlord nor any affiliate of Landlord shall be obligated to provide the Shuttle Services (or, once the Shuttle Services have commenced, to continue to contract with Genentech to provide the Shuttle Services for any specific period of time) or to cause the Shuttle Services to follow any specific route, make any specific stops, or adhere to any specific schedule or hours of operation. When the Shuttle Services become available, (i) Landlord shall give Tenant written notice of the date such operation will commence ("**Shuttle Services Commencement Date**") and the planned route, stops, schedule, and hours of operation, (ii) Tenant's employees actually employed at the Project shall be permitted, upon evidence to Operator that they are tenants at the Project, to use the Shuttle Services, and (iii) commencing on the Shuttle Services Commencement Date through the earlier of the expiration of the Term or the date that the Shuttle Services cease, Operating Expenses shall include the cost incurred by Landlord in connection with the Shuttle Services (with the first 12 months of costs for such Shuttle Services being deemed the Base Year amount). Tenant acknowledges and agrees that Landlord has not made any representations or warranties regarding the commencement, reliability or continued availability of the Shuttle Services throughout the Term. Tenant further acknowledges that the wi-fi provided by the Shuttle Services, if any, is unsecured, has no guarantee of security and Tenant agrees to inform Tenant's employees to take appropriate precautions when using the Shuttle Services.

Landlord and the Landlord Parties shall not have any liability to Tenant or any of Tenant's employees for any matters in connection with the Shuttle Services and Landlord (and the Landlord Parties) shall not be liable for any damages arising from any act, omission or neglect of Genentech or Operator. Tenant hereby waives all Claims against Landlord (and the Landlord Parties) for losses or damages resulting from any accident or occurrence arising in connection with the Shuttle Services.

s. **Project Specific Requirements**. This Lease is made and accepted subject to the provisions, covenants, conditions and restrictions set forth in that certain Declaration of Restrictive Covenants to Run with Certain Land, recorded November 25, 1981 in the official records of San Mateo County (the "**Official Records**") as Instrument No. 11467AT, as amended by that certain First Amendment to Declaration of Restrictive Covenants to Run with Certain Land, recorded April 9, 1985 in the Official Records as Instrument No. 85033403, the provisions of which are incorporated herein by this reference.

[Signatures on next page]

IN WITNESS WHEREOF, Landlord and Tenant have executed this Lease as of the day and year first above written.

TENANT:

ALIGOS THERAPEUTICS, INC.,
a Delaware corporation

By: /s/ Lucinda Quan
Name: Lucinda Quan
Its: EVP, CBO & Gen'l counsel

☒ I hereby certify that the signature, name, and title above are my signature, name and title

LANDLORD:

601 & 651 GATEWAY CENTER LP,
a Delaware limited partnership

By: GATEWAY CENTER GP LLC,
a Delaware limited liability company,
general partner

By: GATEWAY PORTFOLIO MEMBER LLC,
a Delaware limited liability company, managing member

By: GATEWAY PORTFOLIO HOLDINGS LLC, a Delaware limited liability company, managing member

By: ARE-SAN FRANCISCO NO. 83, LLC
a Delaware limited liability company, managing member

By: ALEXANDRIA REAL ESTATE EQUITIES, L.P., a Delaware limited partnership, managing member

By: ARE-QRS CORP.,
a Maryland corporation, general partner

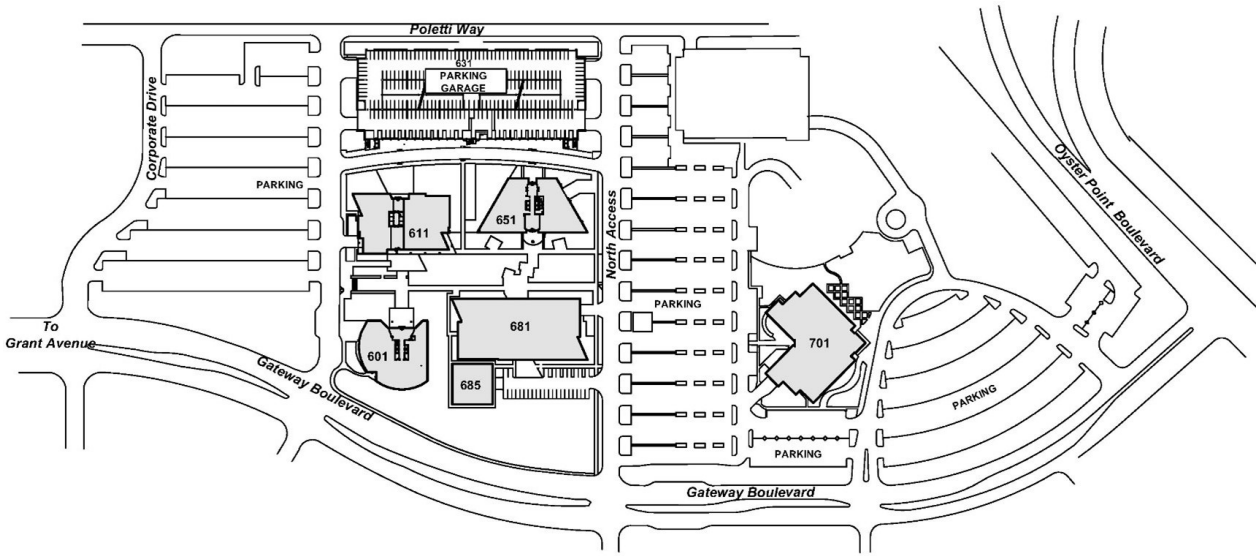
By: /s/ Kristen Childs
Name: Kristen Childs
Its: Vice President - Real Estate L

