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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 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, 2019

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_ to \_\_\_\_

Commission file number 001-37809

**NeuroBo Pharmaceuticals, Inc.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of incorporation or organization)

47-2389984  
(IRS Employer Identification No.)

**200 Berkeley Street, Office 19<sup>th</sup> Floor**  
**Boston, Massachusetts**  
(Address of principal executive offices)

**02116**  
(Zip Code)

**(857) 702-9600**  
(Registrant's telephone number, including area code)

**Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934:**

<u>Title of Each Class</u>	<u>Trading symbol(s)</u>	<u>Name of Exchange on Which Registered</u>
Common stock, \$0.001 par value	NRBO	The Nasdaq Stock Market LLC

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

Indicate by check mark whether 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 Section 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 is a shell company (as defined in Rule 12(b)-2 of the Securities Exchange Act of 1934). Yes  No

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$10.1 million based on the closing price on the Nasdaq Global Market as of June 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter.

The number of outstanding shares of the registrant's common stock, \$0.001 par value, as of March 23, 2020 was 15,677,307.

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**NEUROBO PHARMACEUTICALS, INC.**  
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### **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This Annual Report on Form 10-K for the fiscal year ended December 31, 2019 contains “forward-looking statements” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), and the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These forward-looking statements contain information about our expectations, beliefs or intentions regarding our product development and commercialization efforts, business, financial condition, results of operations, strategies or prospects, and other similar matters. These forward-looking statements are based on management's current expectations and assumptions about future events, which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict. These statements may be identified by words such as “expects,” “plans,” “projects,” “will,” “may,” “anticipates,” “believes,” “should,” “intends,” “estimates,” and other words of similar meaning.

Actual results could differ materially from those contained in forward-looking statements. Many factors could cause actual results to differ materially from those in forward-looking statements, including those matters discussed below, as well as those listed in Item 1A. Risk Factors.

Other unknown or unpredictable factors that could also adversely affect our business, financial condition and results of operations may arise from time to time. Given these risks and uncertainties, the forward-looking statements discussed in this report may not prove to be accurate. Accordingly, you should not place undue reliance on these forward-looking statements, which only reflect the views of NeuroBo Pharmaceuticals, Inc.'s management as of the date of this report. We undertake no obligation to update or revise forward-looking statements to reflect changed assumptions, the occurrence of unanticipated events or changes to future operating results or expectations, except as required by law.

## PART I

### ITEM 1. BUSINESS

#### Overview

NeuroBo Pharmaceuticals Inc. (the “Company,” “we,” “us” or “our”) is a clinical-stage biotechnology company with three therapeutics programs designed to impact a range of indications in neurodegenerative and cardiometabolic disease:

- *NB-01*, which is primarily focused on the development of a treatment for painful diabetic neuropathy (“PDN”), but which we believe could also treat a range of neuropathic conditions, including chemotherapy-induced peripheral neuropathy and post-traumatic peripheral neuropathy;
- *NB-02*, which has the potential to treat the symptoms of cognitive impairment and modify the progression of neurodegenerative diseases associated with the malfunction of a protein called tau, and with amyloid beta plaque deposition; and
- *Gemcabene*, which is focused on developing and commercializing therapies for the treatment of dyslipidemia, a serious medical condition that increases the risk of life-threatening cardiovascular disease, focused on orphan indications such as homozygous familial hypercholesterolemia (“HoFH”), as well as severe hypertriglyceridemia (SHTG).

We were established to advance NB-01 and NB-02, which were originally developed by the South Korean pharmaceutical company Dong-A ST. NB-01 has been in-licensed by us from Dong-A ST for exclusive worldwide rights except for South Korea. We acquired NB-02 from Dong-A ST, and we hold the full worldwide commercial rights for NB-02. The foundation of our current platform is a mechanism-based approach to address multi-target diseases such as neuropathic pain and neurodegeneration. This approach will be implemented by directing multi-component natural drugs toward specific pathways that are implicated in neuropathic pain and neurodegeneration.

The global neuropathic pain market is currently estimated to be more than \$5.4 billion and is projected to grow to more than \$10 billion by 2026. Products to address PDN make up about 60% of the market, and products to address indications such as chemotherapy-induced and post-traumatic neuropathic pain are estimated to constitute an additional 20% of the market. In the U.S., there are currently only three FDA-approved treatments for PDN. The market is characterized by a significant unmet need, with more than 50% of patients not adequately responding to first-line therapy and patients experiencing significant side effects with existing approved therapies.

We believe that NB-01 has the potential to offer pain alleviation with minimal side effects and to be potentially the first disease-modifying therapy impacting the underlying disease mechanisms. NB-01 has successfully completed two Phase 2 proof-of-concept clinical trials for PDN.

In light of the present business environment, including the impact of the COVID-19 disease that emerged in December 2019 as a global pandemic, we have determined that any attempt to conduct Phase 3 clinical trials for NB-01, as previously announced, would be difficult if not impossible in the short or medium term. To conserve financial resources, in the first quarter of 2020, we directed our contract research organization (“CRO”) partners and other vendors working on the Phase 3 clinical trials of NB-01, including Syneos Health, to cease all work, and we gave notice of termination our existing contract arrangements with each of them.

We are currently re-evaluating alternatives to bring the NB-01 asset to the market through a different regulatory pathway. Development of NB-01 as an orphan drug is among the alternatives we are considering, and we may conduct feasibility studies to identify a rare disease relevant to NB-01. Additionally, we are considering marketing NB-01 as a nutraceutical (non-pharmaceutical) product. There is no assurance that we will be able to pursue any of these alternatives for NB-01. See the risk factor entitled “We have determined to postpone indefinitely the initiation of Phase 3 clinical trials of NB-01 under present circumstances, and we may not be able to successfully develop NB-01 pursuant to other alternatives, including as an orphan drug or as a nutraceutical candidate” in Part I, Item A of this report.

NB-02 has shown considerable promise as a neuroprotective agent in preclinical studies, demonstrating a multimodal mechanism of action including inhibition of tau phosphorylation, acetylcholinesterase (“AChE”) inhibition, inhibition of A $\beta$  toxicity and amyloid plaque formation, and anti-inflammatory effects. We intend to further leverage the benefits of tau modulation by NB-02 in conjunction with the other pathway effects to explore treatment of certain dementias, such as tauopathy indications. We believe that leveraging the therapeutic advantages of the NB-02 pipeline will drive a paradigm shift in the treatment of Alzheimer’s disease and other neurodegenerative diseases. Although NB-02 is almost ready for the submission of an investigational new drug (“IND”) application to the Food and Drug Administration (“FDA”), in light of the COVID-19 pandemic, we intend to postpone the initiation of the first clinical trial in humans until global health and macroeconomic conditions improve. Additionally, we are assessing whether to pursue further development of NB-02 as an orphan drug.

Gemcabene has been tested as a monotherapy and in combination with statins and other drugs in more than 1,100 subjects, which Gemphire defined as healthy volunteers and patients, across 25 Phase 1 and Phase 2 clinical trials and has demonstrated promising evidence of efficacy, safety and tolerability.

In August 2018, Gemphire announced that the FDA, following submission of its two-year carcinogenicity study, had requested additional preclinical studies, including a 13-week PPAR-alpha knockout mouse study with Gemcabene. The FDA stated that the EOP2 meeting and Phase 3 trials for Gemcabene, which require more than six months of drug exposure, could not proceed until this partial clinical hold is lifted. We have committed up to \$1 million to support the further development of Gemcabene through the quarter ending March 31, 2020.

### **December 2019 Completion of Business Combination**

On December 30, 2019, the Company, which was a private entity formerly known as NeuroBo Pharmaceuticals, Inc. (“Private NeuroBo”) completed its business combination (the “Merger”) with Gemphire in accordance with the terms of the Agreement and Plan of Merger and Reorganization, dated as of July 24, 2019, as amended on October 29, 2019 (the “Merger Agreement”), by and among the Company, Gemphire, and GR Merger Sub, Inc.

Prior to completion of the Merger, Gemphire entered into a Contingent Value Rights Agreement (the “CVR Agreement”) with Grand Rapids Holders’ Representative, LLC, as representative of Gemphire’s stockholders prior to the Merger, and Computershare Inc. and Computershare Trust Company, N.A. as the rights agents. Under the CVR Agreement, which the Company assumed in the Merger, the holders of Gemphire shares at the Merger (“CVR Holders”) will receive 80 percent of the proceeds from the grant, sale, or transfer of rights to Gemcabene. The CVR Agreement also obligated the Company to commit up to \$1 million to support the further development of Gemcabene during the first quarter of 2020.

### **Strategy**

Our goal is to discover, develop and commercialize novel therapeutics designed to impact a range of indications in neurodegenerative and cardiometabolic disease and nutraceuticals for their respective health areas. The key elements of our business strategy to achieve this goal include:

- Explore alternatives for NB-01, including assessing whether to pursue NB-01 as an orphan drug and/or as a nutraceutical product.
- Conduct feasibility studies to identify a specified rare disease relevant to NB-01.
- Explore alternatives for NB-02, including assessing whether to pursue NB-02 as an orphan drug.
- Extend the pipeline of drug indications by leveraging the potential of NB-01 and NB-02 in neurodegenerative diseases such as neuropathic pain in rare diseases and tauopathies. As we continue to build and develop our product portfolio, we may opportunistically pursue strategic partnerships that maximize the value of our pipeline.
- Support the further development of Gemcabene by submitting a request to the FDA to lift the partial clinical hold and, if successful, progress to an End of Phase 2 meeting with the FDA and subsequently initiate a Phase 3 trial in HoFH, in collaboration with Beijing SL.
- Continue to hire highly qualified management and personnel in advancing drug development, achieving marketing approval, and implementing our corporate growth strategy.

## Product Candidates

### ***NB-01***

NB-01 addresses a range of mechanisms that contribute to neuropathic pain and nerve degeneration in diabetic and other peripheral neuropathies. These include a decrease in key inflammatory markers, restoration of nerve growth factor (“NGF”) to normal levels, and reduction of advanced glycation end products (“AGEs”). Inflammation is a central factor in pain generation and other peripheral neurodegenerative diseases. NB-01 reduces levels of TNF- $\alpha$  and IL-6, both of which are markers of inflammation. NB-01 also reduces AGEs, which are implicated in diabetes-related complications. AGE inhibitors have been clinically tested as potential treatments for these complications. NB-01 also restores the neurotrophin NGF, which is involved in nerve growth, maintenance and repair. NB-01 has been shown in animal models to alleviate symptoms of PDN.

#### *Background*

Based on third-party research, the U.S. population with diabetes is estimated at 30.3 million people. At least half of these individuals will develop diabetic neuropathy, and up to 25% of those individuals will develop neuropathic pain. According to the industry intelligence firm GlobalData plc, as of 2018, the global PDN market was responsible for approximately \$3.6 billion in annual sales, approximately \$2.6 billion of which is concentrated in the U.S. The same source projects that the global PDN market will increase to approximately \$7.1 billion in annual sales by 2026 with approximately \$4.8 billion of such sales concentrated in the U.S.

The following drugs have been approved by the FDA for the treatment of PDN: pregabalin (Lyrica); duloxetine (Cymbalta) and tapentadol (Nucynta ER). Despite an established treatment protocol for PDN based on these approved therapeutics, the current treatment paradigm for patients suffers from numerous shortcomings as a result of their negative side effects associated with the available FDA-approved drug products. The first line of therapy typically consists of anti-epileptic drugs (“AEDs”) such as gabapentin and pregabalin, which are insufficient on their own in that they have been shown to exhibit only moderate efficacy accompanied by moderate to severe side effects such as somnolence and dizziness in some patients, and, even after drug treatment, 50% to 70% of patients still experience pain. If pain persists beyond treatment with AEDs, as it often does, the second line of therapy typically consists of prescriptions for anti-depressants (SNRIs and TCAs), which have been shown to reduce pain only by an additional 20% when added to AED treatment. Treatment with anti-depressants is also associated with significant drug-to-drug interactions. If pain persists beyond treatment with AEDs and anti-depressants, the third line of therapy typically consists of opiates, which are only appropriate as a short-term option and have been shown to exhibit potentially harmful addictive and habit-forming side effects. A significant number of mortalities from drug overdose have been caused by opiates. Beyond the potential side effects, the existing approved therapies for PDN are burdened by additional safety and efficacy concerns.

#### *NB-01 Preclinical development*

Extensive and comprehensive preclinical pharmacology, safety and toxicology studies have been completed with NB-01, as detailed in the table below. Among the safety and toxicology studies completed are: (i) central nervous system (“CNS”), cardiovascular (“CV”), gastrointestinal (“GI”), and respiratory safety in rats, mice and dogs; (ii) a single-dose 13-week and 26-week oral toxicity study in rats; (iii) a single-dose 13-week and 26-week oral toxicity study in dogs; (iv) range-finding embryo fetal development studies in rats; and (v) fertility, pre-and post-natal studies in rats.

Pharmacological and Toxicity Studies	
Type of Study	Models Used
CNS, CV, GI Respiratory safety	Rats and mice, dogs for CV safety
Oral toxicity in rats	Single-dose, 13-week, 26-week toxicity in rats
Oral toxicity in dogs	2-week, 13-week, 39-week toxicity in dogs
Embryo fetel development studies	Range-finding and development study in rats
Fertility, pre- and post-natal studies	Rats and mice, dogs for CV safety
Bacterial revere mutation, In vitro chromosomal aberration, mouse micronucleus, hERG assays	In vitro and mouse, as applicable
OCT 1/2, CYPs, UGTs	In vitro, human hepatocytes
PK studies of NB-01, Dioscin, Allantoin	In vovi rat studies

In addition, in mechanism of action studies conducted by Dong-A ST, NB-01 induced nerve regeneration in streptozotocin (“STZ”)-induced and db/db diabetes mouse models with a significant increase in axon diameter and thickness of myelin sheath, returning thickness and diameter to almost the naturally occurring levels. Similar results were achieved in rat models, including the streptozotocin (“STC”) diabetes model. NGF has been shown to be lowered in diabetes and diabetic neuropathy animal models, and the administration of NB-01 in these models shows elevation of endogenous NGF to near-normal levels. Preclinical studies have demonstrated that NB-01 has a demonstrable impact on reduction of AGEs as well as inflammatory markers (TNF-alpha and interleukin-6) which are implicated in nerve degeneration in diabetes.

Additional studies have been completed on the effect of NB-01 on thermal and mechanical hyperalgesia in mouse models, including the STZ diabetes model and genetic (db/db) diabetes model. The data from these studies have demonstrated that NB-01 alleviates both thermal and mechanical hyperalgesia relative to the control.

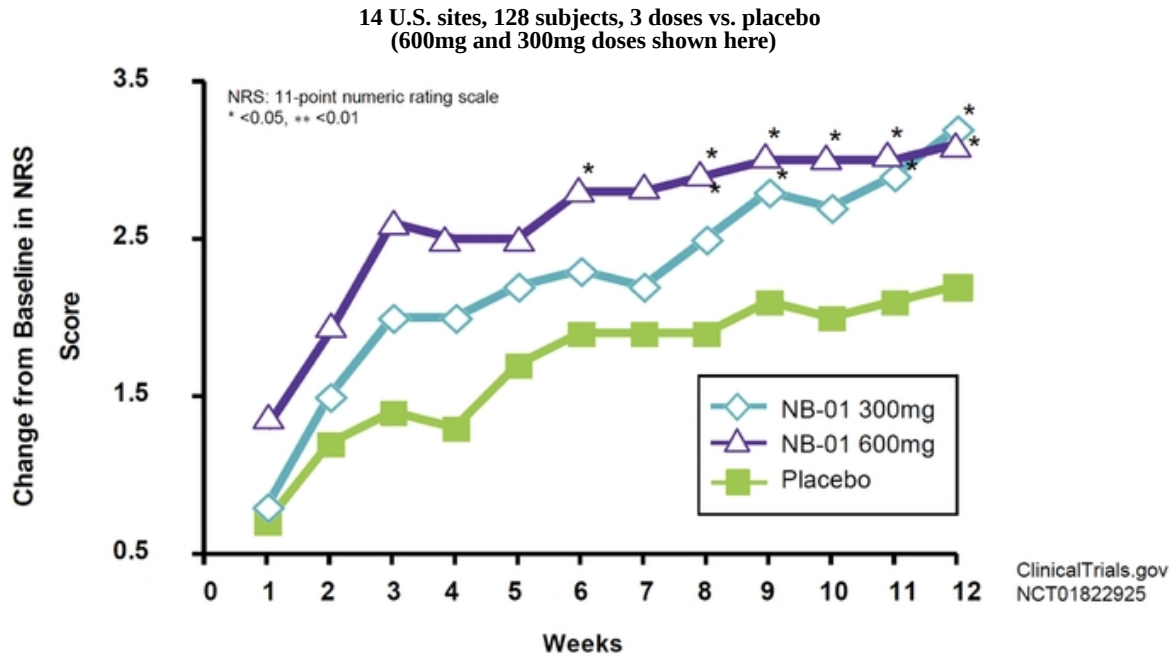
With respect to additional neuropathic indications, NB-01 has also been studied for its effects on rat models of chemotherapy-induced neuropathic pain and chronic constriction injury (“CCI”). In these studies, NB-01 demonstrated an analgesic effect on rats, measured by threshold of paw pressure tolerance, during treatment with paclitaxel and with CCI. In both cases, the paw pressure threshold was significantly elevated following dosing with NB-01.

*NB-01 Phase 2 Clinical Development*

**Completed Phase 2 trial in Korea.** A 15-site, 128-subject, double blind, dose ranging, randomized, placebo-controlled Phase 2 trial to assess the efficacy and safety of NB-01 in the treatment of subjects with PDN has been completed in Korea. Three doses of NB-01 were evaluated versus placebo in 128 subjects (32 per dose group), administered daily for an 8-week treatment period. The treatment groups were placebo or one of NB-01 100 mg, 200 mg, or 300 mg, administered three times daily (“TID”), for a total daily NB-01 dose of 300 mg, 600 mg or 900 mg, respectively. The primary endpoint of the study was reduction in the average daily Pain Numerical Rating Scale (“NRS”) score from baseline at 8 weeks. Secondary endpoints included percentage reduction in NRS at 8 weeks, Patient Global Impression of Improvement (“PGI-I”) scale, Clinical Global Impression of Severity, and change from baseline in the NRS based on a daily patient diary.

**Completed Phase 2 trial in the United States.** A 14-site, 128-subject, double blind, dose ranging, randomized, placebo-controlled Phase 2 trial to assess the efficacy and safety of NB-01 in the treatment of subjects with PDN has been completed in the United States. Three doses of NB-01 were evaluated versus placebo in 128 subjects (32 per dose group), administered daily for a 12-week treatment period. The treatment groups were placebo or one of NB-01 100 mg,

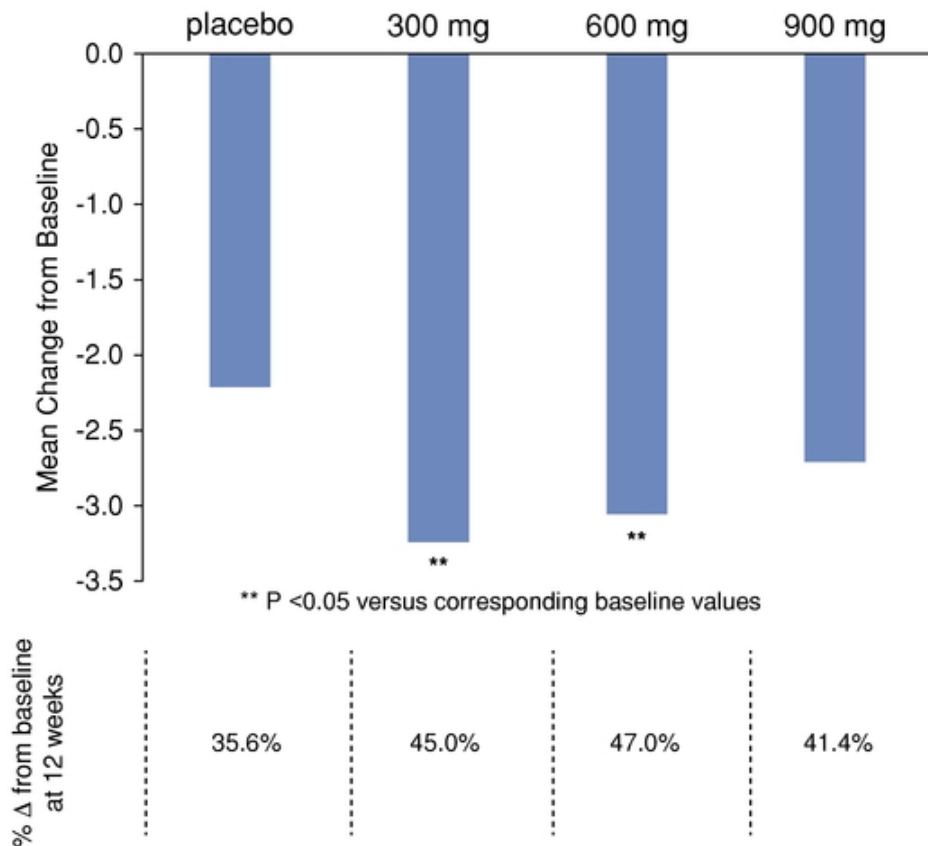
200 mg, or 300 mg, administered three times daily (“TID”) for a total daily NB-01 dose of 300 mg, 600 mg or 900 mg, respectively. The primary endpoint of the study was reduction in the clinic visit Pain Numerical Rating Scale (“NRS”) score at 12 weeks. Secondary endpoints included percentage reduction in clinic visit NRS score at 12 weeks, proportion of subjects with at least 30% improvement in the clinic visit pain NRS score, proportion of responders in the Patient Global Impression of Improvement (“PGI-I”) scale, and change from baseline in the NRS based on a daily patient diary.



Measured as a change from baseline in NRS score over the course of 12 weeks, NB-01 was observed to be generally well tolerated in its Phase 2 study at doses ranging from 300 mg to 900 mg against placebo, as summarized in the table below.

Measured in terms of changes in the mean NRS score at week 12 in the Phase 2 study, patients treated with the 300 mg and 600 mg doses showed statistically significant improvement from baseline in pain scores. As summarized in the table below, patients treated with the 300 mg dose experienced an average 45% change from the baseline NRS score, and patients treated with the 600 mg dose experienced an average 47% change from the baseline NRS score.





**Mean Change in NRS Score at Week 12 Following NB-01 Dosing**

During the Phase 2 study, patients in each dose group experienced a number of adverse events, including nausea and pruritus, but not at a level higher than those of subjects who received placebo.

**Future Development of NB-01**

In light of the present business environment including the impact of the COVID-19 disease that emerged in December 2019 as a global threat, we have determined that any attempt to conduct Phase 3 clinical trials for NB-01, as previously announced, would be difficult if not impossible in the short or medium term. To conserve financial resources, in the first quarter of 2020 we directed our contract research organization (“CRO”) partners and other vendors working on the Phase 3 clinical trials of NB-01, including Syneos Health, to cease all work and we gave notice of termination of our existing contract arrangements with each of them.

We are currently re-evaluating alternatives to bring the NB-01 asset to the market through a different regulatory pathway. Development of NB-01 as an orphan drug is among the alternatives we are considering, and we may conduct feasibility studies to identify a rare disease relevant to NB-01. Additionally, we are considering marketing the NB-01 product line as nutraceutical (non-pharmaceutical) products. There is no assurance that we will be able to pursue either alternative for NB-01.

**NB-02**

NB-02 is in development for the symptomatic and disease modifying treatment of neurodegenerative diseases, including Alzheimer’s disease and tauopathies. In preclinical studies, we have observed the mechanisms of action of NB-02 to

include inhibition of tau phosphorylation, acetylcholinesterase (“AChE”) inhibition, inhibition of A $\beta$  toxicity and amyloid plaque formation, and anti-inflammatory effects.

Specifically, in both *in vitro* and *in vivo* models, NB-02 has demonstrated inhibition of AChE, as is the case with three of the current drugs on the market to treat the symptoms of Alzheimer's disease. It has also demonstrated inhibition of tau phosphorylation and of amyloid plaque formation, both mechanisms believed to contribute to the progression of neurodegenerative diseases.

NeuroBo acquired NB-02 from Dong-A ST on January 18, 2018. NeuroBo has full worldwide rights to all disease indications for NB-02 from the asset acquisition and does not have further obligations in future payments to Dong-A ST however; if NeuroBo wishes to sell products using NB-02 in the Republic of South Korea, Dong-A is entitled to certain notice rights and rights to negotiate with respect to any distribution agreement for the sale of NB-02 in such territory.

#### *Background*

Alzheimer's disease (“AD”) is a progressive and chronic neurodegenerative disease characterized by memory and cognitive deterioration beyond normal aging that becomes severe enough to interfere with daily tasks. It is the most common form of dementia. AD is characterized by the loss of neurons and synapses in the cerebral cortex and certain subcortical regions. Different mechanisms have been implicated in the underlying cause of the cognitive and functional impairments observed in AD. Degeneration of the cholinergic nervous system has been shown to be closely linked to the impairment of cognitive functions. Also, neurodegeneration caused by the buildup of two structural abnormalities known as beta-amyloid ( $\beta$ A) plaques and hyper-phosphorylated tau protein (pTau) aggregates that leads to neurofibrillary tangle formation is thought to play a major role in the pathogenesis of AD. However, neurodegeneration in AD appears to be a multi-factorial event, in which various genetics as well as environmental risk factors may play a role sequentially and/or in parallel.

Despite the need, there is no cure for AD. Currently available treatments can only temporarily provide symptomatic relief without the ability to control disease progression. As the life expectancy increases, the prevalence of aging-associated diseases such as AD has also dramatically increased and has become a major public health concern. Therefore, there is an urgent need for the development of AD drugs that are capable of more than just relieving the symptoms. The current goal in AD therapeutics research is to search for drugs/interventions that can directly address the underlying disease processes of AD, also known as disease-modifying therapy (“DMT”), to delay or even prevent disease progression.

Based on the preclinical studies, NB-02 has both symptomatic relief benefits and disease modifying mechanism of action. Specifically, in *in vivo* studies, NB-02 was shown to up-regulate nerve growth factor (“NGF”), brain-derived neurotrophic factor (“BDNF”) and cellular antioxidant defense system, which is indicative of neuroprotection and neuronal survival. Decrease in the accumulation of  $\beta$ A protein level and tau protein hyper-phosphorylation was also observed, which suggests NB-02 has disease modification efficacy by clearance of the toxic proteins that represent the neuropathological indices of AD. Furthermore, NB-02 was shown to reverse cognition impairment by suppressing  $\beta$ A-induced acetylcholinesterase (“AChE”) activity. The findings from these nonclinical studies collectively suggested that NB-02 could be a treatment candidate for AD via multiple mechanisms of action including cognition enhancement and disease modification.