EXHIBIT A TO LEASE

DESCRIPTION OF PREMISES

EXHIBIT B TO LEASE

DESCRIPTION OF PROJECT



SITE PLAN

601,611,651,681,685
GATEWAY BOULEVARD
SOUTH SAN FRANCISCO, CA

BRW

ALEXANDRIA.

bxp Boston Properties

EXHIBIT C TO LEASE

WORK LETTER

THIS WORK LETTER dated November __, 2021 (this "**Work Letter**") is made and entered into by and between **601 & 651 GATEWAY CENTER LP**, a Delaware limited partnership ("**Landlord**"), and **ALIGOS THERAPEUTICS, INC.**, a Delaware corporation ("**Tenant**"), and is attached to and made a part of the Lease Agreement dated of even date herewith (the "**Lease**"), by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

1. **General Requirements**.

a. **Tenant's Authorized Representative**. Tenant designates Bharath Kumandan and Robbie Planting (either such individual acting alone, "**Tenant's Representative**") as the only persons authorized to act for Tenant pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any request, approval, inquiry or other communication ("**Communication**") from or on behalf of Tenant in connection with this Work Letter unless such Communication is in writing from Tenant's Representative. Tenant may change either Tenant's Representative at any time upon not less than 5 business days advance written notice to Landlord.

b. **Landlord's Authorized Representative**. Landlord designates Linda Ray and Greg Gehlen (either such individual acting alone, "**Landlord's Representative**") as the only persons authorized to act for Landlord pursuant to this Work Letter. Tenant shall not be obligated to respond to or act upon any request, approval, inquiry or other Communication from or on behalf of Landlord in connection with this Work Letter unless such Communication is in writing from Landlord's Representative. Landlord may change either Landlord's Representative at any time upon not less than 5 business days advance written notice to Tenant.

c. **Architects, Consultants and Contractors**. Landlord and Tenant hereby acknowledge and agree that: (i) Landmark Builders, Inc. shall be the general contractor for the Tenant Improvements (the "**General Contractor**"), (ii) DGA shall be the architect (the "**TI Architect**") for the Tenant Improvements, and (iii) and any subcontractors for the Tenant Improvements shall be selected by Tenant, subject to Landlord's approval, which approval shall not be unreasonably withheld, conditioned or delayed. Landlord shall be named a third party beneficiary of any contract entered into by Tenant with the TI Architect, any consultant, any contractor or any subcontractor, and of any warranty made by any contractor or any subcontractor.

2. **Tenant Improvements**.

a. **Tenant Improvements Defined**. As used herein, "**Tenant Improvements**" shall mean all improvements to the Premises desired by Tenant of a fixed and permanent nature shown on the TI Construction Drawings (as defined below). Other than funding the TI Allowance (as defined below) as provided herein, Landlord shall not have any obligation whatsoever with respect to the finishing of the Premises for Tenant's use and occupancy.

b. **Tenant's Space Plans**. Tenant shall deliver to Landlord schematic drawings and outline specifications (the "**Space Plans**") detailing Tenant's requirements for the Tenant Improvements within 10 days of the date hereof. Not more than 5 business days thereafter, Landlord shall deliver to Tenant the written objections, questions or comments of Landlord with regard to the Space Plans. Tenant shall cause the Space Plans to be revised to address such written comments and shall resubmit said drawings to Landlord for approval within 5 business days thereafter. Such process shall continue until Landlord has approved the Space Plans. Landlord shall not unreasonably withhold, condition or delay its approval of Space Plans.

c. **Working Drawings**. Promptly following the approval of the Space Plans by Landlord, Tenant shall cause the TI Architect to prepare and deliver to Landlord for review and comment construction plans, specifications and drawings for the Tenant Improvements ("**TI Construction Drawings**"), which TI Construction Drawings shall be prepared substantially in accordance with the Space Plans. Tenant shall be solely responsible for ensuring that the TI Construction Drawings reflect Tenant's requirements for the Tenant Improvements. Landlord shall deliver its written comments on the TI Construction Drawings to Tenant not later than 10 business days after Landlord's receipt of the same; provided, however, that Landlord may not disapprove any matter that is consistent with the Space Plans. Landlord shall not unreasonably withhold, condition or delay its approval of the TI Construction Drawings. Tenant and the TI Architect shall consider all such comments in good faith and shall, within 10 business days after receipt, notify Landlord how Tenant proposes to respond to such comments. Any disputes in connection with such comments shall be resolved in accordance with Section 2(d)hereof. Provided that the design reflected in the TI Construction Drawings is consistent with the Space

Plans, Landlord shall approve the TI Construction Drawings submitted by Tenant. Once approved by Landlord, subject to the provisions of Section 4 below, Tenant shall not materially modify the TI Construction Drawings except as may be reasonably required in connection with the issuance of the TI Permit (as defined in Section 3(a) below).

d. **Approval and Completion**. If any dispute regarding the design of the Tenant Improvements is not settled within 10 business days after notice of such dispute is delivered by one party to the other, Tenant may make the final decision regarding the design of the Tenant Improvements, provided (i) Tenant acts reasonably and such final decision is either consistent with or a compromise between Landlord's and Tenant's positions with respect to such dispute, (ii) that all costs and expenses resulting from any such decision by Tenant shall be payable out of the TI Fund (as defined in Section 5(d) below), and (iii) Tenant's decision will not affect the base Building, structural components of the Building or any Building systems (in which case Landlord shall make the final decision). Any changes to the TI Construction Drawings following Landlord's and Tenant's approval of same requested by Tenant shall be processed as provided in Section 4 hereof.

3. **Performance of the Tenant Improvements.**

a. **Commencement and Permitting of the Tenant Improvements**. Tenant shall commence construction of the Tenant Improvements upon obtaining and delivering to Landlord a building permit (the "**TI Permit**") authorizing the construction of the Tenant Improvements consistent with the TI Construction Drawings approved by Landlord. If permitted to do so by the City of South Francisco and so long as the same is not otherwise in violation of Legal Requirements, Tenant may commence work prior to obtaining the TI Permit provided that (i) Landlord shall in no event be held responsible for costs or delays in obtaining the TI Permit and/or any costs incurred by Tenant arising from or in connection with its decision to commence work prior to obtaining the TI Permit, and (ii) Tenant's general contractor does not cover up or otherwise obscure installations that require inspection and approval from any Governmental Authority. The cost of obtaining the TI Permit shall be payable from the TI Fund. Landlord shall assist Tenant in obtaining the TI Permit. Prior to the commencement of the Tenant Improvements, Tenant shall deliver to Landlord a copy of any contract with Tenant's contractors (including the TI Architect), and certificates of insurance from any contractor performing any part of the Tenant Improvement evidencing industry standard commercial general liability, automotive liability, "builder's risk", and workers' compensation insurance. Tenant shall cause the General Contractor to provide a certificate of insurance naming Landlord, its officers, directors, employees, managers, agents, sub-agents, constituent entities, joint venture partners and lease signators, Alexandria Real Estate Equities, Inc., and Landlord's lender (if any) as additional insureds for the General Contractor's liability coverages required above.

b. **Selection of Materials, Etc**. Where more than one type of material or structure is indicated on the TI Construction Drawings approved by Tenant and Landlord, the option will be within Tenant's reasonable discretion if the matter concerns the Tenant Improvements, and within Landlord's sole and absolute subjective discretion if the matter concerns the structural components of the Building or any Building system.

c. **Tenant Liability**. Tenant shall be responsible for correcting any deficiencies or defects in the Tenant Improvements.

d. **Substantial Completion**. Tenant shall substantially complete or cause to be substantially completed the Tenant Improvements in a good and workmanlike manner, in accordance with the TI Permit subject, in each case, to Minor Variations and normal "punch list" items of a non-material nature which do not interfere with the use of the Premises ("**Substantial Completion**" or "**Substantially Complete**"). Upon Substantial Completion of the Tenant Improvements, Tenant shall require the TI Architect and the General Contractor to execute and deliver, for the benefit of Tenant and Landlord, a Certificate of Substantial Completion in the form of the American Institute of Architects ("**AIA**") document G704. For purposes of this Work Letter, "**Minor Variations**" shall mean any modifications reasonably required: (i) to comply with all applicable Legal Requirements and/or to obtain or to comply with any required permit (including the TI Permit); (ii) to comport with good design, engineering, and construction practices which are not material; or (iii) to make reasonable adjustments for field deviations or conditions encountered during the construction of the Tenant Improvements.

4. **Changes**. Any changes requested by Tenant to the Tenant Improvements after the delivery and approval by Landlord of the Space Plans, shall be requested and instituted in accordance with the provisions of this Section 4 and shall be subject to the written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed.

a. **Tenant's Right to Request Changes**. If Tenant shall request changes to the Tenant Improvements ("**Changes**"), Tenant shall request such Changes by notifying Landlord in writing in substantially the same form as the AIA standard change order form (a "**Change Request**"), which Change Request shall detail the nature

and extent of any such Change. Such Change Request must be signed by Tenant's Representative. Landlord shall review and approve or disapprove such Change Request within 10 business days thereafter, provided that Landlord's approval shall not be unreasonably withheld, conditioned or delayed.

b. **Implementation of Changes**. If Landlord approves such Change and Tenant deposits with Landlord any Excess TI Costs (as defined in Section 5(d) below) required in connection with such Change, Tenant may cause the approved Change to be instituted. If any TI Permit modification or change is required as a result of such Change, Tenant shall promptly provide Landlord with a copy of such TI Permit modification or change.