#### *Development Plan*

NB-02 has shown considerable promise as a neuroprotective agent in preclinical studies, demonstrating a multimodal mechanism of action including inhibition of tau phosphorylation, AChE inhibition, inhibition of A $\beta$  toxicity and amyloid plaque formation, and anti-inflammatory effects. We intend to further leverage the benefits of tau modulation by NB-02 in conjunction with the other pathway effects to explore treatment of certain dementias, such as tauopathy indications. We believe that leveraging the therapeutic advantages of NB-02 will drive a paradigm shift in the treatment of Alzheimer's disease and other neurodegenerative diseases. Although NB-02 is almost ready for the submission of an IND application to the FDA, we intend to postpone the first human clinical trials until global macroeconomic conditions improve. Additionally, we are assessing whether to pursue further development of NB-02 as an orphan drug.

## **Gemcabene**

Gemcabene is a novel, once-daily, oral therapy designed to target known lipid metabolic pathways to lower levels of LDL-C, hsCRP and triglycerides. Gemcabene shares many of the attributes of statin therapy, including broad therapeutic applications, convenient route of administration and cost-effective manufacturing process, but does not appear to increase the reporting of myalgia when added to statin therapy. Gemcabene has also shown additive LDL-C lowering in combination with stable low, moderate or high-intensity statin therapy. As described below, we licensed global rights to Gemcabene from Pfizer in April 2011. The license with Pfizer was renegotiated to April 2024.

Gemcabene is in development for the treatment of dyslipidemias where patients are unable to reach their lipid lowering goals, including patients already receiving maximally tolerated statin therapy. Within dyslipidemia, indications broadly include familial hypercholesterolemia (“FH”), atherosclerotic cardiovascular disease (“ASCVD”), severe hypertriglyceridemia (“SHTG”), nonalcoholic fatty liver disease (“NAFLD”), and nonalcoholic steatohepatitis (“NASH”). Within these broader indications are orphan diseases including homozygous familial hypercholesterolemia (“HoFH”), familial chylomicronemia syndrome (FCS; TGs>880mg/dL), and familial partial lipodystrophy disease (“FPLD”), which represent clear unmet clinical needs because current therapies are considered inadequate. Our plan to develop Gemcabene for multiple clinical indications is based on: (i) clinical data and mechanism of action in these indications; (ii) a cost-effective manufacturing process; (iii) convenient oral dosing; (iv) viability as adjunct combination therapy; and (v) the commercial potential.

### **Background**

Gemcabene's mechanism of action is multifaceted. In the liver, Gemcabene acts in two major ways to reduce levels of circulating LDL-C and triglycerides: (i) inhibition of the two metabolic pathways that synthesize precursors (i.e., cholesterol and fatty acids) of VLDL-C, LDL-C and triglycerides and (ii) stimulation of a liver mechanism known as the remnant receptor pathway that removes particles that contain cholesterol and triglycerides from the blood. Gemcabene's stimulation of this remnant receptor pathway involves enhanced removal of an LDL-C precursor known as very low-density lipoprotein remnants. With regard to Gemcabene's anti-inflammatory properties, in human clinical trials and animal studies, to date, Gemcabene has been shown to significantly reduce plasma levels of CRP. Furthermore, in preclinical studies of dyslipidemia as well as NASH, Gemcabene inhibited production of a number of known pro-inflammatory molecules (e.g., CRP, CCR2, CCR5, IL-6, TNF-alpha, MCP-1 and MIP1-beta) as well as pro-fibrotic factors (e.g., TIMP-1, MMP-2). Overall, Gemcabene's multifaceted mechanism of action provides the potential for safely addressing multiple major risk factors in a broad array of cardiometabolic patients who have an elevated risk of cardiovascular or liver disease, even when taking conventional therapies.

### **Clinical Experience with Gemcabene**

Gemcabene has been assessed in 25 Phase 1 and Phase 2 clinical trials. Across these trials, over 1,500 adult subjects have participated, including healthy volunteers and patients with various underlying conditions. Of these subjects, over 1,100 have been exposed to at least one dose of Gemcabene.

Across the Gemphire-sponsored clinical trials, Gemcabene was observed to be well tolerated at single doses up to 1,500 mg and multiple doses up to 900 mg/day. Safety of the subjects in these trials was evaluated by adverse event (“AE”) monitoring, clinical laboratory assessments, electrocardiograms (ECGs), physical examinations, and vital sign assessments. Across all trials, 10 Gemcabene treated healthy volunteers or patients reported a treatment-emergent severe adverse event (“SAE”), none of which were considered by the clinician to be related to Gemcabene. No deaths occurred in any of the trials. AEs reported were generally mild to moderate in intensity with the most common events being headache, weakness, nausea, dizziness, upset stomach, infection and abnormal bowel movements. Gemcabene, when compared with placebo, was not associated with an increased incidence of myalgia or liver enzyme elevations, whether as monotherapy or in combination with statin therapy. Elevated levels of liver enzymes, specifically alanine transaminase (“ALT”) and/or aspartate aminotransferase (“AST”), were observed in three patients (0.27% of Gemcabene treated subjects). These three patients had ALT or AST levels more than three times the upper limit of normal (“ULN”) returning to near baseline after cessation of treatment. Small mean increases in serum creatinine and blood urea nitrogen (“BUN”) have been observed in some trials. The increase in creatinine values was reversible returning to baseline within approximately four weeks of cessation of Gemcabene. No clinically meaningful changes were observed in physical examinations or vital signs, including blood pressure.

In addition, Gemcabene demonstrated promising clinical pharmacology attributes across 15 completed company-sponsored Phase 1 trials in healthy subjects, such as once-daily dosing, no meaningful drug-drug interactions with high-intensity statins and no observed food effect. Gemcabene can be taken with or without food. Gemcabene was observed to: (i) be rapidly absorbed following oral administration with time of maximum concentration within two hours and (ii) reach maximum plasma concentration ( $C_{max}$ ) and area under the curve over 24 hours ( $AUC_{0-24}$ ) that were dose proportional following both single- and multiple-dose administration. Steady state concentrations were achieved within six days of repeated dose administration. Average half-life ranged from 32 to 41 hours. Gemcabene's primary route of elimination was renal. No significant drug-drug interactions ("DDIs") were observed with digoxin, a cardiovascular drug for the treatment of atrial fibrillation or statins (atorvastatin, simvastatin and rosuvastatin) used as background therapy in patients with HoFH, HeFH and many SHTG patients.

Gemcabene has been evaluated in ten company-sponsored Phase 2 trials across a diverse patient population. These trials explored safety, tolerability and efficacy using multiple doses of Gemcabene as monotherapy and in combination with low-, moderate- and high-intensity statins. In company-sponsored Phase 2 trials, patients treated with Gemcabene were observed to have significantly lowered LDL-C, hsCRP and triglycerides.

#### *Development Plan*

In August 2018, Gemphire announced that it had completed and submitted to the FDA the results from its two year rodent carcinogenicity studies. These studies were submitted as part of a request for the FDA to remove the partial clinical hold that prevents human studies of Gemcabene that are greater than six months in duration. In response to its submission, the FDA did not lift the hold, requested that Gemphire provide additional data, including two preclinical studies, namely, a subchronic (13 week) study of Gemcabene in PPAR $\alpha$  knock-out mice and a study of Gemcabene in *in vitro* PPAR transactivation assays using monkey and canine PPAR isoforms and informed Gemphire that an End-of-Phase 2 ("EOP2") meeting to reach agreement on the design of Phase 3 registration and long-term safety exposure trials for its target indications in dyslipidemia would not take place until such time, if ever, as the clinical hold is lifted.

In late 2017 and early 2018, Gemphire announced the initiation of two non-company investigator-initiated proof-of-concept Phase 2 trials in Pediatric Non-Alcoholic Fatty Liver Disease ("NAFLD") and in Familial Partial Lipodystrophy Disease ("FPLD").

In August 2018, the Data Safety Monitoring Board ("DSMB") halted the Pediatric NAFLD trial early due to "unanticipated problems" in the first three patients. Specifically, ALT was increased in 2 of these 3 subjects beyond baseline levels. In addition, all 3 subjects had an increase in liver fat fraction as measured by MRI PDFF. All 6 subjects treated in this study gained weight and had increased TGs during study treatment. These observations are in contrast to the totality of the evidence from other Gemcabene trials. In addition, there was evidence of non-compliance to the dosing regimen and patient non-adherence to dietary and lifestyle guidelines, as well as inconsistencies in biomarkers. The six pediatric patients that were enrolled in the study were followed for a 12 month safety monitoring period post final dose which is now complete. During this follow-on period there were no drug related adverse events reported. There was one serious non-related adverse event of hospitalization of subacute spinal cord infarction/embolism. No deaths or other SAEs were reported.

In June 2019, Gemphire reported topline data from the FPLD trial. Overall Gemcabene treatment resulted in a median change in serum triglycerides (TGs) of -19.6% for the five patients at twelve weeks (the primary endpoint) with a range of TG responses from +40.4% to -52.9% and three patients showing decreases. Gemcabene was generally well tolerated and safe. Nonsignificant fluctuations in ALT, AST, serum creatinine and eGFR were observed. Four of 5 subjects completed the study; one subject withdrew due to an AE of right quadrant pain considered related to Gemcabene. There was one SAE of benign paroxysmal positional vertigo considered unrelated to treatment.

On July 24, 2019, Gemphire announced that it had entered into the Beijing SL License Agreement pursuant to which Gemphire has granted to Beijing SL an exclusive, royalty-bearing license to develop and commercialize products containing Gemcabene for the treatment of any human disease in mainland China, Taiwan, Hong Kong and Macau.

With respect to the partial clinical hold that prevents human studies of Gemcabene that are greater than six months in duration, Gemphire has completed the *in vitro* PPAR transactivation studies and the subchronic study of Gemcabene in

PPAR $\alpha$  knock-out mice and is expecting to get a response from the FDA in Q2 2020 regarding removal of the partial clinical hold.

Following the merger, there is no obligation to develop Gemcabene, or to expend any funds or efforts with respect to Gemcabene, other than the \$1 million payment, to fund (i) a toxicity study, (ii) a related FDA submission designed to result in the release of the partial clinical hold with respect to Gemcabene, (iii) preparation for an EOP2 meeting with the FDA, and (iv) consulting costs for outside experts to support such activities. The expected cost of such activities is based on estimates and assumptions that may prove to be untrue. If \$1 million is insufficient to fund the matters set forth above, we will have no obligation to provide further funding. We have no other obligation to support the development of Gemcabene, including to release the partial clinical hold.

### **Licensing Agreements**

#### ***License Agreement with Dong-A ST for NB-01***

On January 18, 2018, we entered into an exclusive license agreement with Dong-A ST, a leading pharmaceutical company specializing in discovery, development, manufacture and marketing of pharmaceutical products and biosimilars, which agreement was amended on April 18, 2018 and July 24, 2019. Dong-A ST is headquartered in Seoul, South Korea and listed on the Korean stock exchange. Under the terms of the agreement, we obtained an exclusive, royalty-bearing, worldwide (except for the Republic of Korea) license to make, use, offer to sell, sell and import products covered by certain Dong-A ST intellectual property rights in its proprietary compound designated as DA-9801 (NB-01). Our license rights cover any and all applications and markets for the therapeutic, health, nutrition or well-being of humans. We may grant sublicenses to any affiliate or third party. We are responsible for all future patent prosecution costs.

Dong-A ST retained the exclusive right to conduct clinical studies in the Republic of Korea and sell products to end users in Korea. NeuroBo grants Dong-A ST an exclusive, royalty free right and license to use, solely for Dong-A ST's commercialization of products in Korea, any inventions, designs and technology developed by us in its performance of the agreement. If Dong-A ST terminates the agreement due to a breach by us or bankruptcy event, then this technology is licensed exclusively to Dong-A ST at no charge. We will also negotiate in good faith to supply product to Dong-A ST for clinical studies and sale of products to end-users in Korea under a separate supply agreement.

We are obligated to use commercially reasonable efforts to develop products for use in each of the United States, the European Union, Japan and the People's Republic of China. If we terminate, discontinue or suspend, for longer than 12 months, the development of any product listed as a product under development in any development plan provided to Dong-A ST (other than for reasons of force majeure or requirements of applicable law), then we are deemed in breach of this development obligation, and Dong-A ST may terminate for cause after a 60-day cure period. We are obligated to use commercially reasonable efforts to commercialize products worldwide throughout the term of the agreement.

In connection with obtaining the licenses we paid Dong-A ST total consideration of \$2 million consisting of a one-time upfront license fee and shares of common stock.

We may be required to pay development milestone payments of up to an aggregate of \$98 million related to publication of Phase 3 clinical trial data, the first NDA submission in any country, and NDA approval in the United States, the European Union, Japan and the People's Republic of China. We may also be required to pay sales milestone payments in a specified amount, related to the first time that aggregate net sales of products exceed specified amounts in a calendar year.

We are required to pay Dong-A ST commercial milestone payments of up to an aggregate of \$80 million and a royalty between a single digit and a low double digit percentage of net sales of products. The royalty rate increases as annual net sales increase.

The term of the agreement continues on a country-by country and product-by-product basis until the later of the 12<sup>th</sup> anniversary of the first commercial sale of such product in such country or expiration or termination of the last valid claim within the patent rights covering the product. The royalty rate is then reduced by 30% in any country that prohibits

the payment of royalties on a patent license beyond the expiration or invalidation of the last valid claim covering the product.

Either Dong-A ST or we may terminate the agreement if the other party is in material breach of the agreement and has not cured or started to cure the breach within 60 days of notice of such breach, or is subject to a bankruptcy or insolvency event. We may terminate the agreement at any time upon 90 days' written notice.

We may assign our rights under the agreement in connection with a merger, consolidation, or sale of substantially all of its assets, with prior written notice to Dong-A ST, and if the successor entity agrees in writing to be bound by the agreement.

#### ***Pfizer License Agreement***

In August 2018, an Amended and Restated License Agreement with Pfizer (the "Pfizer Agreement") for the research, development, manufacture and commercialization of Gemcabene went into effect. This agreement amended and restated in full the prior license agreement with Pfizer dated April 16, 2011.

The Pfizer Agreement included milestone payments to Pfizer totaling up to \$37 million upon the achievement of certain milestones, including the first new drug application (or its foreign equivalent) in any country, regulatory approval in each of the United States, Europe and Japan, the first anniversary of the first regulatory approval in any country, and upon achieving certain aggregate sales levels of Gemcabene. Future milestone payments under the Pfizer Agreement, if any, would not be expected to begin for at least several years and extend over a number of subsequent years.

Pfizer will also receive tiered royalties on a country-by-country basis based upon the annual amount of net sales as specified in the Pfizer Agreement until the later of: (i) five years after the first commercial sale in such country; (ii) the expiration of all regulatory or data exclusivity for Gemcabene in such country; and (iii) the expiration or abandonment of the last valid claim of the licensed patents, including any patent term extensions or supplemental protection certificates in such country. The royalty rates range from the high single digits to the mid-teens depending on the level of net sales. The royalty rates are subject to reduction during certain periods when therapeutically-equivalent generic products represent a certain market share of prescription volume in the country. Under the Pfizer Agreement, commercially reasonable efforts must be used to develop and commercialize Gemcabene.

The Pfizer Agreement will expire upon expiration of the last royalty term. On expiration (but not earlier termination), we will have a perpetual, exclusive, fully paid-up, royalty-free license under the licensed patent rights and related data to make, use, develop, commercialize, import and otherwise exploit the clinical product candidate Gemcabene. Either party may terminate the Pfizer Agreement for the other party's material breach following a cure period or immediately upon certain insolvency events relating to the other party. Pfizer may immediately terminate the Pfizer Agreement in the event that (i) we or any of our affiliates or sublicensees contests or challenges, or supports or assists any third party to contest or challenge, Pfizer's ownership of or rights in, or the validity, enforceability or scope of any of the patents licensed under the Pfizer Agreement or (ii) we or any of our affiliates or sublicensees fails to achieve the first commercial sale in at least one country by April 16, 2024.

#### ***License Agreement with Beijing SL***

As of July 23, 2019, Beijing SL has an exclusive royalty-bearing license to research, develop, manufacture and commercialize pharmaceutical products comprising, as an active ingredient, Gemcabene in the territory comprised of mainland China, Hong Kong, Macau and Taiwan. We retain all rights to Gemcabene outside of the territory. The parties have agreed to collaborate with respect to development and commercialization activities under the Beijing SL License Agreement through a joint steering committee composed of an equal number of representatives of Beijing SL and us.

Beijing SL will be responsible, at its expense, for developing and commercializing products containing Gemcabene in the territory, with certain assistance from us. To the extent mutually agreed to in writing, the parties will collaborate on the Phase 3 clinical trial for HoFH or other clinical trials, with us as the sponsor, and designed to enroll patients both inside and outside the territory, but Beijing SL will be responsible, at its expense, for the conduct of any such study to the extent solely in the territory. Beijing SL will be responsible for development activities, including non-clinical and

clinical studies directed at obtaining regulatory approval of the licensed product in the territory. Beijing SL has agreed to use commercially reasonable efforts to commercialize the licensed products for each indication that receives regulatory approval in the territory and shall prepare and present a commercialization plan that shall be subject to approval by the joint steering committee.

Pursuant to the Beijing SL License Agreement, Beijing SL made an upfront gross payment of \$2.5 million. Additionally, with respect to each licensed product, Beijing SL will pay (i) payments for specified developmental and regulatory milestones (including submission of a new drug application to China's National Medical Product Administration, dosing of the first patient in a Phase 3 clinical trial in mainland China and regulatory approval for the first and each additional indication of a Licensed Product in the Territory) totaling up to \$6 million in the aggregate and (ii) payments for specified global net sales milestones of up to \$20 million in the aggregate multiplied by the ratio of the net sales of a licensed product divided by the global net sales of a licensed product, which net sales milestone payments are payable once, upon the first achievement of such milestone.

Beijing SL will also be obligated to pay tiered royalties ranging from the mid-teens to twenty percent on the net sales of all licensed products in the territory until the latest of (a) the date on which any applicable regulatory exclusivity with respect to such Licensed Product expires in such region, (b) the expiration or abandonment of the last valid patent claim or joint patent claim covering such Licensed Product in each region and (c) the fifth anniversary of the first commercial sale of such Licensed Product in such region. Future milestone payments under the Beijing SL License Agreement, if any, are not expected to begin for at least one year and will extend over a number of subsequent years.

Either party may terminate the Beijing SL License Agreement (x) with written notice for the other party's material breach following a cure period or (y) if the other party becomes subject to certain insolvency proceedings. In addition, we may terminate the Beijing SL License Agreement in its entirety if Beijing SL or its affiliates or sublicensees commence a proceeding challenging the validity, enforceability or scope of any of our patents.

The Beijing SL License Agreement contemplates that parties shall, no later than twelve months prior to the anticipated date of the first commercial sale of a licensed product, if any, negotiate in good faith and execute a commercial supply agreement, pursuant to which Beijing SL shall purchase from us, and we shall use commercially reasonable efforts to supply, Gemcabene or licensed product for clinical or commercial purposes, as applicable, until manufacturing and regulatory transfers are complete.

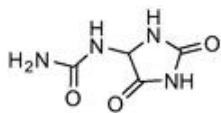
## **Manufacturing**

### *NB-01*

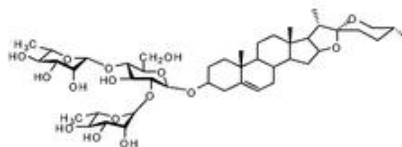
NB-01 is derived from two plant species native to China, *Dioscorea Rhizome* and *Dioscoreae Nipponicae Rhizoma*. Both species have been previously used in traditional Chinese medicine (TCM) for the treatment of arthritis-related pain, muscular pain and pain related to other conditions such as Kashin-Beck disease. Traditional Chinese medicine (TCM) is a style of traditional medicine built on a foundation of more than 2,500 years of Chinese medical practice that includes various forms of herbal medicine, acupuncture, massage (tui na), exercise (qigong), and dietary therapy.

While the characterization of the full composition of NB-01 and underlying active compounds is underway, certain compounds have been identified for purposes of product screening and quality control. These include allantoin and dioscin, the chemical structures for which are shown in the figure below. Allantoin is a marker of the *D. Rhizome* extract and dioscin is a marker of the *D. Nipponicae Rhizoma* extract. Signature high-performance liquid chromatography (HPLC) chemical profile assays are established for both markers. These markers are used to show the drug quality profile during the manufacturing of the drug extract from the plant species and the final drug product formulation used in the human clinical studies.





**Allantoin**



**Dioscin**

NB-01 is manufactured in a highly monitored and controlled manner to ensure rigorous batch-to-batch consistency that yields a complex mixture of active compounds. NB-01 is considered a "botanical drug product" by the FDA, which defines this class of products to include plant materials, algae, macroscopic fungi, and combinations thereof. As a result, it has unique features that must be taken into account during the drug development process. Plant species used for the production of our compounds are cultivated on dedicated, Good Agricultural Practices ("GAP")-compliant acreage in accordance with established World Health Organization ("WHO") standards for starting materials of plant or herbal origin, as recommended by FDA its guidelines for botanical drug development. Production of the drug substance from the botanical raw material involves modern harvesting and extraction processes incorporating state-of-the-art molecular biology and analytical chemistry methodologies.

The manufacturing process and analytical testing methodologies have been validated and the adherence to regulatory requirements of the processes have been audited by two firms, Amarex and FDAMap, well-experienced in the review and audit of botanical drug requirements of the FDA. The drug substance, an ethanol extract of the two plant species, combined in a specific weight ratio, is manufactured in KGC Yebon, in South Korea in a GMP-compliant process, and has been audited by Amarex and FDAMap. The drug substance has completed process validation and analysis method validation, and demonstrated 36-month stability. The drug product is manufactured by Dong-A ST in South Korea in a GMP-compliant process, and is audited by Amarex and FDAMap. The final drug product has completed process validation and analysis method validation, and demonstrated 36-month stability.

#### *NB-02*

NB-02 is derived from two plant materials, *Morus alba* Linne and the peel of *Poria cocos* Wolf. NB-02 is manufactured in a highly monitored and controlled manner to ensure rigorous batch-to-batch consistency that yields a complex mixture of active compounds. NB-02 is considered a "botanical drug product" by the FDA, which defines this class of products to include plant materials, algae, macroscopic fungi, and combinations thereof. As a result, NB-02 has unique features that must be taken into account during the drug development process. Plant species used for the production of our compounds are cultivated on dedicated, GAP-compliant acreage in accordance with established WHO standards for starting materials of plant or herbal origin, as recommended by FDA its guidelines for botanical drug development. Production of the drug substance from the botanical raw material involves modern harvesting and extraction processes incorporating state-of-the-art molecular biology and analytical chemistry methodologies.

#### *Gemcabene*

Gemcabene is a small molecule drug candidate that can be synthesized as a single polymorph crystalline monocalcium salt, using readily available raw materials and based on conventional chemical processes. Contract manufacturers produce both the drug substance and drug product required for the preclinical studies and clinical trials of Gemcabene. All of the contract manufacturers have updated GMP certificates and all of the drug products are being manufactured under current good manufacturing practices (GMP), a quality system regulating CMC activities.

Gemcabene Immediate Release (IR) tablets are manufactured under GMP to support all clinical trials. More specifically, drug substance and drug product manufacturing process and analytical method development have been optimized and updated based on ICH/FDA guidelines. In addition, Gemcabene is successfully manufactured in multiple strengths of tablets under GMP: 150mg, 300mg, and 600mg. There is solid stability data for both the drug substance and drug product. The current contract manufacturers have been producing, and could produce in the future, bulk drug substance and drug product for use in our preclinical studies and clinical trials on a purchase order basis.



## Competition

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

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

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize therapeutics that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain marketing approvals for their products more rapidly than we may obtain approval for our products, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected because in some cases insurers or other third-party payors, including government programs, seek to encourage the use of generic products. This may have the effect of making branded products less attractive, from a cost perspective, to buyers.

### *NB-01—Painful Diabetic Neuropathy*

We expect that, if approved, NB-01 will compete with currently approved drug therapies for painful diabetic neuropathy, including pregabalin, duloxetine, and tapentadol HCl. We are also aware of a number of therapies that are approved to treat other types of neuropathic pain, and that various therapies are used off-label to treat neuropathic pain. In addition to the marketed therapies, we are aware of several companies currently developing therapies for neuropathic pain, including Biogen Inc., Cara Therapeutics, Inc., Daiichi Sankyo Company, Eliem Therapeutics Inc, Immune Pharmaceuticals Inc., Novartis AG, and Xenoport Inc.

### *NB-02—Cognitive disease and Tauopathies*

We expect that, if approved, NB-02 will compete with the currently approved therapies for management of cognitive disease including Alzheimer's disease. In Alzheimer's disease, four drugs are currently approved by the FDA for the treatment of symptoms of Alzheimer's disease, based on acetylcholinesterase (AChE) inhibition (three drugs) and NMDA receptor antagonism (one drug). In addition to the marketed therapies, we are aware of several companies currently developing therapies for Alzheimer's disease, including Eisai Co., Ltd., Hoffman-LaRoche, Otsuka Pharmaceuticals, Inc., Novartis AG, and Avanir Pharmaceuticals, and Biohaven Pharmaceuticals.

### *Gemcabene*

We expect that, if approved, Gemcabene will compete with large pharmaceutical and biopharmaceutical companies, specialty pharmaceutical and generic drug companies, academic institutions, government agencies and research institutions. We are aware of other therapies approved to lower LDL, both statin and non-statin based therapies, as well as medications written off label to treat the disease. In addition, we are aware of other therapies to lower triglycerides. Lipid-lowering therapies currently on the market that would compete with Gemcabene, if approved, include the following:

- statins, such as Crestor marketed by AstraZeneca, Livalo marketed by Kowa Pharmaceuticals America, Inc. (Kowa), Zocor marketed by Merck & Co., Inc. (Merck), Lipitor marketed by Pfizer, and their generic versions;

- cholesterol absorption inhibitors, such as Zetia, marketed by Merck;
- apoB antisense Kynamro marketed by Genzyme Corporation, a Sanofi company, and MTTP inhibitor Juxtapid marketed by Aegerion Pharmaceuticals, Inc.;
- combination therapies, such as Vytorin and Liptruzet, both marketed by Merck;
- other lipid-lowering monotherapies and fixed dose combinations, including: fibrates, such as TriCor and Trilipix, both marketed by AbbVie Inc. (AbbVie), and Lipofen marketed by Kowa; niacin, such as Niaspan marketed by AbbVie; bile acid sequestrants, such as Welchol, marketed by Daiichi Sankyo Inc.; combination therapies, such as Advicor and Simcor, both of which are marketed by AbbVie; Pemafibrate (PPARalpha agonist) being marketed by Kowa; and the generic versions of these drugs; Nexletol and Nexlizet marketed by Esperion
- triglyceride lowering therapies including: prescription fish oils, such as Lovaza marketed by GlaxoSmithKline, Epanova marketed by AstraZeneca and Vascepa marketed by Amarin Corporation plc; Waylivra marketed by Akcea;
- PCSK9 inhibitors, such as Praluent, developed by Sanofi-Aventis U.S. LLC, and Regeneron Pharmaceuticals, Inc. and Repatha marketed by Amgen Inc; and
- anti-inflammatory agents such as canakinumab, developed by Novartis.

Several other pharmaceutical companies have other lipid-lowering therapies in development that may be approved for marketing in the United States or outside of the United States. Based on publicly available information, we believe the current therapies in development that would compete with Gemcabene but not limited to include:

- for HoFH, RGEN-1500 being developed by Regeneron Pharmaceuticals, Inc. MGL-3196 developed by Madrigal Pharmaceuticals (Madrigal) for HoFH, and ALN-PCSSc being developed by The Medicines Company and Alnylam Pharmaceuticals, Inc.;
- for HeFH and ASCVD, drugs include: oral cholesteryl ester transfer protein inhibitors, such as anacetrapib being developed by Merck and TA-8995 being developed by Amgen/Dezima; ATP citrate lyase inhibitor, ETC-1002 developed by current Esperion; PCSK9 inhibitors, such as ALN-PCSSc (inclisiran) being developed by Novartis; apoA antisense agent AKCEA-APO(a)-LRx being developed by Akcea and Novartis; apabetalone (RVX-208) being developed by Resvelogix; and MGL-3196 developed by Madrigal (HeFH only);
- for SHTG, AKCEA-APOCIII-LRx and AKCEA-ANGPTL3-LRx both being developed by Akcea Pharmaceuticals, Inc.; Evinacumab ANGPTL-3 in development by Regeneron; CaPre(long-chain omega-3 phospholipid) being developed by Acasti; and pemafibrate being developed by KOWA.

### **Intellectual Property**

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

As with other biotechnology and pharmaceutical companies, our ability to maintain and solidify our proprietary and intellectual property position for our product candidates, including NB-01 and NB-02, its preclinical compounds, and its core technologies will depend on our success in obtaining effective patent claims and enforcing those claims if granted. However, patent applications that we may file or license from third parties may not result in the issuance of patents. We also cannot predict the breadth of claims that may be allowed or enforced in our patents. Any issued patents that we may receive in the future may be challenged, invalidated or circumvented. For example, prior to March 16, 2013, in the

United States, patent applications were subject to a “first to invent” rule of law. Applications effectively filed on or after March 16, 2013, are subject to a “first to file” rule of law.

Discoveries reported in the scientific literature often lag 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. We cannot be certain that any existing application will be subject to the “first to file” or “first to invent” rule of law, that we or our licensor were the first to make the inventions claimed in our existing patent portfolio subject to the prior laws, or that we or our licensor were the first to file for patent protection of such inventions subject to the new laws. If third parties prepare and file patent applications in the United States that also claim technology we have claimed in our patents or patent applications, we may have to participate in interference or derivation proceedings and/or invalidation proceedings in the USPTO, which could result in substantial costs to us, even if the eventual outcome is favorable. In addition, because of the extensive time required for clinical development and regulatory review of a product candidate we may develop, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of any such patent.

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

Our ability to commercialize product candidates depends in large part on our ability to obtain and maintain intellectual property protection for our product candidates. Our policy is to seek to protect our intellectual property position by, among other methods, filing U.S. and foreign patent applications related to the technology, inventions and improvements that are important to the development and implementation of our business strategy. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary position.

#### *NB-01 and NB-02*

As of March 19, 2020, our intellectual property portfolio for NB-01 included two issued U.S. patents, comprised of one patent directed to composition of matter and another directed to use, and two pending U.S. non-provisional patent applications, comprised of one directed to composition of matter and another directed to use, and 65 granted foreign patents, comprised of eight patents directed to composition of matter and 57 patents directed to use, and two pending foreign applications directed to composition of matter; these patents and applications are related to its NB-01 clinical programs in peripheral neuropathy and neurological conditions. The issued patents have expiration dates ranging from October 27, 2026 to December 29, 2031. Patents issuing from these applications, if any, are expected to expire between 2026 and 2031. The jurisdictions for the foreign patents and applications include: Brazil, Canada, China, the European Patent Convention (including Austria, Belgium, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Spain, Switzerland, Turkey, and the United Kingdom), India, Japan, Mexico, the Republic of Korea, and Russia. One patent family including some of the above patents and patent applications for NB-01 is assigned to University-Industry Cooperation Group of Kyung Hee University, and is exclusively licensed from Kyung Hee University to Dong-A ST and then from Dong-A ST to us pursuant to the terms of the corresponding agreements. The other two patent families including the other above patents and patent applications for NB-01 are assigned to Dong-A ST and exclusively licensed to us.

As of March 19, 2020, our intellectual property portfolio for NB-02 included one issued U.S. patent, two pending U.S. non-provisional patent applications, 6 foreign granted patents, and 10 foreign patent applications, all of which are directed to compositions of matter. Patents issuing from these applications, if any, are expected to expire around 2035. The issued patents have an expiration date of December 3, 2035. The jurisdictions for the foreign patents and applications include: Brazil, Canada, China, the European Patent Convention (including Austria, Belgium, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Spain, Switzerland, Turkey, and the

United Kingdom), India, Japan, Mexico, the Republic of Korea, and Russia. All of the above patents and patent applications for NB-02 were assigned to us.

### *Gemcabene*

As of March 19, 2020, our intellectual property portfolio relating to Gemcabene included eight issued U.S. patents, seven pending U.S. patent applications, 40 foreign-granted patents and 76 foreign patent applications directed to formulations, compositions, methods of use and methods of manufacturing. The Gemcabene intellectual property includes both owned and Pfizer-licensed issued and pending patents in the United States and foreign jurisdictions. The issued patents in the United States and foreign countries have expiration dates between August 2020 and November 2036. The patents in the United States and foreign countries that may be issued from pending applications, if any, are expected to expire between December 2031 and October 2039. The jurisdictions for the foreign countries include Argentina, Australia, Brazil, Canada, China, Europe, Hong Kong, India, Israel, Japan, Mexico, New Zealand, Philippines, Korea, Russia, Singapore, South Africa, Taiwan and Thailand.

### **Government Regulation**

Government authorities at the federal, state and local level in the United States and in other countries extensively regulate, among other things, the research, development, testing, manufacture (including any manufacturing changes), packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, post-approval monitoring and reporting, import and export of pharmaceutical products, such as those we are developing.

#### *United States — FDA Regulation*

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, or the FDCA, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as imposition of clinical holds, refusal by the FDA to approve pending New Drug Applications (NDAs), warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement, civil penalties and criminal prosecution.

Pharmaceutical product development in the United States typically involves preclinical or other nonclinical laboratory and animal tests and the submission to the FDA of an Investigational New Drug (IND) application, which must become effective before clinical testing may commence. For commercial approval, the sponsor must submit adequate tests by all methods reasonably applicable to show that the drug is safe for use under the conditions prescribed, recommended or suggested in the proposed labeling. The sponsor must also submit substantial evidence, generally consisting of adequate, well-controlled clinical trials to establish that the drug will have the effect it purports or is represented to have under the conditions of use prescribed, recommended or suggested in the proposed labeling. In certain cases, the FDA may determine that a drug is effective based on one clinical study plus confirmatory evidence. Satisfaction of the FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease. For botanical drug products in particular, which may be heterogeneous in nature and may carry additional uncertainty about their active constituents in comparison to synthetic small-molecule drug products, one of the critical issues during drug development is ensuring that the therapeutic effect for marketed drug product batches is consistent. FDA has determined that therapeutic consistency can generally be supported by a "totality of the evidence" approach, which the agency has outlined in a 2016 guidance for industry entitled Botanical Drug Development.

Nonclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal studies to assess the characteristics and potential safety and efficacy of the product. The conduct of the nonclinical tests must comply with federal requirements, including the FDA's good laboratory practice regulations and the U.S. Department of Agriculture's, or USDA's, regulations implementing the Animal Welfare Act. The results of nonclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long-term nonclinical tests, such as animal studies of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has not imposed a clinical hold on the IND or otherwise commented or questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations, (ii) in compliance with good clinical practice (“GCP”), an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators and monitors (some of which have been codified into U.S. federal regulations), and (iii) under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time or impose other sanctions if it believes that the clinical trial either is not being conducted in accordance with the FDA requirements or presents an unacceptable risk to the clinical trial patients. The trial protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, at each site where a trial will be conducted for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB’s requirements or may impose other conditions. Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In general, in Phase I, the initial introduction of the drug into healthy human volunteers or, in some cases, patients, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses and, if possible, early evidence of effectiveness. Phase 2 usually involves trials in a limited patient population to determine the effectiveness of the drug for a particular indication, dosage tolerance and optimum dosage, and to identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit the FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug. In most cases, the FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. The FDA may, however, determine that a drug is effective based on one clinical trial plus confirmatory evidence. Only a small percentage of investigational drugs complete all three phases and obtain marketing approval. In some cases, the FDA may require post-market studies, known as Phase 4 studies, to be conducted as a condition of approval to gather additional information on the drug’s effect in various populations and any side effects associated with long-term use. Depending on the risks posed by the drugs, other post-market requirements may be imposed.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product may begin in the United States. The NDA must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product’s pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency’s threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. Under the statute and implementing regulations, the FDA has 180 days (the initial review cycle) from the date of filing to issue either an approval letter or a complete response letter, unless the review period is adjusted by mutual agreement between the FDA and the applicant or as a result of the applicant submitting a major amendment. In practice, the performance goals established pursuant to the Prescription Drug User Fee Act have effectively extended the initial review cycle beyond 180 days. The FDA’s current performance goals call for the FDA to complete review of 90% of standard (non-priority) NDAs within 10 months of receipt and within six months for priority NDAs, but two additional months are added to standard and priority NDAs for a new molecular entity, or NME, such that the 10-month and 6-month action goals for NME applications begin to run from the 60-day filing date rather than from receipt of the original NDA submission.

The FDA may also refer applications for novel drug products, or drug products that present difficult questions of safety or efficacy, to an advisory committee, which is typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the

recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve the product unless compliance with current good manufacturing practice (“GMP”) regulations is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After the FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter (“CRL”) generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If, or when, those deficiencies have been addressed to the FDA’s satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. The FDA has committed to reviewing 90% of NDA resubmissions within two to six months depending on the type of information included in response to the deficiencies identified in the CRL.

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, or REMS, to help ensure that the benefits of the drug outweigh the potential risks. REMS can include medication guides, communication plans for health care professionals, and/or elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS can materially affect the potential market and profitability of the drug. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the drug’s safety or efficacy. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

#### *Fast Track Designation and Accelerated Approval*

The FDA is authorized to facilitate the development, and expedite the review, of drugs that are intended for the treatment of a serious or life-threatening disease or condition for which there is no effective treatment and which demonstrate the potential to address unmet medical needs for the condition. These programs include fast track designation, breakthrough therapy designation, priority review designation and other accelerated approvals.

Under the Fast Track Program, the sponsor of a new drug candidate that is intended to treat a serious condition may request that the FDA designate the drug candidate for a specific indication as a Fast Track drug concurrent with, or after, the filing of the IND for the drug candidate. The FDA must determine if the drug candidate qualifies for Fast Track designation within 60 days of receipt of the sponsor’s request. In addition to other benefits such as the ability to engage in more frequent interactions with the FDA, the FDA may initiate review of sections of a Fast Track drug’s NDA before the application is complete. This rolling review is available if the applicant provides, and the FDA approves, a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, the FDA’s time period goal for reviewing an application does not begin until the last section of the NDA is submitted. Additionally, the Fast Track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

In 2012, Congress enacted the Food and Drug Administration Safety and Innovation Act, or FDASIA. This law established a new regulatory program for products designated as “breakthrough therapies.” A product may be designated as a breakthrough therapy if it is intended, either 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 product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The FDA may take certain actions with respect to designated breakthrough therapies, including: holding meetings with the sponsor throughout the development process; providing timely advice to the product sponsor regarding development and approval; involving more senior staff in the review process; assigning a cross-disciplinary project lead for the review team; and taking other steps to design the clinical trials in an efficient manner.

The FDA may also designate a product for priority review if it is a drug that treats a serious condition and, if approved, would provide a significant improvement in safety or effectiveness. The FDA determines at the time that the marketing application is submitted, on a case- by-case basis, whether the proposed drug represents a significant improvement when compared with other available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting drug reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes, or evidence of



safety and effectiveness in a new subpopulation. A priority review designation is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for taking action on a marketing application from ten months to six months.

Under the FDA's accelerated approval regulations, the FDA may approve a drug for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon 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. The accelerated approval regulations are codified within Title 21 of the Code of Federal Regulations, as Subpart H under Part 314, the part of the FDA regulations covering applications for FDA approval to market a new drug, and as such the accelerated approval pathway is sometimes referred to as approval under "Subpart H."

In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A drug candidate approved under Subpart H is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or confirm a clinical benefit during post-marketing studies, will allow the FDA to withdraw the drug from the market on an expedited basis. Unless otherwise informed by the FDA, for an accelerated approval product an applicant must submit to the FDA for consideration during the preapproval review period copies of all promotional materials, including promotional labeling as well as advertisements, intended for dissemination or publication within 120 days following marketing approval. After 120 days following marketing approval, unless otherwise informed by the FDA, the applicant must submit promotional materials at least 30 days prior to the intended time of initial dissemination of the labeling or initial publication of the advertisement. The accelerated approval pathway is most often used in settings in which the course of a disease is long and an extended period of time is required to measure the intended clinical benefit of a drug, even if the effect on the surrogate or intermediate clinical endpoint occurs rapidly. For example, accelerated approval has been used extensively in the development and approval of drugs for treatment of a variety of cancers in which the goal of therapy is generally to improve survival or decrease morbidity and the duration of the typical disease course requires lengthy and sometimes large clinical trials to demonstrate a clinical or survival benefit.

#### *Orphan Drugs*

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition—generally a disease or condition that affects fewer than 200,000 individuals. The U.S. Orphan Drug Designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity and trade name, if any, of the drug and its designated use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first NDA applicant to receive FDA approval for a particular active ingredient to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the United States for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product 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 NDA application user fee.

#### *Nutraceutical Regulation*

The FDA regulates foods, food additives, drugs and cosmetics. Unlike pharmaceutical drugs and conventional foods, nutraceuticals are regulated as "dietary supplements" under the Dietary Supplement, Health and Education Act of 1994 ("DSHEA") as a separate regulatory category of food. Before the DSHEA, dietary supplements were subject to the same regulatory requirements as were other foods. DSHEA amended the FDCA to create a new regulatory framework for the safety and labeling of dietary supplements. Under DSHEA, a company is responsible for determining that the dietary supplements it manufactures or distributes are safe and that any representations or claims made about them are substantiated by adequate evidence to show that they are not false or misleading. Dietary supplements do not need approval

from FDA before they are marketed. Except in the case of a “new dietary ingredient,” where pre-market review for safety data and other information is required by law, a firm does not have to provide FDA with the evidence it relies on to substantiate safety or effectiveness before or after marketing a product. In addition, there is a requirement for manufacturers to register pursuant to the Bioterrorism Act with FDA before producing or selling supplements. In June 2007, FDA published regulations for Current Good Manufacturing Practices (“cGMP”) for those who manufacture, package, label or hold dietary supplement products. These regulations focus on practices that ensure the identity, purity, quality, strength and composition of dietary supplements.

Congress defined the term “dietary supplement” in DSHEA as “a product (other than tobacco) intended to supplement the diet that bears or contains one or more of the following dietary ingredients: vitamins, minerals, amino acids, herbs or other botanicals; a concentrate, metabolite, constituent, extract or combination of the ingredients listed above.” A dietary supplement is a product taken by mouth that contains a “dietary ingredient” intended to supplement the diet. The “dietary ingredients” in these products may include vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, glandulars, and metabolites and can also be extracts or concentrates. Dietary supplements are produced in the form of tablets, capsules, softgels, gelcaps, liquids, or powders. Dietary supplements can also be in other forms, such as a nutrition bar, but if they are in another form, information on their label must not represent the product as a conventional food or a sole item of a meal or diet. Regardless of form, DSHEA places dietary supplements in a special category under the general umbrella of “foods,” not drugs, and requires the product to be labeled as a “dietary supplement.”

According to the FDA, a drug is an article intended to diagnose, cure, mitigate, treat or prevent disease. While nutraceuticals are not intended to cure or treat disease, both dietary supplements and drugs are intended to affect the structure or function of the body. Dietary supplements that contain structure/function claims on their labels must bear the disclaimer: “This statement has not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.” The manufacturer is responsible for ensuring the accuracy and truthfulness of these claims; they are not approved by FDA. Moreover, dietary supplements are supposed to enhance the diet, not be used as a conventional food or as the sole item of a meal or diet, and not supposed to be taken alone as a substitute for any food or medicine.

The DSHEA requires that a manufacturer or distributor notify FDA if it intends to market a dietary supplement in the U.S. that contains a “new dietary ingredient.” The manufacturer and distributor must demonstrate to FDA why the ingredient is reasonably expected to be safe for use in a dietary supplement, unless it has been recognized as a food substance and is present in the food supply. A new dietary ingredient is an ingredient marketed after October 15, 1994. There is no authoritative list of dietary ingredients that were marketed before October 15, 1994. Therefore, manufacturers and distributors are responsible for determining if a dietary ingredient is “new,” and if it is not, for documenting that the dietary supplements it sells, containing the dietary ingredient, were marketed before October 15, 1994. The DSHEA states that the manufacturer is responsible for the safety evaluation of the product. If the dietary supplement contains a new ingredient, the manufacturer must inform FDA that the new ingredient “can reasonably be expected to be safe” within 75 days of going to market. This notice must provide information that supports the manufacturer’s conclusion that the ingredient is safe. It is up to the FDA to prove that a dietary supplement is unsafe after it is marketed.

A dietary supplement is adulterated if, among other things, it or an ingredient in it presents a “significant or unreasonable risk of illness or injury” when used as directed or contains a new ingredient for which there is insufficient information to provide assurance that the ingredient does not present any significant or unreasonable risk of illness or injury. The DSHEA also has labeling requirements for dietary supplements, including requiring information on the label such as (1) name of each ingredient; (2) quantity of each ingredient; (3) total weight of all ingredients, if a blend; (4) identity of the plant part used; (5) the term “Dietary Supplement;” (6) nutritional labelling information (calories, fat, sodium, etc.).

### *Pediatric Information*

Under the Pediatric Research Equity Act (PREA), NDAs or supplements to NDAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant full or partial waivers for submission of data, as well as deferrals for several reasons, including a finding that the drug is ready for approval for use in adults before pediatric studies are complete or that additional safety or effectiveness data needs to be collected before the pediatric studies begin. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted.



The Best Pharmaceuticals for Children Act (BPCA) provides NDA holders a six-month extension of any exclusivity—patent or non-patent—for a drug if certain conditions are met. Conditions for exclusivity include the FDA's determination that information relating to the use of a new drug in the pediatric population may produce health benefits in that population, the FDA making a written request for pediatric studies, and the applicant agreeing to perform, and reporting on, the requested studies within the statutory timeframe. Applications under the BPCA are treated as priority applications, with all of the benefits that designation confers.

#### *Special Protocol Assessment*

A company may reach an agreement with the FDA under the Special Protocol Assessment, or SPA, process as to the required design and size of clinical trials intended to form the primary basis of an efficacy claim for a new drug product. According to its performance goals, the FDA seeks to evaluate the protocol within 45 days of the request to assess whether the proposed trial is adequate, and that evaluation may result in discussions and a request for additional information. An SPA request must be made before the proposed trial begins, and all open issues must be resolved before the trial begins. If a written agreement is reached, it will be documented and made part of the administrative record. Under the FDCA and FDA guidance implementing the statutory requirement, an SPA is generally binding upon the FDA except in limited circumstances, such as if the FDA identifies a substantial scientific issue essential to determining safety or efficacy after the study begins, public health concerns emerge that were unrecognized at the time of the protocol assessment, the sponsor and the FDA agree to the change in writing, or if the study sponsor fails to follow the protocol that was agreed upon with the FDA.

#### *Disclosure of Clinical Trial Information*

Sponsors of clinical trials of certain FDA-regulated products, including prescription drugs, are required to register and disclose certain clinical trial information on a public website maintained by the U.S. National Institutes of Health (NIH). Information related to the product, patient population, phase of investigation, study sites and investigator, and other aspects of the clinical trial is made public as part of the registration. Sponsors are also obligated to disclose the results of these trials after completion. Disclosure of the results of these trials can be delayed for up to two years if the sponsor certifies that it is seeking approval of an unapproved product or that it will file an application for approval of a new indication for an approved product within one year. Competitors may use this publicly available information to gain knowledge regarding the design and progress of the development programs. Failure to timely register a covered clinical study or to submit study results as provided for in the law can give rise to civil monetary penalties and also prevent the non-compliant party from receiving future grant funds from the federal government. Since the NIH's Final Rule on ClinicalTrials.gov registration and reporting requirements became effective in 2017, both NIH and FDA have signaled the government's willingness to begin enforcing those requirements against clinical trial sponsors who fail to meet those legal obligations, with FDA releasing in late 2018 a proposal for certain procedural steps it intends to take when determining whether and how to assess civil monetary penalties against a non-compliant party.

#### *Post-Approval Requirements*

Drugs manufactured, marketed or distributed pursuant to FDA approval decisions are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion, and reporting of adverse experiences with the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to FDA review and approval before they can be implemented. There also are continuing, annual user fee requirements for any marketed products and related manufacturing facilities, as well as new application fees for supplemental applications.

In addition, drug manufacturers and other entities involved in the manufacture of approved drugs are required to register their facilities with the FDA and state agencies, and are subject to periodic unannounced inspections by the FDA for compliance with GMP requirements. Prescription drug distribution facilities are also subject to state licensure, including inspections, by the relevant local regulatory authority. Changes to the manufacturing process, specifications or container closure system for an approved drug are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from GMP and impose reporting and documentation requirements upon the sponsor and others involved in the drug manufacturing process. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality

control to maintain GMP compliance and ensure ongoing compliance with other statutory requirements the FDCA, such as the requirements for making manufacturing changes to an approved NDA.

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

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

As described further below, the FDA strictly regulates marketing, labeling, advertising and promotion of prescription drug products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant penalties.

*The Hatch-Waxman Amendments*

### **Orange Book Listing**

In 1984, with passage of the Hatch-Waxman Amendments to the FDCA, Congress authorized the FDA to approve generic drugs that are the same as drugs previously approved by the FDA under the NDA provisions of the statute. As part of the marketing application process when seeking approval for a new drug through an NDA, applicants are required to list with the FDA every patent whose claims cover the applicant's product or an approved method of using the product. Upon approval of a drug, approval information about the drug along with each of the applicant's listed patents is then published in the FDA's *Approved Drug Products with Therapeutic Equivalence Evaluations*, commonly known as the "Orange Book." Pursuant to the Hatch-Waxman Amendments, drugs listed in the Orange Book can, in turn, be cited by potential generic competitors in support of approval of an abbreviated new drug application, or ANDA. An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the RLD and has been shown through bioequivalence testing to be bioequivalent to the RLD. The FDA is responsible for determining that the generic drug is "bioequivalent" to the innovator drug, although under the statute, a generic drug is bioequivalent to a RLD if "the rate and extent of absorption of the drug do not show a significant difference from the rate and extent of absorption of the listed drug..."

Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, preclinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are most often considered to be therapeutically equivalent to the RLD, are commonly referred to as "generic equivalents" to the RLD, and can often be substituted by pharmacists under prescriptions written for the original RLD in accordance with state law. Specifically, upon approval of an ANDA, the FDA indicates whether the generic product is "therapeutically equivalent" to the RLD in the Orange Book. By operation of certain state laws and numerous health insurance programs, the FDA's designation of therapeutic equivalence in the Orange Book often results in substitution of the generic drug without the knowledge or consent of either the prescribing physician or the patient.

The Hatch-Waxman Amendments also amended the FDCA to enact Section 505(b)(2) of the FDCA, which permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference. A Section 505(b)(2) applicant may eliminate the need to conduct certain preclinical or clinical studies, if it can establish that reliance on studies conducted for a previously-approved product is scientifically appropriate. The FDA may also require companies to perform

additional trials or measurements to support the change from the approved product. The FDA may then approve the new product for all or some of the label indications for which the referenced product has been approved, as well as for any new indication sought by the Section 505(b)(2) applicant. With respect to listed patents, patent certification requirements, and the blocking of follow-on marketing applications for the drug product previously approved under an NDA and listed in the Orange Book—known as the reference listed drug, or RLD—505(b)(2) NDA applications and ANDAs are required under the statute and FDA's implementing regulations to follow similar procedures and are subject to similar conditions. However, only in some cases is a 505(b)(2) NDA-approved drug product determined by FDA to be therapeutically equivalent to the original innovator RLD.

As part of its own marketing application process, the ANDA/505(b)(2) applicant is required to certify to the FDA concerning any patents listed for the relevant RLD in the FDA's Orange Book. Specifically, the applicant must certify either that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the generic product. The ANDA applicant may also elect to submit a section viii statement, certifying that its proposed ANDA or 505(b)(2) labeling does not contain (or carves out) any language regarding the patented method-of-use, rather than certify to a listed method-of-use patent.

If the ANDA/505(b)(2) applicant does not challenge the innovator's listed patents, or indicates that it is not seeking approval of a patented method of use, the ANDA/505(b)(2) application will not be approved by the FDA until all the listed patents claiming the referenced product have expired.

A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV certification. If the ANDA/505(b)(2) applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of that Paragraph IV certification to the NDA sponsor and patent holders once FDA accepts the ANDA/505(b)(2) application for filing. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification, as provided for in the statute. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA/505(b)(2) NDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the ANDA/505(b)(2) applicant.

#### **Non-Patent Exclusivity**

Under the Hatch-Waxman Amendments, the FDA also may not approve an ANDA or 505(b)(2) NDA until any applicable period of non-patent exclusivity for the RLD has expired. The FDCA provides a period of five years of non-patent exclusivity for a new drug containing a new chemical entity, or NCE, which is a drug that contains no active moiety that has been approved by the FDA in any other NDA. During this five years of marketing exclusivity, the FDA cannot receive any ANDA or 505(b)(2) application seeking approval of a drug that references a version of the NCE drug.