5. **Costs**.

a. **Budget For Tenant Improvements**. Before the commencement of construction of the Tenant Improvements, Tenant shall obtain a detailed breakdown, by trade, of the costs incurred or that will be incurred, in connection with the design and construction of the Tenant Improvements (the "**Budget**"), and deliver a copy of the Budget to Landlord for Landlord's approval, which shall not be unreasonably withheld or delayed. The Budget shall be based upon the TI Construction Drawings approved by Landlord. The Budget shall include a payment to Landlord of administrative rent ("**Administrative Rent**") equal to 1% of the TI Costs (as hereinafter defined) for monitoring and inspecting the construction of the Tenant Improvements, which sum shall be payable from the TI Fund. Such Administrative Rent shall include, without limitation, all out-of-pocket costs, expenses and fees incurred by or on behalf of Landlord arising from, out of, or in connection with, such monitoring of the construction of the Tenant Improvements, and shall be payable out of the TI Fund. If the Budget is greater than the TI Allowance, Tenant shall deposit with Landlord the difference, in cash, prior to the commencement of construction of the Tenant Improvements, for disbursement by Landlord as described in Section 5(d).

b. **TI Allowance**. Landlord shall provide to Tenant a tenant improvement allowance (collectively, the "**TI Allowance**") as follows:

1. a "**Tenant Improvement Allowance**" in the maximum amount of $85.00 per rentable square foot in the Premises, which is included in the Base Rent set forth in the Lease; and
2. an "**Additional Tenant Improvement Allowance**" in the maximum amount of $50.00 per rentable square foot in the Premises, which shall, to the extent used, result in TI Rent as set forth in Section 4(b)of the Lease.

Prior to application of any portion of the Additional Tenant Improvement Allowance to TI Costs, Tenant shall notify Landlord how much Additional Tenant Improvement Allowance Tenant has elected to receive from Landlord. Such election shall be final and binding on Tenant, and may not thereafter be modified without Landlord's consent, which may be granted or withheld in Landlord's sole and absolute subjective discretion. The TI Allowance shall be disbursed in accordance with this Work Letter.

c. Tenant shall have no right to the use or benefit (including any reduction to Base Rent) of any portion of the TI Allowance not required for the construction of (i) the Tenant Improvements described in the TI Construction Drawings approved pursuant to Section 2(d) or (ii) any Changes pursuant to Section 4. Tenant shall have no right to any portion of the TI Allowance that is not disbursed before the last day of the month that is 12 months after the Commencement Date.

d. **Costs Includable in TI Fund**. The TI Fund shall be used solely for the payment of design, permits and construction costs in connection with the construction of the Tenant Improvements, including, without limitation, the cost of electrical power and other utilities used in connection with the construction of the Tenant Improvements, the cost of preparing the Space Plans and the TI Construction Drawings, all costs set forth in the Budget, including Landlord's Administrative Rent, and the cost of Changes (collectively, "**TI Costs**"). Notwithstanding anything to the contrary contained herein, the TI Fund shall not be used to purchase any furniture, personal property or other non-Building system materials or equipment, including, but not limited to, Tenant's voice or data cabling, non-ducted biological safety cabinets and other scientific equipment not incorporated into the Tenant Improvements.

e. **Excess TI Costs**. Landlord shall have no obligation to bear any portion of the cost of any of the Tenant Improvements except to the extent of the TI Allowance. If at any time and from time-to-time, the remaining TI Costs under the Budget exceed the remaining unexpended TI Allowance, Tenant shall deposit with Landlord, as a condition precedent to Landlord's obligation to fund the TI Allowance, 100% of the then current TI Cost in excess of the remaining TI Allowance ("**Excess TI Costs**"). If Tenant fails to deposit, or is late in depositing any Excess TI Costs with Landlord, Landlord shall have all of the rights and remedies set forth in the Lease for nonpayment of Rent (including, but not limited to, the right to interest at the Default Rate and the right to assess a late charge). For purposes of any litigation instituted with regard to such amounts, those amounts will

be deemed Rent under the Lease. The TI Allowance and Excess TI Costs is herein referred to as the "**TI Fund**." Funds deposited by Tenant shall be the first thereafter disbursed to pay TI Costs. Notwithstanding anything to the contrary set forth in this Section 5(d), Tenant shall be fully and solely liable for TI Costs and the cost of Minor Variations in excess of the TI Allowance. If upon Substantial Completion of the Tenant Improvements and the payment of all sums due in connection therewith there remains any undisbursed portion of the TI Fund, Tenant shall be entitled to such undisbursed TI Fund solely to the extent of any Excess TI Costs deposit Tenant has actually made with Landlord.

f. **Payment for TI Costs**. During the course of design and construction of the Tenant Improvements, Landlord shall reimburse Tenant for TI Costs once a month against a draw request in Landlord's standard form, containing evidence of payment of such TI Costs by Tenant and such certifications, lien waivers (including a conditional lien release for each progress payment and unconditional lien releases for the prior month's progress payments), inspection reports and other matters as Landlord customarily obtains, to the extent of Landlord's approval thereof for payment, no later than 30 days following receipt of such draw request. Upon completion of the Tenant Improvements (and prior to any final disbursement of the TI Fund), Tenant shall deliver to Landlord: (i) sworn statements setting forth the names of all contractors and first tier subcontractors who did the work and final, unconditional lien waivers from all such contractors and first tier subcontractors; (ii) as-built plans (one copy in print format and two copies in electronic CAD format) for such Tenant Improvements; (iii) a certification of substantial completion in Form AIA G704, (iv) a certificate of occupancy for the Premises; and (v) copies of all operation and maintenance manuals and warranties affecting the Premises.