The FDCA also provides for a period of three years of exclusivity if the NDA includes reports of one or more new clinical investigations, other than bioavailability or bioequivalence studies, that were conducted by or for the applicant and are essential to the approval of the application. This three-year exclusivity period often protects changes to a previously approved drug product, such as a new dosage form, route of administration, combination or the addition of a new indication. During this three-year period of exclusivity, the FDA cannot approve an ANDA or 505(b)(2) application that includes the change.

An ANDA or 505(b)(2) application may be submitted one year before NCE exclusivity expires if a Paragraph IV certification is filed. If there is no listed patent in the Orange Book, there may not be a Paragraph IV certification requirement, and in such situations, no ANDA or 505(b)(2) application may be filed before the expiration of the exclusivity period.

For a botanical drug, the FDA may determine that the active moiety is one or more of the principal components, or the complex mixture as a whole. This determination would affect the possibility of any five-year exclusivity as well as the ability of any potential generic competitor to demonstrate that it is the same drug as the original botanical drug. Because

the agency has not promulgated specific regulations for botanical drug products and is approaching the development of such products, especially those that are composed of more complex mixtures, on a case-by-case basis, the 2016 Botanical Drug Development guidance for industry represents the best source for the FDA's current thinking on these drug products.

### **Patent Term Extension**

After NDA approval, owners of relevant drug patents may apply for up to a five-year patent extension. The allowable patent term extension is calculated as half of the drug's testing phase—the time between IND submission and NDA submission—and all of the review phase—the time between NDA submission and approval up to a maximum of five years. The time can be shortened if the FDA determines that the applicant did not pursue approval with due diligence. The total patent term after the extension may not exceed 14 years from market approval.

For patents that might expire during the application phase, the patent owner may request an interim patent extension. An interim patent extension increases the patent term by one year and may be renewed up to four times. For each interim patent extension granted, the post-approval patent extension is reduced by one year. The director of the U.S. Patent and Trademark Office must determine that approval of the drug covered by the patent for which a patent extension is being sought is likely. Interim patent extensions are not available for a drug for which an NDA has not been submitted.

### *Prescription Drug Marketing Act*

As part of the sales and marketing process, pharmaceutical companies frequently provide samples of approved drugs to physicians. The Prescription Drug Marketing Act (PDMA) imposes requirements and limitations upon the provision of drug samples to physicians, as well as prohibits states from licensing distributors of prescription drugs unless the state licensing program meets certain federal guidelines that include minimum standards for storage, handling and record keeping. In addition, the PDMA sets forth civil and criminal penalties for violations.

### *New Legislation and Regulations*

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the testing, approval, manufacturing and marketing of products regulated by the FDA and relevant regulatory authorities outside the United States. In addition to new legislation, regulations and policies are often revised or interpreted by regulatory authorities in ways that may significantly affect Our business and its product candidates. It is impossible to predict whether further legislative changes will be enacted or whether regulations, guidance, policies or interpretations will be changed or what the effect of such changes, if any, may be.

### *Other U.S. Healthcare Laws and Compliance Requirements*

If we obtain regulatory approval of our product candidates and launch them commercially in the United States, we may be subject to various federal and state laws targeting fraud and abuse in the healthcare industry. These laws may impact, among other things, our proposed sales, marketing and education programs. In addition, we may be subject to patient privacy regulation by both the federal government and the states in which we conduct our business. Some of the laws that may affect our future ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce, or in return for, the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payers that are false or fraudulent;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;

- HIPAA, as amended by the Health Information Technology and Clinical Health Act, or HITECH, and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information;
- the federal transparency requirements under the Physician Payments Sunshine Act require manufacturers of FDA-approved drugs, devices, biologics and medical supplies covered by Medicare or Medicaid to report, on an annual basis, to the Department of Health and Human Services information related to payments and other transfers of value to physicians, teaching hospitals, and certain advanced non-physician health care practitioners and physician ownership and investment interests; and
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws, which may apply to items or services reimbursed by any third-party payer, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. Moreover, some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines, or the relevant compliance guidance promulgated by the federal government, in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures to the extent that those laws impose requirements that are more stringent than the Physician Payments Sunshine Act.

### ***Europe/Rest of World Government Regulation***

In addition to regulations in the United States, we are and will be subject, either directly or through our distribution partners, to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of its products, if approved.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in non-U.S. countries prior to the commencement of clinical trials or marketing of the product in those countries.

The approval process varies from country to country and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others.

In the European Union, medicinal products are subject to extensive pre- and post-marketing regulation by regulatory authorities at both the European Union and national levels. Additional rules also apply at the national level to the manufacture, import, export, storage, distribution and sale of controlled substances. In many E.U. member states the regulatory authority responsible for medicinal products is also responsible for controlled substances. Responsibility is, however, split in some member states, such as the United Kingdom. Generally, any company manufacturing or distributing a medicinal product containing a controlled substance in the European Union will need to hold a controlled substances license from the competent national authority and will be subject to specific record-keeping and security obligations. Separate import or export certificates are required for each shipment into or out of the member state.

### ***Clinical Trials and Marketing Approval***

Certain countries outside of the United States have a process that requires the submission of a clinical trial application much like an IND prior to the commencement of human clinical trials. In Europe, for example, a clinical trial application, or CTA, must be submitted to the competent national health authority and to independent ethics committees in each country in which a company intends to conduct clinical trials. Once the CTA is approved in accordance with a country's requirements and a company has received favorable ethics committee approval, clinical trial development may proceed in that country.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country, even though there is already some degree of legal harmonization in the European Union member states resulting from the national implementation of underlying E.U. legislation. In all cases, the clinical trials

must be conducted in accordance with the International Conference on Harmonization, or ICH, guidelines on GCP and other applicable regulatory requirements.

To obtain regulatory approval to place a drug on the market in the European Union, we must submit a marketing authorization application. This application is similar to the NDA in the United States, with the exception of, among other things, country-specific document requirements. All application procedures require an application in the common technical document, or CTD, format, which includes the submission of detailed information about the manufacturing and quality of the product, and non-clinical and clinical trial information. Drugs can be authorized in the European Union by using (i) the centralized authorization procedure, (ii) the mutual recognition procedure, (iii) the decentralized procedure or (iv) national authorization procedures.

The European Commission created the centralized procedure for the approval of human drugs to facilitate marketing authorizations that are valid throughout the European Union and, by extension (after national implementing decisions) in Iceland, Liechtenstein and Norway, which, together with the E.U. member states, comprise the European Economic Area, or EEA. Applicants file marketing authorization applications with the EMA, where they are reviewed by a relevant scientific committee, in most cases the Committee for Medicinal Products for Human Use, or CHMP. The EMA forwards CHMP opinions to the European Commission, which uses them as the basis for deciding whether to grant a marketing authorization. This procedure results in a single marketing authorization granted by the European Commission that is valid across the European Union, as well as in Iceland, Liechtenstein and Norway. The centralized procedure is compulsory for human drugs that are: (i) derived from biotechnology processes, such as genetic engineering, (ii) contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative diseases, autoimmune and other immune dysfunctions and viral diseases, (iii) officially designated "orphan drugs" (drugs used for rare human diseases) and (iv) advanced-therapy medicines, such as gene-therapy, somatic cell-therapy or tissue-engineered medicines. The centralized procedure may, at the voluntary request of the applicant, also be used for human drugs which do not fall within the above-mentioned categories if the CHMP agrees that (a) the human drug contains a new active substance not yet approved on November 20, 2005; (b) it constitutes a significant therapeutic, scientific or technical innovation or (c) authorization under the centralized procedure is in the interests of patients at the E.U. level.

Under the centralized procedure in the European Union, the maximum timeframe for the evaluation of a marketing authorization application by the EMA is 210 days (excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP), with adoption of the actual marketing authorization by the European Commission thereafter. Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest from the point of view of therapeutic innovation, defined by three cumulative criteria: the seriousness of the disease to be treated, the absence of an appropriate alternative therapeutic approach, and anticipation of exceptional high therapeutic benefit. In this circumstance, the EMA ensures that the evaluation for the opinion of the CHMP is completed within 150 days and the opinion issued thereafter.

For those medicinal products for which the centralized procedure is not available, the applicant must submit marketing authorization applications to the national medicines regulators through one of three procedures: (i) the mutual recognition procedure (which must be used if the product has already been authorized in at least one other E.U. member state, and in which the E.U. member states are required to grant an authorization recognizing the existing authorization in the other E.U. member state, unless they identify a serious risk to public health), (ii) the decentralized procedure (in which applications are submitted simultaneously in two or more E.U. member states) or (iii) national authorization procedures (which results in a marketing authorization in a single E.U. member state).

#### *Mutual Recognition Procedure*

The mutual recognition procedure, or MRP, for the approval of human drugs is an alternative approach to facilitate individual national marketing authorizations within the European Union. Basically, the MRP may be applied for all human drugs for which the centralized procedure is not obligatory. The MRP is applicable to the majority of conventional medicinal products and must be used if the product has already been authorized in one or more member states.



The characteristic of the MRP is that the procedure builds on an already—existing marketing authorization in a member state of the European Union that is used as a reference in order to obtain marketing authorizations in other E.U. member states. In the MRP, a marketing authorization for a drug already exists in one or more member states of the European Union and subsequently marketing authorization applications are made in other E.U. member states by referring to the initial marketing authorization. The member state in which the marketing authorization was first granted will then act as the reference member state. The member states where the marketing authorization is subsequently applied for act as concerned member states. The concerned member states are required to grant an authorization recognizing the existing authorization in the reference member state, unless they identify a serious risk to public health.

The MRP is based on the principle of the mutual recognition by E.U. member states of their respective national marketing authorizations. Based on a marketing authorization in the reference member state, the applicant may apply for marketing authorizations in other member states. In such case, the reference member state shall update its existing assessment report about the drug in 90 days. After the assessment is completed, copies of the report are sent to all member states, together with the approved summary of product characteristics, labeling and package leaflet. The concerned member states then have 90 days to recognize the decision of the reference member state and the summary of product characteristics, labeling and package leaflet. National marketing authorizations shall be granted within 30 days after acknowledgement of the agreement.

If any E.U. member state refuses to recognize the marketing authorization by the reference member state, on the grounds of potential serious risk to public health, the issue will be referred to a coordination group. Within a timeframe of 60 days, member states shall, within the coordination group, make all efforts to reach a consensus. If this fails, the procedure is submitted to an EMA scientific committee for arbitration. The opinion of this EMA Committee is then forwarded to the European Commission for the start of the decision making process. As in the centralized procedure, this process entails consulting various European Commission Directorates General and the Standing Committee on Human Medicinal Products.

#### *Data and Market Exclusivity in the European Union*

In the European Union, NCEs qualify for eight years of data exclusivity upon marketing authorization and an additional two years of market exclusivity. This data exclusivity, if granted, prevents regulatory authorities in the European Union from referencing the innovator's data to assess a generic (abbreviated) application for eight years, after which generic marketing authorization can be submitted, and the innovator's data may be referenced, but not approved for two years. The overall ten-year period will be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization (MA) holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies. Even if a compound is considered to be a NCE and the sponsor is able to gain the prescribed period of data exclusivity, another company nevertheless could also market another version of the drug if such company can complete a full MAA with a complete database of pharmaceutical test, preclinical studies and clinical trials and obtain marketing approval of its product.

#### *Data and Market Exclusivity in Japan*

Japan has no established system for data exclusivity or marketing exclusivity. However, the Pharmaceuticals Act of Japan (PAA) provides for a re-examination system after drug approval. This system imposes an obligation on the MA holder to continue to collect clinical data after market approval during a study period. The MA holder must apply for reexamination to the Minister of Health Labor and Welfare within three months of the expiration of the study period. During the study and reexamination period no generic drug may be approved, effectively providing a form of market exclusivity. The study period is determined by the drug category. The study period for an orphan drug is 10 years from MA, the study period for an NCE is eight years from MA, and for an improvement (new indication, formulation, etc.) the study period is four to six years from MA.

### *Patent Term Extension in Japan*

The term of a patent that covers the approved drug may be extended for the shorter of five years, or the period during which the patent could not be worked (exploited) due to obtaining regulatory approval. This period is calculated from the later of the patent registration date (grant date) or the clinical trial start date to the regulatory approval date.

### *Regulatory Exclusivity in China*

China has a six-year regulatory exclusivity period for NCE and orphan drugs, such as NB-01, NB-02 and Gemcabene, which begins at the date of market approval.

### *Pharmaceutical Coverage, Pricing and Reimbursement*

Sales of pharmaceutical products approved for marketing in the United States by the FDA will depend, in part, on the extent to which the costs of the products will be covered by third-party payers, such as government health programs, and commercial insurance and managed health care organizations. These third-party payers are increasingly challenging the prices charged for medical products and services. Additionally, the containment of health care costs has become a priority of federal and state governments, and the prices of drugs have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including price controls, utilization management and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our operating results. If these third-party payers do not consider our products to be cost-effective compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow Us to sell its products on a profitable basis.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, imposed requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries and included a major expansion of the prescription drug benefit under Medicare Part D. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Part D is available through both stand-alone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Parts A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee.

Government payment for some of the costs of prescription drugs may increase demand for products for which We receive marketing approval in the U.S. However, any negotiated prices for Our products covered by a Part D prescription drug plan will likely be lower than the prices We might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payers often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payers.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, collectively, the ACA, was enacted with the goal of expanding coverage for the uninsured while at the same time containing overall health care costs. With regard to pharmaceutical products, among other things, the ACA expanded and increased industry rebates for drugs covered under Medicaid programs and made changes to the coverage requirements under the Medicare Part D program. We still cannot fully predict the impact of the ACA on pharmaceutical companies as many of the ACA reforms require the promulgation of detailed regulations implementing the statutory provisions which has not yet been completed, and the Centers for Medicare & Medicaid Services has publicly announced that it is analyzing the ACA regulations and policies that have been issued to determine if changes should be made. In addition, although the United States Supreme Court has upheld the constitutionality of most of the ACA, some states have stated their intentions to not implement certain sections of the ACA and some members of



Congress and President Trump are still working to repeal the ACA. These challenges add to the uncertainty of the changes enacted as part of ACA.

In the United States, Medicare covers certain drug purchases by the elderly and eligible disabled people and introduced a reimbursement methodology based on average sales prices for physician-administered drugs. In addition, Medicare may limit the number of drugs that will be covered in any therapeutic class. Ongoing cost reduction initiatives and future laws could decrease the coverage and price that we will receive for any approved products. While Medicare beneficiaries are limited to most elderly and certain disabled individuals, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates.

Among the provisions of the ACA of importance to our product candidates are the following:

- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic products;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the Public Health Service Act's pharmaceutical pricing program;
- new requirements to report financial arrangements with physicians and teaching hospitals (i.e., the Federal Physician Payment Sunshine Act, which has since been expanded to cover additional specified healthcare providers);
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; 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.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we will receive for any approved product. Any reduction in payments from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products. The ACA also continues to be the subject of significant political controversy and legal challenges, making its continued implementation uncertain.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, some E.U. jurisdictions operate positive and negative list systems under which products 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 product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines but monitor and control company profits. Such differences in national pricing regimes may create price differentials between E.U. member states. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of Our products. Historically, products launched in the European Union do not follow price structures of the United States. In the European Union, the downward pressure on healthcare costs in general, particularly prescription medicines, has become intense. As a result, barriers to entry of new products are becoming increasingly high and patients are unlikely to use a drug product that is not reimbursed by their government.

## **Employees**

As of December 31, 2019, we had 12 full-time employees. Of these employees, nine were engaged in research and development and three were engaged in general and administrative functions. Eight of our employees are located in the United States, and four are located in South Korea. We have no collective bargaining agreements with our employees and have not experienced any work stoppages. We consider our relationships with our employees to be good.

## **Corporate Information**

NeuroBo was incorporated under the laws of the State of Delaware in July 2017 and completed the Merger with Gemphire on December 30, 2019. Our principal executive offices are located at 200 Berkeley Street, 19th Floor, Boston, Massachusetts, 02116. Our website address is [www.neurobopharma.com](http://www.neurobopharma.com). The information contained on, or that can be accessed through, our website is not a part of this report.

## ITEM 1A. RISK FACTORS

Our business, prospects, financial condition or results of operations could be materially adversely affected by any of the risks and uncertainties set forth below, as well as in any amendments or updates reflected in subsequent filings with the Securities and Exchange Commission (the “SEC”). In assessing these risks, you should also refer to other information contained in this report, including our financial statements and related notes.

### **Risks Related to our Operations and to Development, Marketing, Commercialization and Regulation of Our Product Candidates**

***We have incurred losses since inception, we anticipate that we will incur continued losses for the foreseeable future and there is substantial doubt about our ability to continue as a going concern for the full one-year period following the date of this report. We require additional financing to accomplish our long-term business plan and failure to obtain necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our operations.***

We have experienced net losses and negative cash flows from operating activities since our inception and have an accumulated deficit of \$36.9 million as of December 31, 2019. It is possible we will never generate revenue or profit.

As of December 31, 2019, we had cash and cash equivalents of \$13.9 million. Operating at the level of scientific activity described in “Management’s Discussion and Analysis of Financial Statements and Results of Operations – Overview - Recent Developments – Current Scientific Activity; Repurposing of NB-01”, we expect that our cash and cash equivalents will be adequate to fund operations through the end of December 2020. Accordingly, we will need to raise additional capital to fund continued operations at the current level beyond 2020. We have some ability to reduce costs further in 2020 by further curtailing the level of scientific activity planned for 2020, thereby potentially lengthening our operational window into the first quarter of 2021.

Although we are exploring financing opportunities and carefully monitoring the capital markets, we do not yet have any commitments for additional financing and may not be successful in our efforts to raise additional funds. There can be no assurances that additional financing will be available to us on satisfactory terms, or at all. If we are unable to raise sufficient additional capital (which is not assured at this time, particularly as a result of recent depressed capital market conditions), our long-term business plan may not be accomplished, and we may be forced to cease, reduce, or delay operations. For more information about our liquidity and capital resources, see Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources.”

The foregoing factors individually and collectively raise substantial doubt about our ability to continue as a going concern for the full one-year period following the date of this report. For more information, see “Management’s Discussion and Analysis of Financial Statements and Results of Operations – Overview - Recent Developments – Going Concern” and “Going Concern” under Note 1 to our audited financial statements which are included elsewhere in this report. The perception that we may not be able to continue as a going concern may cause others to choose not to deal with us due to concerns about our ability to meet our contractual obligations. If we are unable to continue as a going concern, investors could lose all or part of their investment in our Company.

***We have determined to postpone the initiation of Phase 3 clinical trials of NB-01 under present circumstances and we have terminated all of our agreements with contract research organizations related to NB-01. We may not be able to successfully develop NB-01 pursuant to other alternatives, including as an orphan drug or as a nutraceutical candidate.***

NB-01 has successfully completed two Phase 2 proof-of-concept clinical trials for PDN. However, in light of the present business environment including the impact of the COVID-19 disease that emerged in December 2019 as a global pandemic, we have determined that any attempt to conduct Phase 3 clinical trials for NB-01, as previously announced, would be difficult if not impossible in the short or medium term. To conserve financial resources, in the first quarter of 2020 we directed our contract research organization (“CRO”) partners and other vendors working on the Phase 3 clinical trials of NB-01, including Syneos Health, to cease all work and we gave notice of termination of our existing contract arrangements with each of them.

We are currently re-evaluating alternatives to bring the NB-01 asset to the market through a different regulatory pathway. Development of NB-01 as an orphan drug is among the alternatives we are considering, and we may conduct feasibility studies to identify a rare disease relevant to NB-01. Additionally, we are considering marketing the NB-01 product line as nutraceutical (non-pharmaceutical) products. There is no assurance that we will be able to pursue either alternative for NB-01.

Our ability to successfully develop NB-01 as an orphan drug would be subject to the following additional risks, among others:

- the results from different types of animal models could be inconsistent from the previous data we have;
- a limited number of potential participants could make clinical trials for NB-01 difficult;
- disparate locations of a limited number of potential participants could make clinical trials difficult; and
- batch-by-batch consistency is difficult to achieve in clinical trials with small numbers of participants.

Our ability to successfully develop NB-01 as a nutraceutical product would be subject to the following risks, among others:

- the future growth and profitability of NB-01 would depend in large part upon our ability to successfully hire personnel with requisite marketing expertise, the effectiveness and efficiency of our marketing efforts and our ability to select effective markets and media in which to market and advertise;
- our inability to properly manage, motivate and retain third party distributors for NB-01, as applicable, could have a material adverse effect on us;
- the success of NB-01 would likely be linked to the size and growth rate of the vitamin, mineral and dietary supplement market, and an adverse change in the size or growth rate of that market could have a material adverse effect on us; and
- unfavorable publicity or consumer perception of NB-01 and any similar products distributed by other companies could have a material adverse effect on us.

***We may not be able to successfully obtain regulatory or marketing approval for, or successfully commercialize, any of our product candidates.***

Although we currently have no drug product for sale and may never be able to develop marketable drug products, our business depends heavily on the successful clinical development (for our pharmaceutical drug products), regulatory approval and commercialization of our drug candidates.

The clinical trials of our product candidates are, and the manufacturing and marketing of our product candidates will be, subject to extensive and rigorous review and regulation by government authorities in the United States and in other countries where we intend to test and, if approved, market any product candidate. Before obtaining regulatory approvals

for the commercial sale of any product candidate as a pharmaceutical product, we must successfully meet a number of critical developmental milestones, including:

- developing dosages that will be well-tolerated, safe and effective;
- completing the development and scale-up to permit manufacture of our product candidates in commercial quantities and at acceptable costs;
- demonstrating through pivotal clinical trials that the product candidate is safe and effective in patients for the intended indication;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers; and
- obtaining and maintaining exclusive rights, including patent and trade secret protection and non-patent exclusivity for our product candidates.

The time necessary to achieve these developmental milestones for any individual product candidate is long and uncertain, and we may not successfully complete these milestones for any product candidates that we may develop.

We have not yet completed development of any product candidate. Moreover, both NB-01 and NB-02 are considered a “botanical drug product” by the FDA, which results in the drug candidate having unique features that must be taken into account during the drug development process. Botanical drug products may be heterogeneous in nature and may carry additional uncertainty about their active constituents in comparison to synthetic small-molecule drug products. Accordingly, the FDA may impose additional requirements on us in order to confirm that the final formulation of NB-01 or NB-02 is able to demonstrate the necessary therapeutic consistency to support the marketing of a safe and effective commercial drug product. The complexities of developing botanical drug products may increase the time and costs associated with the development of our product candidates.

In August 2018, the FDA, following submission of a two-year carcinogenicity study, requested additional preclinical studies, including a 13-week PPAR-alpha knockout mouse study with Gemcabene. The FDA stated that there could be no progression to the EOP2 meeting or commencement of the Phase 3 trials, which require more than 6 months of drug exposure, until the partial clinical hold was lifted. This request delayed the timeline for the EOP2 meeting and start of a Phase 3 trial by more than one and a half years. We are currently conducting all preclinical studies requested for resubmission of our application to the FDA to lift the clinical hold. We cannot assure you that the studies will be completed on time by third party vendors who are involved or that the results will prove satisfactory for the FDA to lift the hold. It is possible that the FDA may request additional studies and information prior to lifting the hold which would significantly delay the time and cost to initiating Phase 3 trials and future development of Gemcabene. If the FDA decisions further delay our clinical plans, this could jeopardize our ability to commercialize Gemcabene by April 2024, as required by the Pfizer Agreement. Finally, we cannot assure you that the partial clinical hold will ever be lifted, in which case Gemcabene will never receive NDA approval or be commercialized.

We are continuing to test and develop our product candidates and may explore possible design or formulation changes to address safety, efficacy, manufacturing efficiency and performance issues to the extent any arise. The design of a clinical trial may be able to determine whether its results will support approval of a product, and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced or completed. There is no assurance that we will be able to design and complete a clinical trial to support marketing approval. Moreover, nonclinical and clinical data are often susceptible to multiple interpretations and analyses. A number of companies in the pharmaceutical and biotechnology industries have experienced significant setbacks in advanced clinical trials, even after promising results in earlier trials.

We may not be able to complete development of any product candidates that demonstrate safety and efficacy and that will have a commercially reasonable treatment and storage period. If we are unable to complete development of NB-01, NB-02, Gemcabene or any other product candidates that we may develop, we will not be able to commercialize and earn revenue from them.

***The regulatory review and approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, including pursuant to the guidelines applicable to NB-01 and NB-02 as botanical drug products, and the guidelines applicable to Gemcabene, our business will be substantially harmed.***

Of the large number of drugs in development in the United States, only a small percentage receive FDA regulatory approval and are commercialized in the United States. We are not permitted to market NB-01, NB-02, Gemcabene or any other product candidate as a pharmaceutical drug in the United States until we receive approval of an NDA from the FDA, or in any foreign countries until we receive the requisite approval from such countries or jurisdictions, such as the marketing authorization application, or MAA, in the European Union from the European Medicines Agency, or EMA.

Successfully completing clinical trials and obtaining approval of an NDA is a complex, lengthy, expensive and uncertain process, and the FDA, or a comparable foreign regulatory authority, may delay, limit or deny approval of an NDA for many reasons, including, among others:

- disagreement with the design or implementation of our clinical trials;
- disagreement with the sufficiency of our clinical trials;
- failure to demonstrate the safety and efficacy of the product candidate for the proposed indications;
- failure to demonstrate that any clinical and other benefits of the product candidate outweigh their safety risks;
- a negative interpretation of the data from our nonclinical studies or clinical trials;
- deficiencies in the manufacturing or control processes or failure of third-party manufacturing facilities with which our contracts for clinical and commercial supplies to comply with current Good Manufacturing Practice requirements, or cGMPs;
- deficiencies in the harvesting and processing of botanical raw materials under Good Agricultural and Collection Processes, or GACPs, or the inability to demonstrate that the final product is capable of being therapeutically consistent, as applicable to botanical drug products, as applicable;
- insufficient data collected from clinical trials or changes in the approval requirements that render our nonclinical and clinical data insufficient to support the filing of an NDA or to obtain regulatory approval; or
- changes in clinical practice in or approved products available for the treatment of the target patient population that could have an impact on the indications that we are pursuing for our product candidates.

Further, the FDA has specific requirements and technical standards for botanical drugs, with which we will be obliged to comply in the clinical development of NB-01 and NB-02 as pharmaceutical drugs, including with respect to the quality and therapeutic consistency standards for the product candidate that will be used in clinical trials. We cannot assure you that it will be able to meet the standards to which it will be held for these purposes.

The FDA or a comparable foreign regulatory authority may also require more information, including additional nonclinical or clinical data to support approval, which may delay or prevent approval and our commercialization plans, or cause us to abandon the development program. Even if we obtain regulatory approval, our product candidates may be approved for fewer or more limited indications than we request, such approval may be contingent on the performance of costly post-marketing clinical trials, or we may not be allowed to include the labeling claims necessary or desirable for the successful commercialization of such product candidate.

***Our profits from Gemcabene sales will be limited pursuant to our CVR obligations, and we therefore, may, at any time and in our sole and absolute discretion, discontinue any and all further efforts to develop, divest or otherwise monetize Gemcabene.***

We have agreed to commit up to \$1 million to support the further development of Gemcabene through the quarter ending March 31, 2020 (the "Covenant End Date"). We do not have any obligation to develop Gemcabene, or to expend any funds or efforts with respect to Gemcabene, other than the aforementioned commitment, to fund, (i) a toxicity study, (ii) a related FDA submission designed to result in the release of the partial clinical hold with respect to Gemcabene, (iii) preparation for an end-of-phase 2 meeting with the FDA, and (iv) consulting costs for up to four former Gemphire employees to support such activities. The expected cost of such activities is based on estimates and assumptions that may prove to be inaccurate.

Our profits from Gemcabene sales will be limited pursuant to our CVR obligations. Under the terms of the CVR Agreement, CVR holders are entitled to 80% of the Gross Consideration (as defined in the CVR Agreement) received from the grant, sale or transfer of rights to Gemcabene.

If \$1 million is insufficient to fund the matters set forth above, we do not have any obligation to provide further funding. We may, at any time and in our sole and absolute discretion, discontinue any and all further efforts to develop, divest or otherwise monetize Gemcabene.

***The Phase 2a clinical trial of Gemcabene in Pediatric NAFLD was terminated by the Data and Safety Monitoring Board (DSMB) of the principal investigator following the occurrence of unanticipated problems. This trial termination and the unanticipated problems could have negative impacts on the clinical development of Gemcabene.***

On August 10, 2018, the DSMB at Emory University School of Medicine overseeing the non-company, investigator-led open label Phase 2a proof-of-concept trial evaluating Gemcabene in pediatric patients with non-alcoholic fatty liver disease (“NAFLD”) recommended that the trial be terminated due to unanticipated problems. Data on the first three patients who underwent 12 weeks of treatment showed that all three experienced an increase in liver fat content, as measured by MRI-PDFF. Two of the three patients also demonstrated increases in ALT; however, their baseline ALT levels were elevated prior to receiving Gemcabene. The increase in liver fat was deemed an unanticipated problem by the trial investigator because it was an unexpected consistent pattern of worsening of the disease, rather than improvement, creating risk to the patients, which the investigator believed was likely due to the drug. Six subjects had received study medication when the study was halted. Additional data that came to light subsequently showed that during the trial none of the three patients were fully compliant with taking Gemcabene and their life styles could have potentially impacted the findings. Subjects were instructed to self-administer the test-agent daily; however, compliance was significantly compromised as assessed by return of unused tablets and measurement of blood drug levels. All six subjects gained weight and had increased TGs during study treatment. In support of non-compliance, these findings are inconsistent with other Gemcabene trials, and as such, the risk for increased liver fat with Gemcabene treatment is unknown at this time. The six subjects who received Gemcabene were followed in a 12-month safety monitoring period post final-dose, which is now complete. During this follow-on reporting period there were no drug related adverse events reported. There was one serious non-related adverse event of hospitalization of subacute spinal cord infarction/embolism. No deaths or other SAEs were reported.

We cannot assure you that the unanticipated problems observed in the pediatric NAFLD trial will not be seen in future trials nor that serious adverse events (SAEs) will not occur in future trials. We also cannot assure you that the unanticipated problems observed in the pediatric NAFLD trial will not result in the FDA or other regulatory authorities requesting additional analyses of previously completed clinical trials, including the three Phase 2b trials in dyslipidemia completed in 2017 and 2018.

If Gemcabene is associated with adverse effects or undesirable side effects in preclinical testing or clinical trials or has characteristics that are unexpected in preclinical testing or clinical trials, Gemcabene could be less attractive to potential collaborators.

***Product candidates may cause undesirable side effects that could delay or prevent their marketing approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any, including marketing withdrawal.***

Undesirable side effects caused by any of our product candidates that we may develop or acquire could cause us or the FDA or other regulatory authorities to interrupt, delay or halt our clinical trials and could result in more restrictive labels or the delay or denial of marketing approval by the FDA or other regulatory authorities of such product candidates. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of these or other side effects. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. In addition, any drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate. If our product candidates receive marketing approval and we or others identify undesirable side effects caused by such product candidates (or any other similar drugs) after such approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such product candidates;
- regulatory authorities may require the addition of labeling statements, such as a "boxed" warning or a contraindication;
- we may be required to recall the product, change the way such product candidates are distributed or administered, conduct additional clinical trials or change the labeling of the product candidates;
- regulatory authorities may require a Risk Evaluation and Mitigation Strategy (REMS) plan to mitigate risks, which could include medication guides to be distributed to patients, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools;
- we may be subject to regulatory investigations and government enforcement actions;
- we may be subject to fines, injunctions or the imposition of civil or criminal penalties;
- we may decide to remove such product candidates from the marketplace after they are approved;
- the product may be rendered less competitive and sales may decrease;
- we could be sued and held liable for injury caused to individuals exposed to or taking its product candidates; and
- our reputation may suffer.

We believe that any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidates and could substantially increase the costs of commercializing our product candidates, if approved, and significantly impact our ability to successfully commercialize our product candidates and generate revenues.

***Delays in our clinical trials may lead to a delay in the submission of marketing approval applications and jeopardize our ability to potentially receive approvals and generate revenues from the sale of our products.***

We may experience delays in clinical trials. We do not know whether planned clinical trials will begin or enroll subjects on time, need to be redesigned or be completed on schedule, if at all. Clinical trials may be delayed, suspended or terminated for a variety of reasons, such as:

- delay or failure in reaching agreement with the FDA or a comparable foreign regulatory authority on a trial design that we are able to execute;
- delay or failure in obtaining authorization to commence a trial or inability to comply with conditions imposed by a regulatory authority regarding the scope or design of a clinical trial;
- inability, delay or failure in identifying and maintaining a sufficient number of trial sites, many of which may already be engaged in competing clinical trial programs;
- issues with the manufacture of drug substance for use in clinical trials;
- delay or failure in recruiting and enrolling suitable subjects to participate in a trial;
- delay or failure in having subjects complete a trial or return for post-treatment follow-up;
- clinical sites and investigators deviating from trial protocol, failing to conduct the trial in accordance with regulatory requirements, or dropping out of a trial;
- delay or failure in reaching agreement on acceptable terms with prospective clinical research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- delay or failure in obtaining institutional review board, or IRB, approval to conduct a clinical trial at each site;
- delays resulting from negative or equivocal findings of the Data Safety Monitoring Board, or DSMB, if any;
- ambiguous or negative results;
- decision by the FDA, a comparable foreign regulatory authority, or recommendation by a DSMB to suspend or terminate clinical trials at any time for safety issues or for any other reason;



- lack of adequate funding to continue the product development program; or
- changes in governmental regulations or requirements.

Any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may significantly harm our business, financial condition and prospects. In addition, 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 regulatory approval of our product candidates.

***The development of NB-01 is dependent upon securing sufficient quantities of Dioscorea Rhizome and Dioscoreae Nipponicae Rhizoma, which are two plant species native to China.***

The therapeutic components of our product candidate, NB-01, consists of *Dioscorea Rhizome* and *Dioscoreae Nipponicae Rhizoma*, which are cultivated in China and Korea. We currently secure these components exclusively from Dong-A ST. Our current supply agreement with Dong-A ST expires on September 28, 2023, unless extended by our mutual agreement with Dong-A ST. There can be no assurances that *Dioscorea Rhizome* and *Dioscoreae Nipponicae Rhizoma* will continue to grow in sufficient quantities to meet commercial supply requirements or that the countries from which we can secure *Dioscorea Rhizome* and *Dioscoreae Nipponicae Rhizoma* will continue to allow the exportation of these components. In the event we are no longer able to obtain these products from Dong-A ST, or in sufficient quantities, we may not be able to produce our proposed products and our business will be adversely affected.

Further, because *Dioscorea Rhizome* and *Dioscoreae Nipponicae Rhizoma* are imported from China and Korea, any trade policies or rules that impose conditions or restrictions on the importation of natural products from those regions may restrict or prevent the timely delivery of these products to us, which would adversely affect our business. We may also have difficulty importing these products as a result of the recent COVID-19 pandemic. See the risk factor below entitled “Our business is subject to risks arising from epidemic diseases, such as the recent COVID-19 pandemic.”

***We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.***

The development and commercialization of new drug products is highly competitive. We face competition with respect to our current product candidates, and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, if approved, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide.

Our competitors may develop products that are more effective, safer, more convenient or less costly than any that we are developing or that would render our product candidates obsolete or non-competitive. Our competitors may also render our technologies obsolete by advances in existing technological approaches or the development of new or different approaches, potentially eliminating the advantages in our drug discovery process. Our competitors may also obtain marketing approval from the FDA or other regulatory authorities for their products more rapidly than it may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market.

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

*NB-01 and NB-02*

There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of painful diabetic neuropathy and for the symptomatic and disease modifying treatment of neurodegenerative diseases, including Alzheimer's disease and tauopathies. Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach and others are based on entirely different approaches. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

NB-01 has been in clinical development for the treatment of painful diabetic neuropathy. We are also developing NB-02 for the symptomatic and disease modifying treatment of neurodegenerative diseases, including Alzheimer's disease and tauopathies. For painful diabetic neuropathy, there are no products currently marketed for disease modification, although there are products available to treat painful diabetic neuropathy. For Alzheimer's disease, current symptomatic treatments have limited effectiveness and no disease-modifying therapy is currently available. Some of the currently approved drug therapies are branded and subject to patent protection, and others are available on a generic basis. Many of these approved drugs are well-established therapies and are widely accepted by physicians, patients and third-party payors. Insurers and other third-party payors may also encourage the use of generic products.

*Gemcabene*

For Gemcabene, the lipid-lowering therapies market is highly competitive, dynamic and dominated by the sale of statin treatments including the cheaper generic versions of statins. Our success will depend, in part, on our ability to obtain a share of the market for our planned indications. Other pharmaceutical companies may develop lipid-lowering therapies for the same indications that compete with Gemcabene, if approved, that do not infringe the claims of our patents, pending patent applications or other proprietary rights, which could adversely affect our business and results of operations. Lipid-lowering therapies currently on the market that would compete with Gemcabene, if approved, are referenced in "Item 1—Business—Competition—*Gemcabene*" above.

This means that there is significant competition for investigational sites and patients to enroll in clinical studies. Additionally, since some drug candidates may be further along in development, approval of such drug candidates could lead to the FDA and other global health authorities to request and/or require changes to ongoing or future clinical trial designs that could impact timelines and cost.

The biomarkers and pathogenesis of NASH are less understood than the dyslipidemia market and for that reason there are many mechanisms of action under investigation to better understand how to effectively treat the disease. Currently accepted diagnosis of NASH is confirmed through a liver biopsy which is invasive, time consuming and costly. Future growth and evolution of the NASH market may rely on development of less invasive technologies to increase diagnoses rates to broaden the drug treated patient population. Several companies have late stage assets (Phase 3 or outcomes studies) well under way with projected market approval dates in NASH as soon as 2020/2021. For NASH, the market is currently evolving with no approved therapies for the indication across the globe. Current thought leader opinions are pointing to a multiple mechanistic approach to effectively treat NASH.

Several pharmaceutical companies have NASH therapies in development that may be approved for marketing in the United States or outside of the United States. Based on publicly available information, we believe the current therapies in development that would compete with Gemcabene in NASH include but are not limited to:

- OCALIVA (Obeticholic Acid) (FXR Agonist) being developed by Intercept Pharmaceuticals, Inc.;
- Elafibranor (PPAR Agonist) being developed by Genfit SA;
- Selonsertib (formerly GS-4997) (ASK1 Inhibitor) being developed by Gilead Sciences, Inc.;
- GS-0976 (ACC Inhibitor) being developed by Gilead Sciences, Inc.;
- GS-9674 (FXR Agonist) being developed by Gilead;
- Cenicriviroc (CVC) (CCR2/CCR5 Inhibitor) being developed by Tobira Therapeutics, Inc. (a wholly-owned subsidiary of Allergan plc);
- AKR-001 being developed by Akerio Therapeutics;

- NGM-282 being developed by MGM Biopharmaceuticals;
- PXL-770 being developed by Poxel;
- EDP-305 being developed by Enanta;
- Aramchol (Synthetic Fatty Acid/Bile Acid Conjugate) being developed by Galmed;
- MN-001 (5-Lipoxygenase Inhibitor) being developed by MediciNova;
- VK2809 (THR-Beta Agonist) being developed by Viking;
- BMS-986036 (GFG21) being developed by BMS;
- Lanifibranor (PPAR Pan Agonist) being developed by Inventiva;
- GR-MD-02 (Galectin-3 Inhibitor) being developed by Galectin Therapeutics; and
- MGL-3196 (THR Agonist) being developed by Madrigal.

***Our commercial success depends upon attaining significant market acceptance of our product candidates, if approved, among hospitals, physicians, patients and healthcare payors.***

Even if we obtain regulatory approval for any of our product candidates that we may develop or acquire in the future, the product may not gain market acceptance among hospitals, physicians, health care payors, patients and the medical community. Market acceptance of any of our product candidates for which we receive regulatory approval depends on a number of factors, including:

- the clinical indications for which the product candidate is approved;
- acceptance by major operators of hospitals, physicians and patients of the product candidate as a safe and effective treatment, particularly the ability of our product candidates to establish themselves as a new standard of care in the treatment paradigm for the indications that we are pursuing;
- the potential and perceived advantages of our product candidates over alternative treatments as compared to the relative costs of the product candidates and alternative treatments;
- the willingness of physicians to prescribe, and patients to take, a product candidate that is based on a botanical source;
- the prevalence and severity of any side effects with respect to our product candidates, and any elements that may be imposed by the FDA under a REMS program that could discourage market uptake of the products;
- the availability of adequate reimbursement and pricing for any approved products by third party payors and government authorities;
- inability of certain types of patients to take our product;
- demonstrated ability to treat patients and, if required by any applicable regulatory authority in connection with the approval for target indications, to provide patients with incremental cardiovascular disease benefits, as compared with other available therapies;
- the relative convenience and ease of administration of our product candidates, including as compared with other treatments available for approved indications;
- limitations or warnings contained in the labeling approved by the FDA;
- availability of alternative treatments already approved or expected to be commercially launched in the near future;
- the effectiveness of our sales and marketing strategies;
- guidelines and recommendations of organizations involved in research, treatment and prevention of various diseases that may advocate for alternative therapies;
- the willingness of patients to pay out-of-pocket in the absence of third-party coverage;
- physicians or patients may be reluctant to switch from existing therapies even if potentially more effective, safe or convenient;
- efficacy, safety, and potential advantages compared to alternative treatments;
- the ability to offer our product for sale at competitive prices;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- any restrictions on the use of our product together with other medications;
- interactions of our product with other medicines patients are taking; and
- the timing of market introduction of our products as well as competitive products.

There may be delays in getting our product candidates, if approved, on hospital or insurance formularies or limitations on coverages that may be available in the early stages of commercialization for newly approved drugs. If any of our product candidates are approved but fail to achieve market acceptance among hospitals, physicians, patients or health care payors, we will not be able to generate significant revenues, which would have a material adverse effect on our business, prospects, financial condition and results of operations.

***Even if we are able to commercialize a future pharmaceutical drug candidate, the profitability of such product candidate will likely depend in significant part on third-party reimbursement practices, which, if unfavorable, would harm our business.***

Our ability to commercialize a drug successfully will depend in part on the extent to which coverage and adequate reimbursement will be available from government health administration 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. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that coverage will be available for any product candidate that we commercialize and, if coverage is available, whether the level of reimbursement will be adequate. Assuming we obtain coverage for our product candidates, if approved, by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use a product candidate, if approved, unless coverage is provided and reimbursement is adequate to cover all or a significant portion of the cost of our products. Therefore, coverage and adequate reimbursement is critical to new product acceptance. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate for which we obtain marketing approval.

There may be significant delays in obtaining reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which a product candidate is approved by the FDA or similar regulatory authorities outside the United States. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers its costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for a new product, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the product and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost medicines and may be incorporated into existing payments for other services. Net prices for products 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 medicines from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. However, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payors in the United States. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Our inability to promptly obtain coverage and profitable payment rates from both government-funded and private payors for any approved products that we develop could have an adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

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

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any product that we may develop including any nutraceuticals. Product liability claims might be brought against us by patients, healthcare providers or others selling or

otherwise coming into contact with any of our products or future product candidate during product testing, manufacturing, marketing or sale. For example, we may be sued on allegations that a product candidate caused injury or that the product is otherwise unsuitable. 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, including as a result of interactions with alcohol or other drugs, negligence, strict liability, and a breach of warranties. Claims could also be asserted under state consumer protection acts.

Nutraceuticals are classified as food ingredients, dietary supplements, or natural health products, and, in most cases, are not necessarily subject to pre-market regulatory approval in the United States. However, if we pursue nutraceutical products, we may, in the future, be subject to various product liability claims, including, among others, claims alleging inadequate instructions for use or inadequate warnings concerning possible side effects and interactions with other substances.

If we cannot successfully defend against claims that our product caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidate that we are developing;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- increased FDA warnings on product labels;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- distraction of management's attention from our primary business;
- loss of revenue;
- the inability to commercialize any product candidate that we may develop;
- the removal of a product from the market; and
- increased insurance costs.

We do not currently maintain clinical trial insurance coverage for clinical trials. Even if we obtain such insurance in the future, it may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to obtain or maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

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

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

***If we are unable to establish sales and marketing capabilities to market and sell our product candidates, if they are approved for such marketing, we may be unable to generate any revenue.***

In order to market and sell our product candidates in development, we currently intend to build and develop our own sales, marketing and distribution operations. Although our management team has previous experience with such efforts for pharmaceutical products, there can be no assurance that we will be successful in building these operations. The establishment and development of our own commercial sales and marketing teams to discuss any products we may develop will be expensive and time-consuming and could delay any product launch.

If we decide to pursue NB-01 as a nutraceutical product, its success will depend significantly on sales and marketing activities. None of our management team has experience with nutraceutical marketing. Accordingly, our future ability to achieve sales and profits for NB-01 as a nutraceutical product would depend on our ability to attract, train, retain and motivate qualified personnel with sales and marketing expertise. There is a risk that we will be unable to attract, train, retain or motivate such qualified personnel, both near term or in the future, and the failure to do so may severely damage our prospects.

If we are unable to establish adequate sales, marketing and distribution capabilities, we may not be able to generate product revenue and may not become profitable. We will also be competing with many companies that currently have extensive and well-funded sales and marketing operations. If any of our product candidates are approved, we may be unable to compete successfully against these more established companies.

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

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of pharmaceutical products. To achieve commercial success for any approved product for which we retain sales and marketing responsibilities, we must either develop a sales and marketing organization or outsource these functions to other third parties. In the future, we may choose to build a focused sales and marketing infrastructure to sell some of our product candidates if and when they are approved.

There are risks involved both with establishing our own sales and marketing capabilities and with entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our product candidates on our own include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future pharmaceutical products; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

If we enter into arrangements with third parties to perform sales, marketing and distribution services, our product revenue or the profitability of these product revenue may be lower than if we were to market and sell any products that we develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell and market our product candidates or may be unable to do so on terms that are favorable to us. We may have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

***Any product candidate for which we obtain marketing approval could be subject to marketing restrictions or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products.***

Any pharmaceutical product candidate for which we obtain marketing approval will be subject to continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements, quality assurance and corresponding maintenance of records and documents and requirements regarding the distribution of samples to physicians and recordkeeping. Even if marketing approval of a product candidate is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the medicine. The FDA closely regulates the post-approval marketing and promotion of drugs to ensure that they are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use and if we do not market our products for their approved indications, we may be subject to enforcement action for off-label marketing and/or promotion.

In addition, later discovery of previously unknown problems with our products, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on such products, manufacturers or manufacturing processes;
- restrictions on the labeling, marketing, distribution or use of a product;
- requirements to conduct post-approval clinical trials;
- warning or untitled letters;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenue;
- suspension or withdrawal of marketing approvals for the drug products;
- refusal to permit the import or export of our products;
- product seizure; and
- injunctions or the imposition of civil or criminal penalties.

Any product marketed as a nutraceutical could also be subject to FDA review or adverse action and we could be forced to remove such product from the market.

***We or any potential collaborator may never receive regulatory approval to market our product candidates outside of the United States.***

The activities associated with the development and commercialization of pharmaceutical drugs are subject to comprehensive regulation by the FDA, other regulatory agencies in the United States and by comparable authorities in other countries. Failure to obtain regulatory approval for our product candidates will prevent us or any potential collaborator from commercializing our product candidates as pharmaceutical drugs. We have not received regulatory approval to market any of our product candidates in any jurisdiction, and we do not expect to obtain FDA or any other regulatory approvals to market any of our product candidates for the foreseeable future, if at all. The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon the type, complexity and novelty of the product candidates involved.

***We may seek to avail ourselves of mechanisms to expedite and/or reduce the cost for development or approval of any of our product candidates or product candidates we may pursue in the future, such as fast track designation or orphan drug designation, but such mechanisms may not actually lead to a faster or less expensive development or regulatory review or approval process.***

We may seek fast track designation, priority review, orphan drug designation, or accelerated approval for any other product candidate we may pursue in the future. For example, if a drug is intended for the treatment of a serious or life-



threatening condition and the drug demonstrates the potential to address unmet medical needs for this condition, the drug sponsor may apply for FDA fast track designation. However, the FDA has broad discretion with regard to these mechanisms, and even if we believe a particular product candidate is eligible for any such mechanism, it cannot assure you that the FDA would decide to grant it. Even if we obtain fast track or priority review designation or pursue an accelerated approval pathway, we may not experience a faster and/or less costly development process, review or approval compared to conventional FDA procedures. The FDA may withdraw a particular designation if it believes that the designation is no longer supported by data from our clinical development program.

***A breakthrough therapy designation by the FDA for our product candidates may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.***

We may seek a breakthrough designation from FDA for some of our product candidates. Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. The receipt of a breakthrough therapy designation for a product candidate may not result in a faster development process, review or approval compared to other drugs and does not assure ultimate approval of the designated product candidate by the FDA. In addition, even if one or more of our product candidates qualifies as breakthrough therapies, the FDA may later decide that the products no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

***Current and future legislation may increase the difficulty and cost to obtain marketing approval of and commercialize our product candidates and affect the prices we may obtain.***

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval. See the section titled "Item 1—Business—Government Regulation" above.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. New legislation or regulations may adversely affect the potential for our products as nutraceuticals. We cannot be sure whether additional legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals, if any, of our product candidates may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing conditions and other requirements.

***If we fail to maintain orphan drug exclusivity for Gemcabene for HoFH, we will have to rely on data and marketing exclusivity for HoFH that is not based on an orphan drug designation, if any, and on our intellectual property rights.***

In the United States, we have obtained orphan drug designation for Gemcabene for the treatment of HoFH. We may submit an application to the FDA for other orphan drug designations for Gemcabene such as for the treatment of TG greater than approximately 750 mg/dL (F) or familial partial lipodystrophy under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug intended to treat a rare disease or condition, defined, in part, as a patient population of fewer than 200,000 in the United States.

In the United States, the company that first obtains FDA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years. This orphan drug exclusivity prevents the FDA from approving another application, including a full NDA, to market the same drug for the same orphan indication, except in very limited circumstances. For purposes of small molecule drugs, the FDA defines "same drug" as a drug that contains the same active pharmaceutical ingredient (API) and is intended for the same use as the drug in question. 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, 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.

The EMA grants orphan drug designation to promote the development of products that may offer therapeutic benefits for life-threatening or chronically debilitating conditions affecting not more than five in 10,000 people in the European Union. Orphan drug designation from the EMA provides ten years of marketing exclusivity following drug approval, subject to reduction to six years if the designation criteria are no longer met.

Even if we are able to obtain and maintain orphan drug exclusivity for Gemcabene for HoFH, the designation may not effectively protect it from competition for HoFH because different drugs can be approved for the same condition. Moreover, even with an orphan drug designation, the FDA can subsequently approve a different formulation of the same API for the same condition if the FDA concludes that the later formulation of the API is safer, more effective or makes a major contribution to patient care.

***Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.***

In some countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of its product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

***Our relationships with healthcare providers and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings, among other penalties and consequences.***

Healthcare providers and third-party payors will play a primary role in the recommendation and prescription of any product candidate for which we obtain marketing approval. Our current and future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any product candidate for which we obtain marketing approval. Restrictions and obligations under applicable federal and state healthcare laws and regulations are noted in the section “Item 1—Business—Government Regulation” above. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to it, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion of products from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

***We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair its ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations which can harm its business.***

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and

national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other partners from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties for clinical trials outside of the United States to sell our products abroad and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other partners, even if it does not explicitly authorize or have actual knowledge of such activities. Our violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

***Our ability to use our NOLs to offset future taxable income may be subject to certain limitations.***

In general, under Section 382 of Internal Revenue Code of 1986, as amended (the "Code"), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its carryforwards to offset future taxable income. Our existing NOL carryforwards, or NOLs, may be subject to limitations arising from previous ownership changes, including in connection with the Merger. Future changes in our stock ownership, some of which are outside of our control, could result in further ownership changes under Section 382 of the Code. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing and any future NOLs could expire or otherwise be unavailable to offset future income tax liabilities.

We believe that we have undergone an ownership change as a result of the Merger. We have begun, but not completed, a preliminary study to confirm whether an ownership change has occurred as a result of the Merger, but have not conducted a study to assess whether there have been multiple ownership changes since inception due to the significant complexity and cost associated with such a study.

***The comprehensive tax reform bill could adversely affect our business and financial condition.***

On December 22, 2017, President Donald J. Trump signed into law the Tax Act that significantly reforms the Code. The Tax Act, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation on the deductibility of interest expense to 30% of adjusted earnings (except for certain small businesses), one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, reduction of U.S. tax on foreign earnings (subject to certain important exceptions), immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits. The overall impact of the Tax Act is immaterial to our business and financial condition. The impact of this tax reform on holders of our common stock is also uncertain and could be adverse. You are urged to consult with your legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our common stock.