g. **Tenant Improvement Progress Reports**. On or before the 10th day of each calendar month during the course of design and construction of the Tenant Improvements, Tenant shall deliver to Landlord a Tenant Improvement progress report in the form of **Schedule 1** completed to provide all of the most up-to-date information regarding Tenant's progress with respect the design and construction of the Tenant Improvements in addition to the corresponding AIA forms G702 and G703, if applicable, for all contracted costs. Concurrently with each process report, Tenant shall also deliver to Landlord a forecast in the form of **Schedule 2** completed to provide the projected remaining TI Costs.

6. **Miscellaneous**.

a. **Consents**. Whenever consent or approval of either party is required under this Work Letter, that party shall not unreasonably withhold, condition or delay such consent or approval, unless expressly set forth herein to the contrary.

b. **Modification**. No modification, waiver or amendment of this Work Letter or of any of its conditions or provisions shall be binding upon Landlord or Tenant unless in writing signed by Landlord and Tenant.

c. **No Default Funding**. In no event shall Landlord have any obligation to fund any portion of the TI Allowance during any period that Tenant is in Default under the Lease.

7. **Infectious Conditions**. Tenant shall require the General Contractor comply with the requirements set forth in Sections 7(a) through 7(c)below, as such requirements may be updated from time to time (and require General Contractor, in turn, to require the TI Architect and any consultants, contractors, subcontractors and all other service and materials providers entering the Project during the construction of the Tenant Improvements to perform services or provide materials in connection with the Tenant Improvements (each such party, a "**Tenant Improvement Contractor Party**") to comply with the same, as the same may be updated from time to time).

a. **Pre-Screening Measures**. Prior to each entry onto the Project by General Contractor or any Tenant Improvement Contractor Party, General Contractor shall pre-screen each employee of General Contractor and each employee of each Tenant Improvement Contractor Party for COVID-19 and any other Infectious Conditions that may arise during the construction of the Tenant Improvements, using all criteria recommended by the Centers for Disease Control and Prevention ("**CDC**") and applicable Governmental Authorities. General Contractor shall not permit any employee of General Contractor or any Tenant Improvement Contractor Party who does not pass the pre-screening to enter into onto the Project until such time as allowed following all recommendations of the CDC and all applicable Governmental Authorities.

In the event that General Contractor learns that, notwithstanding General Contractor's pre-screening, an employee of General Contractor or an employee of a Tenant Improvement Contractor Party who did not meet the screening criteria entered the Project (or within the incubation period after such entry such employee has been diagnosed with/tested positive for or presented symptoms consistent with those of COVID-19 or any other applicable Infectious Condition), General Contractor shall immediately notify Landlord. General Contractor will inform General Contractor of the areas of the Project accessed by such

employee and approximate date/time of access, but General Contractor shall not provide Landlord with any personally identifying information or health information of any such employee.

By way of example, the pre-screening for COVID-19 shall include both a temperature check of each employee and having each employee actively confirm the information listed below. General Contractor shall not permit any of its employees or any employee of any Tenant Improvement Contractor Party to enter the Project unless, no earlier than the morning of such entry:

i. The employee had a temperature of less than 100.4°F or any more stringent applicable temperature threshold used by state or local Governmental Authorities in the jurisdiction where the Project is located; and

ii. The employee answered "no" to each of the following questions:*

1. Have you experienced any of the following symptoms in the past 48 hours: fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscles or body aches, headache, new loss or taste or smell, sore throat, congestion or runny notice, nausea or vomiting or diarrhea? Note: General Contractor must review the CDC website regularly for updates to symptoms and ask this question based on then current CDC guidance regarding COVID-19 symptoms.

2. Within the past 14 days, have you been in close physical contact (6 feet or closer for at least 15 minutes) with a person who is known to have laboratory-confirmed COVID-19 or with anyone who has any symptoms consistent with COVID-19?

3. Are you isolating or quarantining because you may have been exposed to a person with COVID-19 or are worried that you may be sick with COVID-19?

4. Are you currently waiting on the results of a COVID-19 test?

*Note: It is General Contractor's obligation to regularly consult with the CDC guidelines, as well as those of state and local Governmental Authorities, and update these questions to at all times to reflect current guidance as to when it is appropriate for employees of General Contractor or any Tenant Improvement Contractor Parties to enter the Project. The questions listed above are current as of November 2, 2020.

If an employee of General Contractor or any Tenant Improvement Contractor Party fits into any of the categories above, then General Contractor shall not permit such employee to enter Project unless or until such employee has met the criteria established by the CDC for being around others (ending home isolation) and returning to work (e.g.: https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html and https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/end-home-isolation.html).

b. **General Contractor's Compliance with Applicable Regulations and Guidelines**. General Contractor shall comply with and implement (and cause all Tenant Improvement Contractor Parties to comply with and implement) the following procedures to mitigate the spread of Infectious Conditions, including COVID-19:

i. Industry best practices related to the applicable Infectious Condition (and General Contractor shall continuously monitor industry best practices); and

ii. All guidance and requirements of any applicable state or local Governmental Authorities relating to the applicable Infectious Condition (and General Contractor shall continuously monitor such guidance and requirements); and

iii. All guidance and requirements of the Occupational Safety and Health Administration ("**OSHA**") related to the applicable Infectious Condition (and General Contractor shall continually monitor the OSHA's website for updates thereto); and

iv. All guidance issued by the CDC related to the applicable Infectious Condition (and General Contractor shall continually monitor CDC's website for updates thereto); and

v. All reasonable policies or procedures adopted by Landlord with respect to the Project from time to time in order to protect the health and physical well-being of others at the Project or intended to limit the spread of Infectious Conditions of which Landlord has notified Tenant.

Landlord shall not have any obligation notify Tenant, General Contractor, or any Tenant Improvement Contractor Party of the existence of any CDC guidance or any modifications thereto.

c. **Face Coverings**. Without limiting the generality of the foregoing obligations, unless notified otherwise in writing from Landlord, at all times this Section 7 is applicable, General Contractor shall cause all employees of General Contractor and all employees of all Tenant Improvement Contractor Parties to wear face coverings at all times while at the Project, unless industry best practices, guidance or requirements of Governmental Authorities, guidance or requirements of OSHA, guidance issued by the CDC, or policies or procedures adopted by Landlord require more highly protective personal protective equipment ("**PPE**"), in which case General Contractor shall cause all of its employees and all employees of all Tenant Improvement Contractor Parties at the Building to wear such additional PPE.

d. **Cleaning**. If an employee of General Contractor or any Tenant Improvement Contractor Party (i) that has been diagnosed with/tested positive for an Infectious Condition, (ii) that, notwithstanding General Contractor's pre-screening, showing symptoms of an Infectious Condition (who is subsequently diagnosed/tests positive for with an Infectious Condition), or (iii) notwithstanding General Contractor's pre-screening, who has been in close physical contact with a person who is known to have laboratory-confirmed COVID-19 or with anyone who has any symptoms consistent with COVID-19 (who is subsequently diagnosed/tests positive for with an Infectious Condition)(an "**Infected Party**") is determined to have gained access to the portions of the Project (each occurrence, a "**Infectious Conditions Event**"), then, Tenant shall be responsible, (x) at Tenant's cost, for sanitizing the Premises, to the extent determined reasonably necessary by Tenant, and (y) for reimbursing Landlord for the reasonable costs of any additional cleaning required to sanitize those the portions of the Common Areas of the Project where the Infected Party is known or reasonably expected to have been during their entry into the Project as deemed reasonably necessary or prudent by Landlord in order to protect the health and physical well-being of others at the Project and/or to limit the spread of the applicable Infectious Condition. Any "cleaning" performed pursuant to this paragraph shall be performed in accordance with guidelines recommended by the CDC and/or other applicable Governmental Authorities.

Schedule 1
Tenant Improvement Progress Report

Project Address: _____
Certification Period: _____

1a. Original Project Budget, funded by Allowance	$_____
1a. Original Project Budget, funded by Tenant	$_____
1. Total Original Project Budget (Line 1a + 1b)	$_____
2. Net change by Change Orders/Update to budget	$_____
3. Current budget to date (Line 1 + 2)	$_____
4. Total soft costs incurred to date, if any	$_____
5. Total contracted costs incurred to date [(a)]	$_____
6. Total costs incurred to date (Lines 4 + 5)	$_____
7. Remaining balance to budget (Line 3 less Line 6)	**$**_____

Amounts above shall exclude furniture, equipment, and other moveable personal property. Please attach corresponding AIA Forms G702 and G703 for contracted costs incurred, including costs incurred, but not paid.

Certification signature: _____

Schedule 2

TI Cost Forecast

Tenant Improvement Construction Spending Summary
Property Address
As of Date

	Budget	Incurred to Date	Project Cash Flows										
			MM-YY	MM-YY	MM-YY	MM-YY	MM-YY	MM-YY	MM-YY	MM-YY	MM-YY	MM-YY	Total
Cost Description													
Hard Cost (General Contractor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Architecture & Engineering	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Soft Cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Cumulative			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total % Complete		%	%	%	%	%	%	%	%	%	%	%	

*** Incurred to date and projected cash flows should be based on accrual accounting when the transaction occurs rather when payment is made.**

EXHIBIT D TO LEASE

ACKNOWLEDGMENT OF COMMENCEMENT DATE

This **ACKNOWLEDGMENT OF COMMENCEMENT DATE** is made this _____ day of _____, ____, between **601 & 651 GATEWAY CENTER LP**, a Delaware limited partnership ("**Landlord**"), and **ALIGOS THERAPEUTICS, INC.**, a Delaware corporation ("**Tenant**"), and is attached to and made a part of the Lease dated _____, 2021 (the "**Lease**"), by and between Landlord and Tenant. Any initially capitalized terms used but not defined herein shall have the meanings given them in the Lease.