***Tax matters, including the changes in corporate tax rates, disagreements with taxing authorities and imposition of new taxes could impact our results of operations and financial condition.***

We are subject to income and other taxes in the United States and our operations, plans and results are affected by tax and other initiatives. On December 22, 2017, comprehensive changes to the Code were signed into law, informally titled the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act included significant changes that could materially impact the taxation of corporations, like us, including among other things, changes to the corporate income tax rate, limitation of the tax deduction for interest expense to business interest income plus 30% of adjusted taxable income (except for certain small businesses), immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits (including changes to the orphan drug tax credit and changes to the deductibility of research and experimental expenditures that will be effective in the future). The Tax Act also included a limitation of the deduction for net operating losses ("NOLs") generated in tax years beginning after December 31, 2017 to 80% of current year taxable income and the general elimination of carrybacks of NOLs generated in taxable years ending after December 31, 2017. However, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") signed into law on March 27, 2020, provided that NOLs generated in a taxable

year beginning in 2018, 2019, or 2020, may now be carried back five years. In addition, the 80% taxable income limitation is temporarily removed, allowing NOLs to fully offset net taxable income. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the Tax Act and any future tax reform is uncertain and our business and financial condition could be adversely affected. The impact of the Tax Act and any future tax reform on holders of our common stock is likewise uncertain and could be adverse.

We are also subject to regular reviews, examinations, and audits by the IRS and other taxing authorities with respect to our taxes. Although we believe our tax estimates are reasonable, if a taxing authority disagrees with the positions we have taken, we could face additional tax liability, including interest and penalties. There can be no assurance that payment of such additional amounts upon final adjudication of any disputes will not have a material impact on our results of operations and financial position.

We also need to comply with new, evolving or revised tax laws and regulations. The enactment of or increases in tariffs, or other changes in the application or interpretation of the Tax Act, or on specific products that we may ultimately sell or with which our products compete, may have an adverse effect on our business or on our results of operations.

***Inadequate funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.***

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

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA and other government employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, upon completion of the merger and in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

***Federal legislation and actions by state and local governments may permit reimportation of drugs from foreign countries into the United States, including foreign countries where the drugs are sold at lower prices than in the United States, which could adversely affect our operating results.***

We may face competition for our product candidates, if approved, from cheaper alternatives sourced from foreign countries that have placed price controls on pharmaceutical products. The Medicare Modernization Act contains provisions that may change U.S. importation laws and expand pharmacists' and wholesalers' ability to import cheaper versions of an approved drug and competing products from Canada, where there are government price controls. These changes to U.S. importation laws will not take effect unless and until the Secretary of Health and Human Services certifies that the changes will pose no additional risk to the public's health and safety and will result in a significant reduction in the cost of products to consumers. The Secretary of Health and Human Services has so far declined to approve a reimportation plan. Proponents of drug reimportation may attempt to pass legislation that would directly allow reimportation under certain circumstances. Legislation or regulations allowing the reimportation of drugs, if enacted, could decrease the price we receive for any product we may develop and adversely affect our future revenues and prospects for profitability.

## **Risks Related to Dependence on Third Parties**

***We have relied and will rely on third-party clinical research organizations (CROs) to conduct our preclinical studies and clinical trials. If these CROs do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.***

We have relied upon and plan to continue to rely upon CROs and clinical data management organizations to monitor and manage data for our ongoing preclinical and clinical programs. Although we control only certain aspects of their activities, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol and legal, regulatory and scientific standards, and our reliance on the CROs does not relieve us of our regulatory responsibilities. We also rely on third parties to conduct our preclinical studies in accordance with Good Laboratory Practice, or GLP, requirements and the Laboratory Animal Welfare Act of 1966 requirements. We, our CROs and our clinical trial sites are required to comply with regulations and current Good Clinical Practices, or GCP, and comparable foreign requirements to ensure that the health, safety and rights of patients are protected in clinical trials, and that data integrity is assured. Regulatory authorities ensure compliance with GCP requirements through periodic inspections of trial sponsors and trial sites. If we, any of our CROs or our clinical trial sites fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials or a specific site may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications.

Our CROs are not our employees, and except for remedies available to us under our agreements with such CROs, we cannot control whether or not they devote sufficient time and resources to our ongoing clinical and preclinical programs. If CROs do not successfully carry out their contractual obligations or meet expected timelines or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

***We rely on third parties to manufacture our product candidates and preclinical and clinical drug supplies.***

We have no experience manufacturing our product candidates on a large clinical or commercial scale and have no manufacturing facility. We are currently dependent on Dong-A ST as our sole third party manufacturer for the manufacture of NB-01. We rely completely on third parties to supply and manufacture our preclinical and clinical drug supplies for Gemcabene, and we intend to rely on third parties to produce commercial supplies of Gemcabene.

We do not own or operate facilities for the manufacture of NB-01 or Gemcabene. We currently have no plans to build our own clinical or commercial scale manufacturing capabilities. We currently work exclusively with Dong-A ST as the sole manufacturer for the production of NB-01 and rely completely on third parties to supply and manufacture our preclinical and clinical drug supplies for Gemcabene. To meet our projected needs for clinical supplies to support our activities through regulatory approval and commercial manufacturing, Dong-A ST or our other third party providers will need to provide sufficient scale of production for these projected needs. If any issues arise in the manufacturing and we are unable to arrange for alternative third-party manufacturing sources, we are unable to find an alternative third party capable of reproducing the existing manufacturing method or we are unable to do so on commercially reasonable terms or in a timely manner, we may not be able to complete development of our product candidates, or market or distribute them.

In addition, under FDA's guidelines for botanical drug products, the harvesting and processing of the botanical raw materials that are the basis of our product candidates must be done in compliance with Good Agricultural and Collection Processes, or GACPs. We are relying on Dong-A ST and other third parties to ensure that their practices comply with applicable GACPs.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured our product candidates and preclinical and clinical drug supplies, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control (including a failure to synthesize and manufacture our product candidates or any products that we may eventually commercialize in accordance with our specifications);
- the possibility of termination or nonrenewal of the agreement by the third party, based on our own business priorities, at a time that is costly or damaging to us;
- delay in, or failure to obtain, regulatory approval of any of our product candidates because of the failure by our third-party manufacturer to comply with cGMP or failure to scale up manufacturing processes; and
- current manufacturer and any future manufacturers may not be able to manufacture our product candidates at a cost or in quantities or in a timely manner necessary to make commercially successful products.

If third-party manufacturers do not successfully carry out their contractual obligations or meet expected timelines or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

***We may engage in future acquisitions or in-licenses of technology that could disrupt our business, cause dilution to the combined organization's stockholders and harm our financial condition and operating results.***

While we currently have no specific plans to acquire any other businesses or in-license any additional products or technology, we may, in the future, make acquisitions or licenses of, or investments in, companies, products or technologies that we believe are a strategic or commercial fit with its current product candidates and business or otherwise offer opportunities for us. In connection with these acquisitions or investments, the combined organization may:

- issue stock that would dilute its stockholders' percentage of ownership;
- expend cash;
- incur debt and assume liabilities; and
- incur amortization expenses related to intangible assets or incur large and immediate write-offs.

We also may be unable to find suitable acquisition or license candidates and we may not be able to complete acquisitions or licenses on favorable terms, if at all. If we do complete an acquisition or license, we cannot assure you that it will ultimately strengthen our competitive position or that it will not be viewed negatively by customers, financial markets or investors. Further, future acquisitions or licenses could also pose numerous additional risks to our operations, including:

- problems integrating the purchased or licensed business, products or technologies;
- increases to our expenses;
- the failure to have discovered undisclosed liabilities of the acquired or licensed asset or company;
- diversion of management's attention from their day-to-day responsibilities;
- harm to our operating results or financial condition;
- entrance into markets in which we have limited or no prior experience; and
- potential loss of key employees, particularly those of the acquired entity.

We may not be able to complete one or more acquisitions or effectively integrate the operations, products or personnel gained through any such acquisition without a material adverse effect on our business, financial condition and results of operations.

***We may form or seek strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.***

We may form or seek strategic alliances, create 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 our products and any future product candidates that we may develop. Any strategic alliance or collaboration may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders or disrupt our management and business. Our likely collaborators include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our products or any future product candidate. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements. We cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction.

Collaborations involving or product candidates or any future product candidate 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 not perform their obligations as expected;
- collaborators may not pursue development and commercialization or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive;
- a collaborator with marketing and distribution rights to one or more product candidates may not commit sufficient resources to the marketing and distribution of any such product candidate;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our product candidate or that result in costly litigation or arbitration that diverts management's attention and resources;
- we may lose certain valuable rights under circumstances identified in its collaborations, including if it undergoes a change of control;
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates;
- collaborators may learn about our discoveries and use this knowledge to compete with us in the future;
- the results of collaborators' preclinical or clinical studies could harm or impair other development programs;
- there may be conflicts between different collaborators that could negatively affect those collaborations and potentially others;
- the number and type of our collaborations could adversely affect our attractiveness to future collaborators or acquirers;
- collaboration agreements may not lead to development or commercialization of our product candidate in the most efficient manner or at all. If our present or future collaborator 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; and
- collaborators may be unable to obtain the necessary marketing approvals.

If future collaboration partners fail to develop or effectively commercialize our product candidates or any future product candidate for any of these reasons, such product candidate may not be approved for sale and our sales of such product candidate, if approved, may be limited, which would have an adverse effect on our operating results and financial condition.



***If we are not able to establish new collaborations on commercially reasonable terms, we may have to alter our development and commercialization plans.***

We may selectively seek additional third-party collaborators for the development and commercialization of our product candidates. Our likely collaborators for any collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenue from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

We may be restricted under existing collaboration agreements from entering into future agreements on certain terms with potential collaborators. Collaborations are complex and time-consuming to negotiate and document. 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 product candidate for which we are seeking to collaborate, reduce or delay our development program or one or more of our other development programs, delay our 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 product candidate or bring it to market and generate product revenue.

***Our employees, principal investigators, CROs and consultants may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have a material adverse effect on our business.***

We are exposed to the risk that our employees, principal investigators, CROs and consultants may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include failures to comply with FDA regulations or similar regulations of comparable foreign regulatory authorities, to provide accurate information to the FDA or comparable foreign regulatory authorities, to comply with manufacturing standards we have established, to comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable foreign regulatory authorities, to report financial information or data accurately or to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee or third-party misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity, such as employee training, may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending such action or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

### **Risks Related to Intellectual Property**

***If we are unable to obtain and maintain sufficient intellectual property rights, our competitive position could be harmed.***

We depend on our ability to protect our proprietary technology. We rely on trade secret, patent, copyright and trademark laws, and confidentiality, licensing and other agreements with employees and third parties, all of which offer only

limited protection. Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our proprietary technology and products. Where we have the right to do so under our license agreements, we seek to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and products that are important to our business.

The patent positions of biotechnology and pharmaceutical companies generally are highly uncertain, involve complex legal and factual questions and have in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patents, including those patent rights licensed to us by third parties, are highly uncertain.

The steps we have taken to police and protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, both inside and outside the United States. The rights already granted under any of our currently issued patents and those that may be granted under future issued patents may not provide us with the proprietary protection or competitive advantages that we are seeking. If we are unable to obtain and maintain patent protection for our technology and products, or if the scope of the patent protection obtained is not sufficient, our competitors could develop and commercialize technology and products similar or superior to ours, and our ability to successfully commercialize our technology and products may be adversely affected.

With respect to patent rights, we do not know whether any of our pending patent applications for any of our product candidates will result in the issuance of patents that protect our technology or products, or which will effectively prevent others from commercializing competitive technologies and products. Our pending applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. Further, the examination process may require us or our licensors to narrow the claims, which may limit the scope of patent protection that may be obtained. Although our license agreement with Dong-A ST includes a number of issued patents that are exclusively licensed to us, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, issued patents that we own or have licensed from third parties may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in the loss of patent protection, the narrowing of claims in such patents, or the invalidity or unenforceability of such patents, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection for our technology and products. Protecting against the unauthorized use of our patented technology, trademarks and other intellectual property rights is expensive, difficult and may, in some cases, not be possible. In some cases, it may be difficult or impossible to detect third party infringement or misappropriation of our intellectual property rights, even in relation to issued patent claims, and proving any such infringement may be even more difficult.

***Laws and rulings by U.S. courts make it difficult to predict how patents will be issued or enforced in the biotechnology industry.***

Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. There have been numerous changes to the patent laws and to the rules of the United States Patent and Trademark Office, or USPTO, which may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the Leahy-Smith America Invents Act, which was signed into law in 2011, includes a transition from a "first-to-invent" system to a "first-to-file" system, and changes the way issued patents are challenged. Certain changes, such as the institution of inter partes review proceedings, came into effect on September 16, 2012. Substantive changes to patent law associated with the America Invents Act may affect our ability to obtain patents, and, if obtained, to enforce or defend them in litigation or post-grant proceedings, all of which could harm our business.

Furthermore, the patent positions of companies engaged in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. Two cases involving diagnostic method claims and "gene patents" have been decided by the Supreme Court. On March 20, 2012, the Supreme Court issued a decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, or *Prometheus*, a case involving patent claims directed to measuring a metabolic product in a patient to optimize a drug dosage amount for the patient. According to the Supreme Court, the addition of well-understood, routine or conventional activity such as "administering" or "determining" steps was not enough to transform an otherwise patent ineligible natural phenomenon into patent eligible subject matter. On July 3, 2012, the USPTO issued guidance indicating that process claims directed to a law of nature, a natural phenomenon or an abstract

idea that do not include additional elements or steps that integrate the natural principle into the claimed invention such that the natural principle is practically applied and the claim amounts to significantly more than the natural principle itself should be rejected as directed to non-statutory subject matter. On June 13, 2013, the Supreme Court issued its decision in *Association for Molecular Pathology v. Myriad Genetics, Inc.*, or *Myriad*, a case involving patent claims held by Myriad Genetics, Inc. relating to the breast cancer susceptibility genes BRCA1 and BRCA2. Myriad held that isolated segments of naturally occurring DNA, such as the DNA constituting the BRCA1 and BRCA2 genes, is not patent eligible subject matter, but that complementary DNA, which is an artificial construct that may be created from RNA transcripts of genes, may be patent eligible.

We cannot assure you that our current patent protection and our efforts to seek patent protection for our technology and products will not be negatively impacted by the decisions described above, rulings in other cases or changes in guidance or procedures issued by the USPTO.

Moreover, although the Supreme Court has held in *Myriad* that isolated segments of naturally occurring DNA are not patent-eligible subject matter, certain third parties could allege that activities that we may undertake infringe other gene-related patent claims, and we may deem it necessary to defend against these claims by asserting non-infringement and/or invalidity positions, or pay to obtain a license to these claims. In any of the foregoing or in other situations involving third-party intellectual property rights, if we are unsuccessful in defending against claims of patent infringement, we could be forced to pay damages or be subjected to an injunction that would prevent us from utilizing the patented subject matter. Such outcomes could harm our business.

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

In jurisdictions where we have not obtained patent protection, competitors may use our intellectual property to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but where it is more difficult to enforce a patent as compared to the U.S. competitor products may compete with our product candidates, if approved, or any future product candidate in jurisdictions where we do not have issued or granted patents or where we issued or granted patent claims or other intellectual property rights are not sufficient to prevent competitor activities in these jurisdictions. The legal systems of certain countries, particularly certain developing countries, make it difficult to enforce patents and such countries may not recognize other types of intellectual property protection, particularly that relating to pharmaceuticals. This could make it difficult for us to prevent the infringement of its patents or marketing of competing products in violation of our proprietary rights generally in certain jurisdictions. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert its efforts and attention from other aspects of our business.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws in the United States, and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. If we, or our licensors, encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished and we may face additional competition from others in those jurisdictions. Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we, or any of our licensors, are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position in the relevant jurisdiction may be impaired and our business and results of operations may be adversely affected.

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

Competitors may infringe our patents and other intellectual property rights. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time consuming. In addition, in an infringement proceeding, a court may decide that our patent is invalid or unenforceable, or may refuse to stop the other party from using the technology on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted

narrowly. 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. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded.

Litigation proceedings may fail and, even if successful, may result in substantial costs and distraction of our management and other employees. We may not be able to prevent, alone or with its collaborators, misappropriation of its proprietary rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

***We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time consuming and unsuccessful.***

In addition to the possibility of litigation relating to infringement claims asserted against us, we may become a party to other patent litigation and other proceedings, including inter partes review proceedings, post-grant review proceedings, derivation proceedings declared by the USPTO and similar proceedings in foreign countries, regarding intellectual property rights with respect to our current or future technologies or product candidates or products. The cost to us of any patent litigation or other proceeding, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Patent litigation and other proceedings may also absorb significant management time. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could impair our ability to compete in the marketplace.

Competitors may infringe or otherwise violate our intellectual property, including patents that may issue to or be licensed by us. As a result, we may be required to file claims in an effort to stop third-party infringement or unauthorized use. Any such claims could provoke these parties to assert counterclaims against us, including claims alleging that we infringe their patents or other intellectual property rights. This can be prohibitively expensive, particularly for a company of our size, and time-consuming, and even if we are successful, any award of monetary damages or other remedy we may receive may not be commercially valuable. In addition, in an infringement proceeding, a court may decide that our asserted intellectual property is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our intellectual property does not cover its technology. An adverse determination in any litigation or defense proceedings could put our intellectual property at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

If the breadth or strength of our patent or other intellectual property rights is compromised or threatened, it could allow third parties to commercialize our technology or products or result in our inability to commercialize our technology and products without infringing third-party intellectual property rights. Further, third parties may be dissuaded from collaborating with us.

Interference or derivation proceedings brought by the USPTO or its foreign counterparts may be necessary to determine the priority of inventions with respect to our patent applications, and we may also become involved in other proceedings, such as re-examination proceedings, before the USPTO or its foreign counterparts. Due to the substantial competition in the pharmaceutical space, the number of such proceedings may increase. This could delay the prosecution of our pending patent applications or impact the validity and enforceability of any future patents that we may obtain. In addition, any such litigation, submission or proceeding may be resolved adversely to us and, even if successful, may result in substantial costs and distraction to our management.

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. Moreover, intellectual property law relating to the fields in which we operate is still evolving and, consequently, patent and other intellectual property positions in our industry are subject to change and are often uncertain. We may not prevail in any of these suits or other efforts to protect its technology, and the damages or other

remedies awarded, if any, may not be commercially valuable. During the course of this type of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, the market price for the combined organization's common stock could be significantly harmed.

***Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.***

Our commercial success depends upon our ability to develop, manufacture, market and sell our product candidates, and to use our proprietary technologies without infringing the proprietary rights of third parties. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology, including interference and various post grant proceedings before the USPTO or non-U.S. opposition proceedings. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future.

As a result of any such infringement claims, or to avoid potential claims, we may choose or be compelled to seek intellectual property licenses from third parties. These licenses may not be available on acceptable terms, or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us likely would be nonexclusive, which would mean that our competitors also could obtain licenses to the same intellectual property. Ultimately, we could be prevented from commercializing a product candidate or technology or be forced to cease some aspect of our business operations if, as a result of actual or threatened infringement claims, we are unable to enter into licenses of the relevant intellectual property on acceptable terms. Further, if we attempt to modify a product candidate or technology or to develop alternative methods or products in response to infringement claims or to avoid potential claims, we could incur substantial costs, encounter delays in product introductions or interruptions in sales. Ultimately, such efforts could be unsuccessful.

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

Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming and is likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments 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 and negatively impact our ability to raise additional funds. 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 adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating or from successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

***We may be subject to damages resulting from claims that our employees or we have wrongfully used or disclosed alleged trade secrets of their former employers.***

Our employees and consultants have been previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we are not aware of any claims currently pending against us, we may be subject to claims that these employees, or we have, inadvertently or otherwise used or disclosed trade secrets or other proprietary information or intellectual property of the former employers of our employees. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation

could result in substantial costs and be a distraction to management. If we fail in defending such claims, in addition to paying money claims, we may lose valuable intellectual property rights or personnel. A loss of key personnel or their work product could hamper or prevent our ability to commercialize product candidates, which would adversely affect our commercial development efforts.

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

In addition to seeking patents for some of our technologies and product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality, non-competition, non-solicitation, and invention assignment agreements with our employees and consultants that obligate them to assign to us any inventions developed in the course of their work for us. However, we cannot guarantee that we have executed these agreements with each party that may have or have had access to our trade secrets or that the agreements we have executed will provide adequate protection. 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 seek patent protection on technology relating to our product candidates or obtain adequate remedies for such breaches. As a result, we may be forced to bring claims against third parties, or defend claims that they bring against us, to determine ownership of what we regard as our intellectual property. Monitoring unauthorized disclosure is difficult and we do not know whether the procedures that we have followed to prevent such disclosure are or will be adequate. 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 may be less willing or unwilling to protect trade secrets. If any of the technology or information that we protect as trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to, or independently developed by, a competitor, our competitive position would be harmed.

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

Periodic maintenance fees on any issued patent are due to be paid to the USPTO, and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other requirements during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our licensors fail to maintain the patents and patent applications covering our product candidates, our competitors might be able to enter the market, which would have a material adverse effect on our business.

***Intellectual property rights do not necessarily address all potential threats to our competitive advantage.***

The degree of future protection 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 product candidates that are similar to our candidates but that are not covered by the claims of the patents that we own or have exclusively licensed;
- we or our 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 own or have exclusively licensed;



- we or our future licensors or collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or have exclusively licensed may be held invalid or unenforceable, 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; and
- the patents of others may have an adverse effect on our business.

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

### **Risks Related Operations, Employee Matters and Managing Growth**

#### ***Our business is subject to risks arising from epidemic diseases, such as the recent COVID-19 pandemic.***

The recent outbreak of COVID-19 disease, which has been declared by the World Health Organization to be a pandemic, has spread across the globe and is impacting worldwide economic activity. A pandemic, including COVID-19, or other public health epidemic poses the risk that we or our employees, contractors, suppliers, and other partners may be prevented from conducting business activities for an indefinite period of time, including due to spread of the disease within these groups or due to shutdowns that may be requested or mandated by governmental authorities. While it is not possible at this time to estimate the impact that COVID-19 could have on our business, the continued spread of COVID-19 and the measures taken by the governments of countries affected could disrupt the supply chain and the manufacture or shipment of both drug substance and finished drug product for our product candidates for preclinical testing and clinical trials and adversely impact our business, financial condition or results of operations. We often attend and present updates at various medical and investor conferences throughout the year. The COVID-19 pandemic has caused, and is likely to continue to cause, cancellations or reduced attendance of these conferences and we may need to seek alternate methods to present clinical updates and to engage with the medical and investment communities. The spread of COVID-19 may also slow potential enrollment of clinical trials and reduce the number of eligible patients for our clinical trials. The COVID-19 pandemic and mitigation measures may also have an adverse impact on global economic conditions which could have an adverse effect on our business and financial condition and our potential to conduct financings on terms acceptable to us, if at all. The extent to which the COVID-19 pandemic impacts our results will depend on future developments that are highly uncertain and cannot be predicted, including new information that may emerge concerning the severity of the virus and the actions to contain its impact.

#### ***We currently have a limited number of employees and our future success depends on our ability to retain our executive officers and to attract, retain and motivate qualified personnel.***

Because of the specialized scientific nature of our business, we rely heavily on our ability to attract and retain qualified scientific, technical and managerial personnel. We are highly dependent upon current members of our management team. Our employment relationships with our senior executives are at-will and do not prevent management from terminating their employment with us at any time by providing the requisite advance notice. We intend to increase our technical and management staff as needs arise and supporting resources become available, but the loss of one or more of our senior executive officers could be detrimental to us if we cannot recruit suitable replacements in a timely manner. The competition for qualified personnel in the pharmaceutical field is intense and as a result, we may be unable to continue to attract and retain qualified personnel necessary for the development of our business or to recruit suitable replacement personnel.

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

As of December 31, 2019, we had 12 full-time employees. As our development and commercialization plans and strategies develop, or as a result of any future acquisitions, we will need additional managerial, operational,



development, sales, marketing, financial and other resources. Our management, personnel and systems currently in place will not be adequate to support our future growth. Future growth would impose significant added responsibilities on our employees, including:

- managing our clinical trials effectively;
- identifying, recruiting, maintaining, motivating and integrating additional employees;
- managing our internal development efforts effectively while complying with our contractual obligations to licensors, contractors and other third parties;
- improving our managerial, development, operational and finance systems; and
- expanding our facilities.

As our operations expand, we will need to manage additional relationships with various strategic partners, suppliers and other third parties. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to manage our development efforts and clinical trials effectively and hire, train and integrate additional management, administrative, research and development, and sales and marketing personnel. We may not be able to accomplish these tasks, and our failure to accomplish any of them could prevent us from successfully growing the company.

***We intend to market our product candidates outside of the United States, and if we do, we will be subject to the risks of doing business outside of the United States.***

Because we intend to market our product candidates, if approved, outside of the United States, our business is subject to risks associated with doing business outside of the United States. Accordingly, our business and financial results in the future could be adversely affected due to a variety of factors, including:

- failure to develop an international sales, marketing and distribution system for our products;
- changes in a specific country's or region's political and cultural climate or economic condition;
- unexpected changes in foreign laws and regulatory requirements;
- difficulty of effective enforcement of contractual provisions in local jurisdictions;
- inadequate intellectual property protection in foreign countries;
- inadequate data protection against unfair commercial use;
- trade-protection measures, import or export licensing requirements such as Export Administration Regulations promulgated by the United States Department of Commerce and fines, penalties or suspension or revocation of export privileges;
- the effects of applicable foreign tax structures and potentially adverse tax consequences; and
- significant adverse changes in foreign currency exchange rates.

***Our business and operations would suffer in the event of system failures or unplanned events.***

Despite the implementation of security measures, our internal computer systems and those of our current and future contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we are not aware of any such material system failure, accident 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 regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

Furthermore, any unplanned event, such as flood, fire, explosion, tornadoes, earthquake, extreme weather condition, medical epidemics, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize the facilities, may have an adverse effect on our ability to operate the business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss

of access to these facilities may result in increased costs, delays in the development of our product candidates or interruption of our business operations.

***We rely significantly on information technology and any failure, inadequacy, interruption or security lapse of that technology or loss of data, including any cyber security incidents, could compromise sensitive information related to our business, prevent us from accessing critical information or expose us to liability which could harm our ability to operate our business effectively and adversely affect our business and reputation.***

In the ordinary course of our business, our contract research organizations and other third parties on which we rely collect and store sensitive data, including legally protected patient health information, personally identifiable information about our employees, intellectual property, and proprietary business information. We manage and maintain our applications and data utilizing on-site systems. These applications and data encompass a wide variety of business-critical information, including research and development information and business and financial information.

The secure processing, storage, maintenance and transmission of this critical information is vital to our operations and business strategy. Despite the implementation of security measures, our internal computer systems and those of third parties with which we contract are vulnerable to damage from cyber-attacks, computer viruses, breaches, unauthorized access, interruptions due to employee error or malfeasance or other disruptions, or damage from natural disasters, terrorism, war and telecommunication and electrical failures. Any such event could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. We have measures in place that are designed to detect and respond to such security incidents and breaches of privacy and security mandates. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, government enforcement actions and regulatory penalties. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to conduct research, development and commercialization activities, process and prepare company financial information, manage various general and administrative aspects of our business and damage our reputation, in addition to possibly requiring substantial expenditures of resources to remedy, any of which could adversely affect our business. The loss of clinical trial data could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. In addition, there can be no assurance that we will promptly detect any such disruption or security breach, if at all. 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 our research, development and commercialization efforts could be delayed.

***The pharmaceutical industry is highly competitive and is subject to rapid and significant technological change, which could render our technologies and products obsolete or uncompetitive.***

The pharmaceutical industry is highly competitive and is subject to rapid and significant technological change, which could render certain of our products obsolete or uncompetitive. This is particularly true in the development of therapeutics for indications where new products and combinations of products are rapidly being developed that change the treatment paradigm for patients. There is no assurance that our product candidates will be the most effective, have the best safety profile, be the first to market, or be the most economical to make or use. The introduction of competitive therapies as alternatives to our product candidates could dramatically reduce the value of those development projects or chances of successfully commercializing those product candidates, which could have a material adverse effect on our long-term financial success.

We will compete with companies in the United States and internationally, including major pharmaceutical and chemical companies, specialized CROs, research and development firms, universities and other research institutions. Many of our competitors have greater financial resources and selling and marketing capabilities, greater experience in clinical testing and human clinical trials of pharmaceutical products and greater experience in obtaining FDA and other regulatory approvals than we do. In addition, some of our competitors may have lower development and manufacturing costs.

## **Risks Related to Common Stock**

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

The trading price of our common stock is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in this "Risk Factors" section, these factors include:

- adverse results or delays in preclinical studies, clinical trials, regulatory decisions or the development status of our product candidates or any product candidates we may pursue in the future;
- our ability to raise sufficient additional funds necessary for the continued development of our product candidates whether through potential collaborative, partnering or other strategic arrangements or otherwise;
- our ability to realize any value from Gemcabene, particularly in light of the partial clinical hold and the terminated NAFLD trial;
- the terms and timing of any future collaborative, licensing or other strategic arrangements that we may establish;
- uncertainties created by our future management turnover;
- our inability to comply with the minimum listing requirements of the Nasdaq Stock Market LLC;
- the timing of achievement of, or failure to achieve, our, or any potential collaborator's clinical, regulatory and other milestones, such as the commencement of clinical development, the completion of a clinical trial or the receipt of regulatory approval;
- decisions to initiate a clinical trial, not initiate a clinical trial, or terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval for our product candidates or regulatory actions requiring or leading to a delay or stoppage of any clinical trials;
- the commercial success of any product approved by the FDA or its foreign counterparts;
- changes in applicable laws, rules or regulations;
- disputes with Pfizer regarding our licensed rights to Gemcabene;
- an inability to commercialize Gemcabene before April 16, 2024 as stipulated in the Pfizer license;
- adverse developments concerning our manufacturers, suppliers, collaborators and other third parties;
- occurrence of health epidemics or contagious diseases, such as COVID-19, and potential effects on our business, clinical trial sites, supply chain and manufacturing facilities;
- our failure to commercialize our product candidates;
- the success of competitive drugs;
- if our patents covering our product candidates expire or are invalidated or are found to be unenforceable, or if some or all of our patent applications do not result in issued patents or result in patents with narrow, overbroad, or unenforceable claims;
- additions or departures of key scientific or management personnel;
- unanticipated safety concerns related to the use of any product candidates;
- our announcements or our competitor's announcements regarding new products, enhancements, significant contracts, acquisitions or strategic partnerships and investments;
- the size and growth of our target markets;
- our, or companies perceived to be similar to us, failure to meet external expectations or management guidance;
- fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- publication of research reports about us or our industry, recommendations, earning results or estimates or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- changes in general economic, political and market conditions in any of the regions in which we conduct our business;
- changes in our capital structure or dividend policy, future issuances of securities, sales of common stock by officers, directors and significant stockholders or our incurrence of additional debt;
- trading volume of our common stock;
- changes in accounting practices and ineffectiveness of our internal controls;

- disputes, litigation or developments relating to proprietary rights;
- timing of milestones and royalty payments; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, Nasdaq, and the stock of biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

***If we are unable to comply with Nasdaq's continued listing requirements, our common stock could be delisted, which could affect our common stock's market price and liquidity and reduce our ability to raise capital.***

Our common stock is currently listed on the Nasdaq Capital Market. Nasdaq imposes, among other requirements, continued listing standards including minimum bid, public float and stockholders' equity requirements. If we fail to satisfy the continued listing requirements of the Nasdaq Capital Market, Nasdaq may take steps to delist our common stock. Such a delisting would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. A delisting would adversely affect the liquidity, trading volume and likely the price of our common stock, causing the value of an investment in us to decrease and having an adverse effect on our business, financial condition and results of operations.

***We may enter into financing transactions that are dilutive to our stockholders, impose material restrictions on our business and/or require us to relinquish valuable rights.***

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances, and marketing, distribution or licensing arrangements with third parties. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of current stockholders may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect the rights of our current stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants that limit our ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, scale back or discontinue the development and commercialization of one or more of our product candidates or delay our pursuit of potential in-licenses or acquisitions.

***Our share price may decline due to the large number of shares eligible for future sale.***

The market price of our common stock could decline as a result of sales of a large number of shares of common stock in the market after the expiration of certain lock-up restrictions imposed on our shareholders in connection with the Merger, or the perception that such sales could occur. As a condition to the closing of the Merger, certain stockholders of each of Gemphire and NeuroBo and their affiliates entered into lock-up agreements that restrict their ability to transfer shares of our capital stock for 180 days from the effective time of the Merger. Such lock-up restrictions expire on or about June 28, 2020.

Upon the expiration of the lock-up agreements described above, all of such shares will be eligible for resale in a public market, subject, in the case of shares held by our affiliates, to volume, manner of sale and other limitations under Rule 144 of the Securities Act. Approximately 87% of our outstanding shares of common stock are currently held by holders we consider to be affiliates.

As restrictions on resale end, the market price of our shares of common stock could drop significantly if the holders of these restricted shares sell them or are perceived by the market as intending to sell them. These factors could also make it more difficult for us to raise additional funds through future offerings of our shares of common stock or other securities.

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

Provisions in our certificate of incorporation and the bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by stockholders to replace or remove their current management by making it more difficult for stockholders to replace members of our board. Among other things, these provisions:

- establish a classified board of directors such that not all members of the board are elected at one time;
- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which our stockholders can remove directors from the board;
- establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;
- prohibit our stockholders from calling special meetings;
- Authorize our board to issue preferred stock without stockholder approval, which preferred stock may include rights superior to the rights of the holders of common stock, and which could be used to institute a shareholder rights plan, or so-called "poison pill," that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board; and
- require the approval of the holders of at least two-thirds of the votes that all our stockholders would be entitled to cast to amend or repeal certain provisions of our charter or bylaws.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with it for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

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

Our common stock is currently traded on the Nasdaq Capital Market, but we can provide no assurance that we will be able to maintain an active trading market for our shares on the Nasdaq Capital Market or any other exchange in the future. If there is no active market for our common stock, it may be difficult for our stockholders to sell shares without depressing the market price for the shares or at all.

***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.***

If one or more analysts cover our business and downgrade their evaluations of our stock or publish inaccurate or unfavorable research about our business, 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 and trading volume to decline.

***Our executive officers, directors, and their affiliates exercise significant control over us, which will limit the ability of our stockholders to influence corporate matters and could delay or prevent a change in corporate control.***

As of December 31, 2019, our officers, directors, and their respective affiliates had beneficial ownership, in the aggregate, of approximately 60.3% of our outstanding common stock. These stockholders, if they act together, may be able to influence our management and affairs and control the outcome of matters submitted to our stockholders for approval, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets or other major corporate transaction. Some of these stockholders acquired some or all of their shares of common stock for substantially less than the current trading price of our common stock, and these stockholders may have interests, with respect to our common stock, that are different from other stockholders. In addition, this concentration of ownership might adversely affect the market price of our common stock, have the effect of delaying, deferring or preventing a change of control of us, or discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

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

We are an "emerging growth company," as defined in 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 exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act), reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. 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 irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

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 closing of the 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 means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th, and (2) the date on which we have issued more than \$1 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements.

We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. 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.

***We incur increased costs as a result of operating as a public company and our management is required to devote substantial time to compliance initiatives.***

The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the stock exchange upon which our common stock is listed and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations increase our legal and financial compliance costs and make some activities more time-consuming and costly. However, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. 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 are subject to Section 404 of the Sarbanes-Oxley Act and the related rules of the SEC that generally require our management and independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting. However, for so long as we remain an "emerging growth company" as defined in the JOBS Act or a "smaller reporting company", we intend to take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not emerging growth companies and/or smaller reporting companies, including, but not limited to, for emerging growth companies, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act. Once we are no longer an "emerging growth company" and if our public float is above \$75 million as of the last business day of our most recently completed second fiscal quarter or, if before such date, we opt to no longer take advantage of the applicable exemption, we will be required to include an opinion from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting.

To achieve compliance with Section 404, we are required to engage in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we must dedicate internal resources, hire additional finance and accounting personnel, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting.

During the course of our review and testing, we may identify deficiencies and be unable to remediate them before we must provide the required reports. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall.

In addition, as a public company we are required to timely file accurate quarterly and annual reports with the SEC under the Exchange Act. In order to report our results of operations and financial statements on an accurate and timely basis, we will depend on CROs to provide timely and accurate notice of their costs to it. Any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from Nasdaq or other adverse consequences that would materially harm our business.

***We have identified a material weakness in our internal control over financial reporting that could, if not remediated, result in material misstatements in our financial statements or impair our ability to produce accurate and timely consolidated financial statements.***

We concluded that there was a material weakness relating to our internal control over financial reporting relating to accounting for clinical trial expenses. For more information about this material weakness, see Part II, Item 9A (Controls and Procedures) of this report. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the company's annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

Although we have begun to take measures to remediate this material weakness, the measures we have taken, and expect to take, to improve our internal controls may not be sufficient to address the issues identified, to ensure that our internal controls are effective or to ensure that the identified material weakness will not result in a material misstatement of our annual or interim consolidated financial statements. If we are unable to correct material weaknesses or deficiencies in internal controls in a timely manner, our ability to record, process, summarize and report financial information accurately and within the time periods specified in the rules and forms of the SEC, will be adversely affected. This failure could negatively affect the market price and trading liquidity of our common stock, cause investors to lose confidence in our reported financial information, subject us to civil and criminal investigations and penalties, and materially and adversely impact our business and financial condition.



***We do not anticipate declaring or paying, in the foreseeable future, any cash dividends on our capital stock and, consequently, the ability of our stockholders to achieve a return on their investment will depend on appreciation in the price of our common stock.***

We have never declared or paid any cash dividend on our capital stock and do not currently intend to do so in the foreseeable future. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business. Therefore, the success of an investment in shares of our common stock will depend upon any future appreciation in their value. There is no guarantee that shares of our common stock will appreciate in value or even maintain the price at which you purchased them.

***Our Bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by 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 Bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will generally be the sole and exclusive forum for any derivative action or proceeding brought on its behalf, any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, as amended, the certificate of incorporation or the bylaws or any other action asserting a claim governed by the internal affairs doctrine. This provision does not apply to claims arising under the Securities Act and the Exchange Act or any claim for which the federal courts have exclusive jurisdiction. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of the bylaws described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find this provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

***Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.***

The global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. We cannot assure you that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, 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 it to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive these difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

Not applicable

**ITEM 2. PROPERTIES**

We currently lease space in Boston, Massachusetts and in Seoul, South Korea. Effective February 1, 2020, we entered into a lease agreement for a new corporate headquarters in Boston, which will expire on February 1, 2021. Our research facilities in South Korea, which include lab and office space, consists of approximately 574 square feet.

**ITEM 3. LEGAL PROCEEDINGS**

From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

**PART II**

**ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

***Common Stock***

Our common stock is listed on The Nasdaq Capital Market ("Nasdaq") under the symbol "NRBO." Before December 31, 2019, our common stock was listed on Nasdaq under the symbol "GEMP."

***Stockholders***

On March 23, 2020, we had 15,677,307 shares of common stock outstanding and 59 holders of record of our common stock. The transfer agent and registrar for our common stock is Computershare, Inc.

***Dividend Policy***

We have never declared or paid any dividends on our common stock, and we do not currently intend to pay any dividends on our common stock for the foreseeable future. Any future determination to pay dividends on our common stock will be, subject to applicable law, at the discretion of our Board of Directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, and contractual restrictions in loan or other agreements.

**ITEM 6. SELECTED FINANCIAL DATA**

Not applicable.

**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following discussion of our financial condition and results of operations should be read in conjunction with the financial statements and notes included in Part II, Item 8 "Financial Statements and Supplementary Data" of this report.*

**Overview**

NeuroBo Pharmaceuticals Inc. (the "Company," "we," "us" or "our") is a clinical-stage biotechnology company focused on developing and commercializing novel pharmaceuticals to treat neurodegenerative disorders affecting

millions of patients worldwide. For more information on our business and our three product candidates, NB-01, NB-02 and Gemcabene, see “Business-Overview” in Part I, Item 1 of this report.

### **Recent Developments**

#### ***Current Scientific Activity; Repurposing of NB-01***

In light of the present business environment, including the impact of the COVID-19 pandemic, we are currently conducting the scientific activities described below with a view toward conserving financial resources.

For NB-01, we have determined that any attempt to conduct Phase 3 clinical trials, as previously announced, would be difficult if not impossible in the short or medium term. Accordingly, in the first quarter of 2020, we directed our contract research organization (“CRO”) partners and other vendors working on the Phase 3 clinical trials of NB-01, including Syneos Health, to cease all work and we gave notice of termination of our existing contract arrangements with each of them.

We are currently devoting scientific resources to evaluating the potential to bring the NB-01 asset to the market through a different regulatory pathway. Development of NB-01 as an orphan drug is among the alternatives we are considering, and we may conduct feasibility studies to identify a rare disease relevant to NB-01. Additionally, we are considering marketing NB-01 as a nutraceutical (non-pharmaceutical) product. There is no assurance that we will be able to pursue any of these alternatives for NB-01. See the risk factor entitled “We have determined to postpone indefinitely the initiation of Phase 3 clinical trials of NB-01 under present circumstances, and we may not be able to successfully develop NB-01 pursuant to other alternatives, including as an orphan drug or as a nutraceutical candidate” in Part I, Item A of this report.

For NB-02, which is almost ready for the submission of an IND application to the FDA, we intend to postpone the first human clinical trials until global health and macroeconomic conditions improve. We hope to be in a position to commence clinical trial activity in the first quarter of 2021, subject to availability of financing.

For Gemcabene, we will support activities related to getting the FDA to lift the partial clinical hold that is presently in effect. In addition, we will engage in activities to support our partnership with Beijing SL with the possibility of advancing Gemcabene into trials in China.

As of December 31, 2019, we had cash and cash equivalents of \$13.9 million. Operating at this level of scientific activity, we expect that our cash and cash equivalents will be adequate to fund operations through the end of December 2020.

We will need to raise additional capital to fund continued operations at the current level beyond 2020. Although we are exploring financing opportunities and carefully monitoring the capital markets, we do not yet have any commitments for additional financing and may not be successful in our efforts to raise additional funds. Any amounts raised will be used for further development of our product candidates and for other working capital purposes and, depending on the amount raised, for commencing clinical activity on NB-02 in the first quarter of 2021 and potentially for Gemcabene.

If we are unable to raise additional capital (which is not assured at this time, particularly as a result of recent depressed capital market conditions), our long-term business plan may not be accomplished, and we may be forced to cease, reduce, or delay operations. We have some ability to reduce costs further in 2020 by further curtailing the level of scientific activity described above, thereby potentially lengthening our operational window into the first quarter of 2021.

#### ***Going Concern***

The accompanying financial statements have been prepared in conformity with GAAP, which contemplate our continuation as a going concern. We have not established a source of revenues and, as such, have been dependent on funding operations through the sale of equity securities. Since inception, we have experienced significant losses and incurred negative cash flows from operations. We expect to incur further losses over the next several years as we

develop our business. We have spent, and expect to continue to spend, a substantial amount of funds in connection with implementing our business strategy.

We will need substantial additional funding to support our continuing operations and to pursue our business strategy and, in the meantime, we have reduced scientific activity (as indicated above) and we are carefully controlling expenses. Until such time as we can generate significant revenue from product sales, if ever, we expect to continue to finance our operations primarily through proceeds derived from the sale of equity.

These factors individually and collectively raise substantial doubt about our ability to continue as a going concern for the full one-year period following the date of this report. Our financial statements do not include any adjustments or classifications that may result from our possible inability to continue as a going concern. The report of our independent registered public accounting firm on our financial statements for the year ended December 31, 2019 includes an explanatory paragraph regarding the existence of substantial doubt about our ability to continue as a going concern.

#### ***December 2019 Completion of Business Combination***

Although Gemphire was considered the legal acquirer and issued shares of its common stock to effect the Merger, Private NeuroBo was considered the accounting acquirer. In accordance with the accounting guidance under Accounting Standards Codification (“ASC”) 805, *Business Combinations*, the Merger is accounted for as an asset acquisition. Accordingly, the assets and liabilities of Gemphire have been recorded as of the closing date of the Merger at the purchase price of the accounting acquirer, Private NeuroBo.

On December 30, 2019, prior to completion of the Merger, the Company effected a 1-for-25 reverse stock split of its common stock (the “Reverse Stock Split”) and also on December 30, 2019, following completion of the Merger, changed its name to “NeuroBo Pharmaceuticals, Inc.”

Pursuant to the terms of the Merger Agreement, each outstanding share of Private NeuroBo common stock outstanding immediately prior to the closing of the Merger was converted into approximately 1.1431 shares of the Company’s common stock (the “Exchange Ratio”), after taking into account the Reverse Stock Split, as defined above.

We appointed Richard Kang as our President, Chief Executive Officer, Secretary and as Interim Principal Financial Officer and Treasurer, effective January 1, 2020.

#### ***Contingent Value Rights; CVR Agreement***

Prior to completion of the Merger, Gemphire entered into the CVR Agreement, which the Company assumed in the Merger. Under the CVR Agreement, the holders of Gemphire shares at the Merger will receive 80 percent of the proceeds from the grant, sale, or transfer of rights to Gemcabene. The CVR Agreement also obligated the Company to commit up to \$1 million to support the further development of Gemcabene during the first quarter of 2020. For more information regarding the CVR Agreement and the CVRs, see Note 4 (Merger) to our audited financial statements which are included elsewhere in this report.

#### ***Gemcabene License Agreements***

As a result of the Merger, we became subject to the rights and obligations under certain license agreements with Pfizer and Beijing SL relating to Gemcabene, which were entered into in 2018 and 2019, respectively. For a description of the provisions of these license agreements, including certain milestone and royalty payments that we may become obligated to pay to Pfizer thereunder, see “Pfizer License Agreement” and “Beijing License SL Agreement” under “License Agreements” in Part I, Item 1 (Business) of this report. No milestone payments were due to Pfizer as of December 31, 2019.

### ***Key operating data***

We have incurred significant operating losses since inception. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and eventual commercialization of one or more of our current or future product candidates. Our net losses were \$21.3 million and \$15.5 million for the years ended December 31, 2019 and December 31, 2018, respectively. To date, we have not generated any revenue from product sales, collaborations with other companies, government grants or any other source, and do not expect to generate any revenue in the foreseeable future.

As of December 31, 2019, we had an accumulated deficit of \$36.9 million. We expect to continue to incur significant expenses and increasing operating losses for at least the next several years. We expect that our expenses and capital requirements will increase substantially in connection with our ongoing activities, particularly if and as we:

- pursue clinical development for NB-01, NB-02 and Gemcabene;
- initiate preclinical studies and clinical trials with respect to any additional indications for our current product candidates and any future product candidates that we may pursue;
- acquire or in-license other product candidates and/or technologies;
- develop, maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, scientific and commercial personnel;
- establish a commercial manufacturing source and secure supply chain capacity sufficient to provide commercial quantities of any product candidates for which we may obtain regulatory approval;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure and/or enter into partnership arrangements to commercialize any products for which we may obtain regulatory approval; or
- add administrative, operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts, and to support our transition to a public reporting company.

### **Components of Results of Operations**

#### ***Revenue***

To date, we have not generated any revenue from product sales, collaborations with other companies, government grants or any other source, and do not expect to generate any revenue in the foreseeable future. If our product development efforts for our product candidates are successful and result in regulatory approval, we may generate revenue in the future from product sales. We cannot predict if, when, or to what extent we will generate revenue from the commercialization and sale of our product candidates. We may never succeed in obtaining regulatory approval for any of our product candidates or generating revenue through alternative marketing strategies such as nutraceuticals.

#### ***Cost of Revenue***

To date, we have not generated any revenue and thus have no cost of revenue. If our development efforts for our product candidates are successful and result in regulatory approval, we may generate revenue in the future from product sales and have corresponding cost of revenue. We cannot predict if, when, or to what extent we will incur costs from revenue from the commercialization and sale of our product candidates. If we are successful at commercialization, the cost of revenues would include all costs directly related to providing the commercial asset, which would consist primarily of labor, material, facilities, warehousing and other overhead expenses. Cost of revenues would also include depreciation expense related to certain equipment used as part of the commercial asset.

## **Operating Expenses**

### *Research and Development Expenses*

Research and development expenses consist primarily of costs incurred in connection with the development of our product candidates. We expense research and development costs to operations as incurred. These expenses include:

- employee-related expenses, including salaries, related benefits and stock-based compensation, for employees engaged in research and development functions;
- expenses incurred in connection with the clinical development of our product candidates, including under agreements with third parties, such as consultants and Clinical Research Organizations (“CROs”);
- the cost of manufacturing drug products for use in our preclinical studies and clinical trials, including under agreements with third parties, such as consultants and Clinical Manufacturing Organizations (“CMOs”);
- facilities, depreciation and other expenses, which include direct or allocated expenses for rent and maintenance of facilities and insurance;
- costs related to compliance with regulatory requirements; and
- payments made under third-party licensing agreements.

We recognize external development costs based on an evaluation of the progress toward completion of specific tasks using information provided to us by our service providers. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual costs. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. Such amounts are recognized as an expense when the goods have been delivered or the services have been performed, or when it is no longer expected that the goods will be delivered, or the services rendered.

Our direct research and development expenses consist primarily of external costs, such as fees paid to outside consultants, CROs, CMOs and research laboratories in connection with our clinical development, quality assurance and quality control processes, manufacturing, and clinical development activities. Our direct research and development expenses also include fees incurred under third-party license agreements. We use our employee and infrastructure resources across multiple research and development projects. We do not allocate employee costs and costs associated with our facilities, including depreciation or other indirect costs, to specific product candidates because these costs are deployed across multiple programs and, as such, are not separately classified. We use internal resources primarily to conduct manufacturing and clinical development activities. These employees work across multiple programs and, therefore, we do not track our costs by product candidate.

Clinical development activities are central to our business model. We do not believe that our historical costs are indicative of the future costs associated with these programs, nor do they represent the costs of other future programs we may initiate. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We have some control over the timing of these expenses, but costs may be difficult to control once clinical trials have commenced.

The successful development and commercialization of our product candidates are highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the preclinical and clinical development of any of our product candidates. Additionally, because of the risks inherent in novel treatment discovery and development, we cannot reasonably estimate or know:

- the repurposing of any product as a nutraceutical;
- the timing and progress of preclinical and clinical development activities;
- the number and scope of clinical programs that we decide to pursue;
- our ability to maintain our current development programs and to establish new ones;

- establishing an appropriate safety profile with IND-enabling studies;
- successful patient enrollment in, and the initiation and completion of, clinical trials;
- the successful completion of clinical trials with safety, tolerability and efficacy profiles that are satisfactory to the FDA or any comparable foreign regulatory authority;
- the receipt of regulatory approvals from applicable regulatory authorities;
- the timing, receipt and terms of any marketing approvals from applicable regulatory authorities;
- our ability to establish new licensing or collaboration arrangements;
- establishing agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if any of our product candidates is approved;
- development and timely delivery of clinical-grade and commercial-grade drug formulations that can be used in our clinical trials and for commercial launch;
- obtaining, maintaining, defending and enforcing patent claims and other intellectual property rights;
- launching commercial sales of our product candidates, if approved, whether alone or in collaboration with others;
- maintaining a continued acceptable safety profile of the product candidates following commercialization; or
- the effect of competing technological and market developments.

A change in the outcome of any of these variables with respect to the development of our product candidates could significantly change the costs and timing associated with the development of that product candidate.

#### ***Acquired In-Process Research and Development***

We include costs to acquire or in-license product candidates in acquired in-process research and development expenses (“IPR&D”). When we acquire the right to develop and commercialize a new product candidate, any up-front payments, or any future milestone payments that relate to the acquisition or licensing of such a right are immediately expensed as acquired in-process research and development in the period in which they are incurred. These costs are immediately expensed provided that the payments do not also represent processes or activities that would constitute a “business” as defined under generally accepted accounting principles in the United States (“GAAP”), or provided that the product candidate has not achieved regulatory approval for marketing and, absent obtaining such approval, has no alternative future use. Royalties owed on future sales of any licensed product will be expensed in the period the related revenues are recognized.

#### ***General and Administrative Expenses***

General and administrative expenses consist primarily of salaries and related costs, including stock-based compensation, for personnel in executive, finance and administrative functions. General and administrative expenses also include direct and allocated facility-related costs as well as professional fees for legal, patent, consulting, investor and public relations, accounting, and audit services.

We anticipate that our general and administrative expenses will increase in the future as a result of accounting, audit, legal, regulatory, compliance, and director and officer insurance costs as well as investor and public relations expenses associated with being a public company. Some of these increases may be offset by decreased expenses associated with the change in strategy for NB-01.

#### ***Loss on note extinguishment***

Loss on note extinguishment consists of the loss associated with debt instrument modifications accounted for as debt extinguishments.



***Interest (Expense) Income, net***

***Interest Expense***

Interest expense consists of the interest calculated at a rate of 5% per annum on the convertible notes issued by Private NeuroBo in February 2018 and debt discount amortization attributed to the underlying beneficial conversion features of the convertible notes. The convertible notes were converted into shares of common stock in connection with the Merger.

***Interest Income***

Interest income consists of bank interest earned on our cash and cash equivalents.

***Other Income (Expense), net***

Other income (expense), net reflects non-operating expenses associated mainly with realized foreign currency exchange gains and losses.