Landlord and Tenant hereby acknowledge and agree, for all purposes of the Lease, that the Commencement Date of the Base Term of the Lease is _____, _____, the Rent Commencement Date is _____, _____ and the termination date of the Base Term of the Lease shall be midnight on _____, _____. In case of a conflict between the terms of the Lease and the terms of this Acknowledgment of Commencement Date, this Acknowledgment of Commencement Date shall control for all purposes.

IN WITNESS WHEREOF, Landlord and Tenant have executed this ACKNOWLEDGMENT OF COMMENCEMENT DATE to be effective on the date first above written.

LANDLORD:

601 & 651 GATEWAY CENTER LP,
a Delaware limited partnership

By: GATEWAY CENTER GP LLC,
a Delaware limited liability company,
general partner

By: GATEWAY PORTFOLIO MEMBER LLC,
a Delaware limited liability company, managing member

By: GATEWAY PORTFOLIO HOLDINGS LLC, a Delaware limited liability company, managing member

By: ARE-SAN FRANCISCO NO. 83, LLC
a Delaware limited liability company, managing member

By: ALEXANDRIA REAL ESTATE EQUITIES, L.P., a Delaware limited partnership, managing member

By: ARE-QRS CORP.,
a Maryland corporation, general partner

By: _____
Its: _____

TENANT:

ALIGOS THERAPEUTICS, INC.,
a Delaware corporation

By: _____
Its: _____

EXHIBIT E TO LEASE

Rules and Regulations

1. The sidewalk, entries, and driveways of the Project shall not be obstructed by Tenant, or any Tenant Party, or used by them for any purpose other than ingress and egress to and from the Premises.

2. Tenant shall not place any objects, including antennas, outdoor furniture, etc., in the parking areas, landscaped areas or other areas outside of its Premises, or on the roof of the Project.

3. Except for animals assisting the disabled, no animals shall be allowed in the offices, halls, or corridors in the Project.

4. Tenant shall not disturb the occupants of the Project or adjoining buildings by the use of any radio or musical instrument or by the making of loud or improper noises.

5. If Tenant desires telegraphic, telephonic or other electric connections in the Premises, Landlord or its agent will direct the electrician as to where and how the wires may be introduced; and, without such direction, no boring or cutting of wires will be permitted. Any such installation or connection shall be made at Tenant's expense.

6. Tenant shall not install or operate any steam or gas engine or boiler, or other mechanical apparatus in the Premises, except as specifically approved in the Lease. The use of oil, gas or inflammable liquids for heating, lighting or any other purpose is expressly prohibited. Explosives or other articles deemed extra hazardous shall not be brought into the Project.

7. Parking any type of recreational vehicles is specifically prohibited on or about the Project. Except for the overnight parking of operative vehicles, no vehicle of any type shall be stored in the parking areas at any time. In the event that a vehicle is disabled, it shall be removed within 48 hours. There shall be no "For Sale" or other advertising signs on or about any parked vehicle. All vehicles shall be parked in the designated parking areas in conformity with all signs and other markings. All parking will be open parking, and no reserved parking, numbering or lettering of individual spaces will be permitted except as specified by Landlord.

8. Tenant shall maintain the Premises free from rodents, insects and other pests.

9. Landlord reserves the right to exclude or expel from the Project any person who, in the judgment of Landlord, is intoxicated or under the influence of liquor or drugs or who shall in any manner do any act in violation of the Rules and Regulations of the Project.

10. Tenant shall not cause any unnecessary labor by reason of Tenant's carelessness or indifference in the preservation of good order and cleanliness. Landlord shall not be responsible to Tenant for any loss of property on the Premises, however occurring, or for any damage done to the effects of Tenant by the janitors or any other employee or person.

11. Tenant shall give Landlord prompt notice of any defects in the water, lawn sprinkler, sewage, gas pipes, electrical lights and fixtures, heating apparatus, or any other service equipment affecting the Premises.

12. Tenant shall not permit storage outside the Premises, including without limitation, outside storage of trucks and other vehicles, or dumping of waste or refuse or permit any harmful materials to be placed in any drainage system or sanitary system in or about the Premises.

13. All moveable trash receptacles provided by the trash disposal firm for the Premises must be kept in the trash enclosure areas, if any, provided for that purpose.

14. No auction, public or private, will be permitted on the Premises or the Project.

15. No awnings shall be placed over the windows in the Premises except with the prior written consent of Landlord.

16. The Premises shall not be used for lodging, sleeping or cooking or for any immoral or illegal purposes or for any purpose other than that specified in the Lease. No gaming devices shall be operated in the Premises.

17. Tenant shall ascertain from Landlord the maximum amount of electrical current which can safely be used in the Premises, taking into account the capacity of the electrical wiring in the Project and the Premises and the needs of other tenants, and shall not use more than such safe capacity. Landlord's consent to the installation of electric equipment shall not relieve Tenant from the obligation not to use more electricity than such safe capacity.

18. Tenant assumes full responsibility for protecting the Premises from theft, robbery and pilferage.

19. Tenant shall not install or operate on the Premises any machinery or mechanical devices of a nature not directly related to Tenant's ordinary use of the Premises and shall keep all such machinery free of vibration, noise and air waves which may be transmitted beyond the Premises.

20. Tenant shall cause any vendors and other service providers hired by Tenant to perform services at the Premises or the Project to maintain in effect workers' compensation insurance as required by Legal Requirements and commercial general liability insurance with coverage amounts reasonably acceptable to Landlord. Tenant shall cause such vendors and service providers to name Landlord and Alexandria Real Estate Equities, Inc. as additional insureds under such policies and shall provide Landlord with certificates of insurance evidencing the required coverages (and showing Landlord and Alexandria Real Estate Equities, Inc. as additional insureds under such policies) prior to the applicable vendor or service provider providing any services to Tenant at the Project.

21. Neither Tenant nor any of the Tenant Parties shall have the right to photograph, videotape, film, digitally record or by any other means record, transmit and/or distribute any images, pictures or videos of all or any portion of the Premises or the Project.

22. Tenant shall regularly review the guidelines published by the Centers for Disease Control (CDC) and any state and/or local Governmental Authorities, and will implement the practices and procedures suggested thereby, as well as industry standard best practices, to prevent the spread of Infectious Conditions, including, without limitation, COVID-19.

23. Landlord shall have the right to (a) require tenants to implement and enforce reasonable screening and tracking protocols intended to identify and track the activity at the Project of employees, agents, contractors and visitors seeking access to or accessing the Premises and or the Project exhibiting flu-like symptoms or symptoms consistent with those associated with any currently known or unknown Infectious Conditions including, without limitation, COVID-19 (collectively, "**Symptoms**"), (b) require tenant employees, agents, contractors and visitors to comply with reasonable screening and tracking protocols implemented by Landlord, Landlord's property manager and/or any operator of Project Amenities, intended to identify and track the activity at the Project of individuals seeking access to or accessing the Premises or the Project (including the Project Amenities) exhibiting Symptoms, (c) require tenants to implement and enforce protocols to prohibit individuals exhibiting Symptoms, from accessing the Premises and/or the Project, (d) require tenants to immediately report to Landlord incidences of (i) tenant employees, agents, contractors and visitors accessing the Premises or any portion of the Project while exhibiting Symptoms, and/or (ii) tenant employees, agents, contractors and visitors known to have accessed the Premises or the Project being diagnosed with an Infectious Condition including, without limitation, COVID-19.

24. Landlord may exclude or expel from the Project any person that has Symptoms associated with any currently known or unknown Infectious Condition including, without limitation, COVID-19.

25. Notwithstanding anything to the contrary contained herein, if, at any time during the Term, Landlord becomes aware that any Tenant Party exhibiting Symptoms and/or diagnosed with an Infectious Condition had access to the Premises or any portion of the Project (including, without limitation, the Project Amenities), Tenant shall be responsible for any costs incurred by Landlord to perform additional or deep cleaning of the Premises and/or the Common Areas of the Project or to take other measures deemed reasonably necessary or prudent by Landlord which are intended to limit the spread of such Infectious Condition due to such Tenant Party's presence at the Project.

26. Landlord reserves the right to implement additional rules and regulations relating to access to the Premises, the Building and/or the Project (including, without limitation, the Project Amenities) which are intended to promote and protect health and physical well-being and/or intended to limit the spread of Infectious Conditions.

EXHIBIT F TO LEASE

TENANT'S PERSONAL PROPERTY

None.

Exhibit 21.1

List of Significant Subsidiaries of
Aligos Therapeutics, Inc.

Name	Jurisdiction of Incorporation or Organization
Aligos Belgium BV	Belgium
Aligos Australia Pty LTD	Australia
Aligos Therapeutics (Shanghai) Co. Ltd.	China

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333- 249568) pertaining to the Aligos Therapeutics, Inc. 2018 Equity Incentive Plan, 2020 Incentive Award Plan and 2020 Employee Stock Purchase Plan,

(2) Registration Statement (Form S-8 No. 333- 254628) pertaining to the Aligos Therapeutics, Inc. 2020 Incentive Award Plan and 2020 Employee Stock Purchase Plan, and

(3) Registration Statement (Form S-3 No. 333- 260774) of Aligos Therapeutics, Inc.;

of our report dated March 10, 2022, with respect to the consolidated financial statements of Aligos Therapeutics, Inc. included in this Annual Report (Form 10-K) of Aligos Therapeutics, Inc. for the year ended December 31, 2021.

/s/ Ernst & Young LLP

Redwood City, California

March 10, 2022

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Lawrence M. Blatt, Ph.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of Aligos Therapeutics, 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(s) 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(s) 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 10, 2022

By: /s/ Lawrence M. Blatt
Lawrence M. Blatt, Ph.D.

Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Lesley Ann Calhoun, certify that:

1. I have reviewed this Annual Report on Form 10-K of Aligos Therapeutics, 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(s) 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(s) 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 10, 2022

By: /s/ Lesley Ann Calhoun
Lesley Ann Calhoun
Executive Vice President, Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Aligos Therapeutics, Inc. (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: March 10, 2022

By: /s/ Lawrence M. Blatt
Lawrence M. Blatt, Ph.D.
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

In connection with the Annual Report of Aligos Therapeutics, Inc. (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 10, 2022

By: /s/ Lesley Ann Calhoun
Lesley Ann Calhoun
Executive Vice President, Chief Financial Officer
(Principal Financial and Accounting Officer)