***Income Taxes***

The Merger was intended to qualify as a tax-free reorganization under Section 368 of the Code. Based on the Exchange Ratio, the former stockholders of Private NeuroBo owned approximately 96.2% of the outstanding common stock of the Company immediately after the Merger. Therefore, the Merger was treated as a reverse acquisition for U.S. federal income tax purposes. As a result of the reverse acquisition, the Company became part of the Private NeuroBo (now NeuroBo Therapeutics) consolidated group with the Company as its new parent. In addition, the Company had a short taxable year in 2019 ending on the date of the Merger. Also, as a result of the Merger, for U.S. federal income tax purposes, we believe that the Company underwent an ownership change which places a limit on the amount of a company's net operating losses that can be deducted annually. We have begun, but have not completed, a preliminary analysis to confirm whether such an ownership change has occurred with respect to the Merger, but have not conducted any such study to assess whether any prior ownership changes have historically occurred.

Since our inception, we have not recorded any income tax benefits for the NOLs we have incurred in each year or for our earned research and development tax credits, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our NOL carryforwards and tax credits will not be realized. As of December 31, 2019, we had federal, state and foreign NOLs carryforwards of \$32.1 million, \$32.5 million, and \$0.6 million, respectively, which may be available to offset future income tax liabilities and begin to expire in 2034 for federal carryforwards incurred prior to 2018, in 2026 for state carryforwards and in 2028 for the foreign carryforwards. Federal operating loss carryforwards incurred beginning in 2018 do not expire. As of December 31, 2019, we also had federal and state research and development tax credit carryforwards of \$0.1 million and \$0.2 million, respectively, which may be available to offset future tax liabilities and each begin to expire in 2038 for federal and 2033 for state. We have recorded a full valuation allowance against our net deferred tax assets at each balance sheet date. Utilization of the NOL and research and development credit carryforwards may be subject to a substantial annual limitation due to ownership changes that may have occurred previously or that could occur in the future, as provided by Section 382 of the Code, as well as similar state provisions. Ownership changes may limit the amount of NOL and tax credit carry forwards that can be utilized to offset future taxable income and tax, respectively.

**Results of Operations****Comparison of the Years Ended December 31, 2019 and December 31, 2018**

The following table summarizes our results of operations for the years ended December 31, 2019 and December 31, 2018 (in thousands):

	For the Year Ended		
	December 31,		
	2019	2018	Change
Operating expenses:			
Research and development	\$ 5,324	\$ 5,066	\$ 258
Acquired in-process research and development	12,151	8,815	3,336
General and administrative	2,701	1,605	1,096
Total operating expenses	<u>20,176</u>	<u>15,486</u>	<u>4,690</u>
Loss from operations	(20,176)	(15,486)	(4,690)
Loss on note extinguishment	(1,114)	—	(1,114)
Interest (expense) income, net	(22)	(40)	18
Other income (expense), net	—	(3)	3
Loss before income taxes	<u>(21,312)</u>	<u>(15,529)</u>	<u>(5,783)</u>
Provision for income taxes	—	—	—
Net loss	<u><u>\$(21,312)</u></u>	<u><u>\$(15,529)</u></u>	<u><u>\$ (5,783)</u></u>

*Research and Development Expenses*

Research and development expenses were \$5.3 million for the year ended December 31, 2019 as compared to \$5.1 million for the year ended December 31, 2018. The \$0.3 million increase in 2019 was largely due to payroll costs in connection with newly hired personnel and costs attributed to the newly constituted Scientific Advisory Board (“SAB”) offset in part by a reduction in clinical trial activity due to the timing of underlying studies. In addition, research and development expenses during the year ended December 31, 2019 included stock-based compensation of \$75,000. There were no stock-based compensation costs during the year ended December 31, 2018.

*Acquired In-process Research and Development*

Acquired in-process research and development expenses for the year ended December 31, 2019 was \$12.2 million as compared to \$8.8 million for the year ended December 31, 2018. The increase of \$3.3 million was attributable to research and development projects of Gemphire which were in-process at the Merger date, as compared to the license acquisitions of NB-01 and NB-02 in the prior year. Current accounting standards require that the fair value of IPR&D with no alternative future use be charged to expense on the acquisition date.

*General and Administrative Expenses*

General and administrative expenses were \$2.7 million for the year ended December 31, 2019, compared to \$1.6 million for the year ended December 31, 2018. The increase of \$1.1 million was primarily due to an increase of \$0.5 million in personnel-related costs, \$0.2 million increase in legal costs, \$0.2 million increase in operational consulting fees, a \$0.1 million increase in professional fees due to higher audit and accounting support, and \$0.2 million increase in travel and operations related expenses. The increase of \$0.5 million in personnel-related costs was associated with the hiring of additional personnel in our general and administrative function inclusive of stock-based compensation of \$43,000. There were no stock-based compensation costs during the year ended December 31, 2018.

*Loss on note extinguishment*

Non-cash loss on note extinguishment for the year ended December 31, 2019 was \$1.1 million stemming from the modification of our convertible notes in October 2019 that were accounted for as a debt extinguishment. There were no modifications of debt instruments in the prior year.

*Interest (Expense) Income, net*

Interest expense, net for the year ended December 31, 2019 was \$22,000 compared to \$40,000 for the year ended December 31, 2018. Interest expense, net during the year ended December 31, 2019 included non-cash interest expense in connection with our convertible notes of \$129,000, offset in part by interest income of \$107,000 million related to cash deposits. Non-cash interest expense during the year ended December 31, 2019 consisted of interest on principal in the amount of \$25,000 and costs attributed to the underlying beneficial conversion features of the convertible notes in the amount of \$104,000.

Interest expense, net during the year ended December 31, 2018 included non-cash interest expense in connection with our convertible notes of \$41,000, offset in part by interest income of \$1,000 related to cash deposits. Non-cash interest expense during the year ended December 31, 2018 consisted of interest on principal in the amount of \$23,000 and costs attributed to the underlying beneficial conversion features of the convertible notes in the form discount amortization in the amount of \$18,000.

*Other Income (Expense), net*

Other income (expense), net was less than \$1,000 during the year ended December 31, 2019, compared to \$(3,000) during the year ended December 31, 2018. The net increase in other income (expense), net was due to a nominal increase in net realized foreign currency exchange gains.

**Liquidity and Capital Resources**

Prior to the Merger, Private NeuroBo funded operations with proceeds from sales of preferred stock and proceeds from the issuance of convertible debt. Through December 31, 2019, Private NeuroBo received net proceeds of \$40.9 million from sales of preferred stock and \$0.5 million from the sales of convertible notes which were converted into shares of Private NeuroBo common stock, effective immediately prior to the closing of the Merger.

In April 2018, Private NeuroBo issued an aggregate of 4,801,020 shares of Series A preferred stock (as adjusted for the Exchange Ratio) at a purchase price of \$3.50 per share, for aggregate gross consideration of approximately \$16.8 million. At the effective time of the Merger (the "Effective Time"), each share of Series A preferred stock then outstanding was converted into common stock in accordance with the terms of the Merger Agreement.

In August 2019, Private NeuroBo issued an aggregate of 3,463,593 shares of Series B preferred stock (as adjusted for the Exchange Ratio) at a purchase price of \$7.00 per share, for aggregate gross consideration of approximately \$24.2 million. At the Effective Time, each share of Series B preferred stock then outstanding was converted into common stock in accordance with the terms of the Merger Agreement.

Since inception, we have experienced significant losses and incurred negative cash flows from operations. We expect to incur further losses over the next several years as we develop our business. We have spent, and expect to continue to spend, a substantial amount of funds in connection with implementing our business strategy.

We will need substantial additional funding to support our continuing operations and to pursue our business strategy and, in the meantime, we have reduced scientific activity, as described under "Overview – Current Scientific Activity; Repurposing of NB-01" above, and we are carefully controlling expenses. As of December 31, 2019, we had cash and cash equivalents of \$13.9 million. Operating at such level of scientific activity, we expect that our cash will be adequate to fund operations through the fourth quarter of 2020.

We will need to raise additional capital to fund continued operations at the current level beyond 2020. Although we are exploring financing opportunities and carefully monitoring the capital markets, we do not yet have any commitments for additional financing and may not be successful in our efforts to raise additional funds. If we are unable to raise additional capital (which is not assured at this time, particularly as a result of recent depressed capital market conditions), our long-term business plan may not be accomplished, and we may be forced to cease, reduce, or delay operations. We have some ability to reduce costs further in 2020 by further curtailing the level of scientific activity described above, thereby potentially lengthening our operational window into the first quarter of 2021.

These factors individually and collectively raise substantial doubt about our ability to continue as a going concern for the full one-year period following the date of this report. For more information, see “Recent Developments – Going Concern” above and “Going Concern” under Note 1 to our audited financial statements which are included elsewhere in this report.

### **Cash Flows**

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

	For the Year Ended December 31,	
	2019	2018
	(in thousands)	
Net cash used in operating activities	\$ (7,039)	\$ (14,451)
Net cash used in investing activities	(6,057)	(3)
Net cash provided by financing activities	24,167	17,246
Net increase in cash and restricted cash	<u>\$ 11,071</u>	<u>\$ 2,792</u>

### *Operating Activities*

During the year ended December 31, 2019, operating activities used \$7.0 million of cash, primarily resulting from our net loss of \$21.3 million offset by non-cash expenses related to interest in connection with our convertible notes, the extinguishment loss stemming from the modification of our convertible notes, IPR&D, stock-based compensation and depreciation in the aggregate of \$13.5 million. Net cash provided by changes in our operating assets and liabilities for the year ended December 31, 2019 was \$0.7 million which consisted of a net decrease in prepaid expenses and other current assets of approximately \$0.8 million, offset in part by a net decrease in our accounts payable and accrued expenses of \$0.1 million as adjusted for the net liabilities assumed in connection with the Merger. The net decrease in prepaid expenses and other current assets was primarily due to utilization of clinical research organization deposits for clinical activities. The net decrease in accounts payable and accrued expenses was primarily attributed to the Merger and the timing of vendor invoicing and payments.

During the year ended December 31, 2018, operating activities used \$14.5 million of cash, primarily resulting from our net loss of \$15.5 million offset by non-cash expenses largely related to IPR&D and interest in connection with our convertible notes in the aggregate of \$1.9 million. Net cash used by changes in our operating assets and liabilities for the year ended December 31, 2018 consisted of approximately \$1.0 million increase in prepaid expenses and other current assets, partially offset by a \$0.2 million increase in accounts payable and accrued expenses. The increase in prepaid expenses was primarily due to clinical research organization deposits for future clinical trial activities. The increase in accounts payable and accrued expenses was primarily attributed to the timing of vendor invoicing and payments.

### *Investing Activities*

During the year ended December 31, 2019, net cash used in investing activities was \$6.1 million. Investing activities during the period consisted mainly of transaction costs paid in connection with the Merger, net of cash acquired, in the amount of \$5.8 million. Purchases of property and equipment in the amount of \$0.2 million comprised the balance of investing activities during the period.

During the year ended December 31, 2018, net cash used in investing activities was less than \$0.1 million, consisting of purchases of property and equipment.

### *Financing Activities*

During the year ended December 31, 2019, net cash provided by financing activities was \$24.2 million, consisting primarily of net proceeds from the sale of Series B preferred stock.

During the year ended December 31, 2018, net cash provided by financing activities was \$17.2 million, consisting primarily of net proceeds of \$16.7 million from the sale of Series A preferred stock and net proceeds of \$0.5 million from the sale of convertible notes.

### **Funding Requirements**

We expect to incur additional costs associated with operating as a public company. In addition, we expect our expenses to increase substantially over time in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidates. The timing and amount of our preclinical and clinical expenditures will depend largely on:

- the availability of capital;
- the scope, number, initiation, progress, timing, costs, design, duration, any potential delays, and results of clinical trials and nonclinical studies for our current or future product candidates;
- the clinical development plans we establish for our product candidates;
- the number and characteristics of product candidates and programs that we develop or may in-license;
- the outcome, timing and cost of regulatory reviews, approvals or other actions to meet regulatory requirements established by the FDA and comparable foreign regulatory authorities, including the potential for the FDA or comparable foreign regulatory authorities to require that we perform more studies for our product candidates than those that we currently expect;
- our ability to obtain marketing approval for our product candidates;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights covering our product candidates, including any such patent claims and intellectual property rights that we have licensed pursuant to the terms of our license agreement;
- our ability to maintain, expand and defend the scope of our intellectual property portfolio, including the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us or our product candidates;
- the cost and timing of completion of commercial-scale outsourced manufacturing activities with respect to our product candidates;
- our ability to establish and maintain licensing, collaboration or similar arrangements on favorable terms and whether and to what extent we retain development or commercialization responsibilities under any new licensing, collaboration or similar arrangement;
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own;
- the success of any other business, product or technology that we acquire or in which we invest;
- the costs of acquiring, licensing or investing in businesses, product candidates and technologies; and
- our need and ability to hire additional management and scientific and medical personnel.

We expect that, with current levels of scientific activity, our existing cash and cash equivalents will be sufficient to fund our operating expenses, capital expenditure requirements through December 31, 2020. 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.

### **Critical Accounting Policies and Significant Judgments and Estimates**

Our consolidated financial statements are prepared in accordance with U.S. GAAP. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, costs, and expenses, and related disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting period. On an on-going basis, our management evaluates its estimates, including those related to accounting for clinical trials, income

taxes including the valuation allowance for deferred tax assets, accrued expenses, contingencies and stock-based compensation. We base our estimates on historical experience, known trends and events, and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgements about the carrying values of assets and liabilities. Actual results could differ from those estimates. Changes in estimates are reflected in reported results in the period in which they become known.

Although Gemphire was considered the legal acquirer and issued shares of its common stock to affect the Merger, Private NeuroBo was considered the accounting acquirer. In accordance with the accounting guidance under ASC 805-*Business Combinations*, the Merger is accounted for as an asset acquisition. Accordingly, the assets and liabilities of Gemphire have been recorded as of the closing date of the Merger at the purchase price of the accounting acquirer, Private NeuroBo.

While our significant accounting policies are described in more detail in Note 2 to our consolidated financial statements included elsewhere in this report, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

#### **Research and Development Expenses**

Research and development costs are charged to expense as incurred. Research and development expenses may comprise of costs incurred in performing research and development activities, including clinical trial costs, manufacturing costs for both clinical and pre-clinical materials as well as other contracted services, license fees, and other external costs. Nonrefundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity is performed or when the goods have been received, rather than when payment is made, in accordance with ASC 730, *Research and Development*.

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual costs. Certain of our service providers invoice us in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some service providers require advance payments. We make estimates of our accrued and prepaid expenses as of each balance sheet date in the consolidated financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of these estimates with the service providers and make adjustments, if necessary. Examples of estimated accrued research and development expenses include fees paid to:

- vendors in connection with preclinical development activities;
- CROs and investigative sites in connection with preclinical studies and clinical trials; and
- CMOs in connection with the production of preclinical and clinical trial materials.

We base the expense recorded related to external research and development on our estimates of the services received and efforts expended pursuant to quotes and contracts with multiple CMOs and CROs that supply, conduct and manage preclinical studies and clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, we adjust the accrual or the amount of prepaid expenses accordingly. 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 relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period.

### **Acquired In-Process Research and Development Expenses**

We include costs to acquire or in-license product candidates in acquired in-process research and development expenses. These costs are immediately expensed provided that the payments do not also represent processes or activities that would constitute a “business” as defined under GAAP or provided that the product candidate has not achieved regulatory approval for marketing and absent obtaining such approval, has no alternative future use. Royalties owed on future sales of any licensed product will be expensed in the period the related revenues are recognized.

### **Stock-Based Compensation**

We account for stock-based compensation in accordance with the provisions of ASC 718, *Compensation — Stock Compensation* (“ASC 718”). Accordingly, compensation costs related to equity instruments granted are recognized at the grant-date fair value. We record forfeitures when they occur. Stock-based compensation arrangements to non-employees are accounted for in accordance with the applicable provisions of ASC 718 using a fair value approach.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of the common stock, the expected term of the stock options, the risk-free interest rate for a period that approximates the expected term of the stock options and the expected dividend yield.

### **Determination of the Fair Value of Common Stock**

As prior to the Merger, there had been no public market for the common stock of Private NeuroBo, the estimated fair value of the common stock has been determined by the NeuroBo board of directors as of the date of each option grant, with input from management, considering our most recently available third-party valuations and NeuroBo Board’s assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent third-party valuation through the date of the grant. These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants’ Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. The valuations of the common stock were prepared using a hybrid method, which used market approaches to estimate the enterprise value of Private NeuroBo. The hybrid method is a probability-weighted expected return method (“PWERM”), where the equity value in one or more of the scenarios is calculated using an option pricing method (“OPM”). The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for Private NeuroBo, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common stock. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company’s securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceeded the value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. These third-party valuations were performed at various dates, which resulted in valuations of the common stock of \$0.72 per share as of March 31, 2018, \$0.72 per share as of September 30, 2018, \$0.72 per share as of December 31, 2018, \$3.29 per share as of June 30, 2019 and \$8.46 per share as of October 23, 2019.

In addition to considering the results of these third-party valuations, the NeuroBo Board considered various objective and subjective factors to determine the fair value of the common stock as of each grant date, including:

- the prices at which Private NeuroBo sold preferred stock and the superior rights and preferences of the preferred stock relative to the common stock at the time of each grant;
- the progress of research and development programs, including the status of clinical studies and planned additional clinical trials for product candidates;
- product stage of development and commercialization and business strategy;



- external market conditions affecting the biopharmaceutical industry, and trends within the biopharmaceutical industry;
- financial position, including cash on hand, and historical and forecasted performance and operating results; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

The assumptions underlying these valuations represented the NeuroBo Board's best estimates, which involved inherent uncertainties and the application of management's judgment. As a result, if significantly different assumptions or estimates were used, the fair value of the common stock and the stock-based compensation expense could be materially different.

As a public trading market has been established in connection with the closing of the Merger, it will no longer be necessary for our Board to estimate the fair value of our common stock in connection with our accounting for granted stock options and other such awards we may grant, as the fair value of the common stock will be determined based on a quoted market price.

#### **Leases**

We adopted Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842) ("ASU 2016-02") in the third quarter of 2019. We assess our contracts at inception to determine whether the contract contains a lease, including evaluation of whether the contract conveys the right to control an explicitly or implicitly identified asset for a period of time. We have recognized right-of-use assets and lease liabilities that represent the net present value of future operating lease payments utilizing a discount rate corresponding to our incremental borrowing rate which we amortize over the remaining terms of the leases. For operating leases of a short-term nature, i.e., those with a term of less than twelve months, then we recognize lease payments as an expense on a straight-line basis over the remaining lease term.

#### **Emerging Growth Company Status**

The Jumpstart Our Business Startups ("JOBS") Act permits an "emerging growth company" such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We are choosing to take advantage of this provision and, as a result, we will adopt the extended transition period available under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided under the JOBS Act.

#### **Off-Balance Sheet Arrangements**

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

#### **Recently Issued Accounting Pronouncements**

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations disclosed in Note 2 to our consolidated financial statements included in Part II, Item 8 "*Financial Statements and Supplementary Data*" of this report.

### **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Not applicable.

**ITEM 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

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## **Report of Independent Registered Public Accounting Firm**

### **Stockholders and Board of Directors**

NeuroBo Pharmaceuticals, Inc.  
Boston, Massachusetts

### **Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated balance sheets of NeuroBo Pharmaceuticals, Inc. (the “Company”) as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the two years in the period ended December 31, 2019, 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, 2019 and 2018, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

### **Going Concern Uncertainty**

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As described in Note 1 to the consolidated financial statements, the Company has recurring losses and negative cash flows from operations that raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

### **Change in Accounting Principle**

As discussed in Note 2 to the consolidated financial statements, on July 1, 2019, the Company changed its method of accounting for leases due to the adoption of ASU 2016-02, *Leases* (ASC 842).

### **Emphasis of Matter**

As discussed in Note 16 to the consolidated financial statements, the impact of COVID 19 including measures taken by government agencies to slow the progression of the disease is uncertain and may adversely affect the Company's results of operations, cash flows and financial position. Our opinion is not modified with respect to this matter.

### **Basis for Opinion**

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ **BDO USA, LLP**

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

Boston, Massachusetts  
March 30, 2020

**NeuroBo Pharmaceuticals, Inc.**  
**Consolidated Balance Sheets**  
(in thousands, except share amounts and par value)

	December 31, 2019	December 31, 2018
<b>Assets</b>		
Current assets:		
Cash	\$ 13,908	\$ 2,845
Restricted cash	15	—
Prepaid expenses	153	929
Other assets	42	34
Total current assets	14,118	3,808
Right-of-use assets and other	150	9
Property and equipment, net	200	3
Total assets	<u>\$ 14,468</u>	<u>\$ 3,820</u>
<b>Liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)</b>		
Current liabilities:		
Accounts payable	\$ 638	\$ 170
Accrued liabilities	1,422	49
Lease liability, short-term	22	—
Total current liabilities	2,082	219
Convertible notes – related party	—	118
Lease and other long-term liabilities	94	23
Total liabilities	2,176	360
Commitments and contingencies (Notes 5, 14 and 16)		
Redeemable convertible preferred stock (Series A and B), \$0.0001 par value per share; 12,000,000 shares authorized and 4,801,020 issued and outstanding as of December 31, 2018; aggregate liquidation preference of \$16,800 as of December 31, 2018. No shares authorized, issued or outstanding as of December 31, 2019.	—	16,746
Stockholders' equity (deficit):		
Preferred stock, \$0.001 par value; 10,000,000 and zero shares authorized as of December 31, 2019 and 2018, respectively; no shares issued or outstanding as of December 31, 2019 and 2018.	—	—
Common stock, \$0.001 par value per share, 100,000,000 shares authorized and 15,592,718 shares issued and outstanding as of December 31, 2019; \$0.0001 par value, 45,800,000 shares authorized and 5,166,812 shares issued and outstanding as of December 31, 2018.	16	—
Additional paid-in capital	49,130	2,266
Accumulated other comprehensive income	12	2
Accumulated deficit	(36,866)	(15,554)
Total stockholders' equity (deficit)	12,292	(13,286)
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	<u>\$ 14,468</u>	<u>\$ 3,820</u>

See accompanying notes.

**NeuroBo Pharmaceuticals, Inc.**  
**Consolidated Statements of Operations and Comprehensive Loss**  
**(in thousands, except share and per share amounts)**

	For the Year Ended	
	December 31,	
	2019	2018
Operating expenses:		
Research and development	\$ 5,324	\$ 5,066
Acquired in-process research and development	12,151	8,815
General and administrative	2,701	1,605
Total operating expenses	<u>20,176</u>	<u>15,486</u>
Loss from operations	(20,176)	(15,486)
Loss on note extinguishment	(1,114)	—
Interest (expense) income, net	(22)	(40)
Other income (expense), net	—	(3)
Loss before income taxes	<u>(21,312)</u>	<u>(15,529)</u>
Provision for income taxes	—	—
Net loss	<u>(21,312)</u>	<u>(15,529)</u>
Other comprehensive income, net of tax	10	2
Comprehensive loss	<u>\$ (21,302)</u>	<u>\$ (15,527)</u>
Loss per share:		
Net loss per share, basic and diluted (Note 11)	<u>\$ (4.08)</u>	<u>\$ (3.65)</u>
Weighted average common shares outstanding:		
Basic and diluted	<u>5,224,178</u>	<u>4,251,330</u>

See accompanying notes.

**NeuroBo Pharmaceuticals, Inc.**  
**Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)**  
(in thousands, except share amounts)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Comprehensive Income	Accumulated Deficit	Total Equity (Deficit)
	Shares	Amount	Shares	Amount				
Balance at January 1, 2018	—	\$ —	2,286,200	\$ —	\$ 50	\$ —	\$ (25)	\$ 25
Issuance of Series A redeemable convertible preferred stock, net issuance costs of \$54	4,801,020	16,746	—	—	—	—	—	—
Beneficial conversion feature related to related party convertible notes	—	—	—	—	401	—	—	401
Issuance of common stock in exchange for process research and development	—	—	2,880,612	—	1,815	—	—	1,815
Foreign currency translation adjustment	—	—	—	—	—	2	—	2
Net loss	—	—	—	—	—	—	(15,529)	(15,529)
Balance at December 31, 2018	<u>4,801,020</u>	<u>16,746</u>	<u>5,166,812</u>	<u>—</u>	<u>2,266</u>	<u>2</u>	<u>(15,554)</u>	<u>(13,286)</u>
Issuance of Series B redeemable convertible preferred stock, net issuance costs of \$74	3,463,593	24,166	—	—	—	—	—	—
Conversion of Series A and B redeemable convertible preferred stock into common stock	(8,264,613)	(40,912)	8,264,613	1	40,911	—	—	40,912
Extinguishment of related party convertible notes net of substantial premium of \$10,620	—	—	—	—	732	—	—	732
Conversion of related party convertible notes into common stock	—	—	1,565,300	—	651	—	—	651
Exercise of stock options	—	—	1,143	—	1	—	—	1
Issuance of common stock and warrants to former Gemphire stockholders and effect of reverse asset acquisition	—	—	594,850	15	4,451	—	—	4,466
Stock-based compensation	—	—	—	—	118	—	—	118
Foreign currency translation adjustment	—	—	—	—	—	10	—	10
Net loss	—	—	—	—	—	—	(21,312)	(21,312)
	<u>—</u>	<u>\$ —</u>	<u>15,592,718</u>	<u>\$ 16</u>	<u>\$ 49,130</u>	<u>\$ 12</u>	<u>\$ (36,866)</u>	<u>\$ 12,292</u>

See accompanying notes.



**NeuroBo Pharmaceuticals, Inc.**  
**Consolidated Statements of Cash Flows**  
(in thousands)

	<b>For the Year Ended</b>	
	<b>December 31,</b>	
	<b>2019</b>	<b>2018</b>
<b>Operating activities</b>		
Net loss	\$ (21,312)	\$ (15,529)
Adjustments to reconcile net loss to net cash used in operating activities:		
In process research and development, non-cash portion	12,151	1,815
Stock-based compensation	118	—
Non cash interest related to convertible notes – related party	129	41
Loss on note extinguishment – related party	1,114	—
Depreciation	17	—
Change in assets and liabilities, net of the effects of the reverse asset acquisition:		
Prepaid expenses and other assets	824	(969)
Accounts payable	(1,046)	170
Accrued and other liabilities	966	21
Net cash used in operating activities	<u>(7,039)</u>	<u>(14,451)</u>
<b>Investing activities</b>		
Cash acquired in connection with reverse asset acquisition	1,525	—
Transaction costs in connection with reverse asset acquisition	(7,368)	—
Purchases of property and equipment	(214)	(3)
Net cash used in investing activities	<u>(6,057)</u>	<u>(3)</u>
<b>Financing activities</b>		
Proceeds from issuance of redeemable preferred stock	24,240	16,800
Proceeds from issuance of convertible notes to related parties	—	500
Exercise of stock options	1	—
Issuance costs	(74)	(54)
Net cash provided by financing activities	<u>24,167</u>	<u>17,246</u>
Net increase in cash and restricted cash	11,071	2,792
Net foreign exchange difference	7	3
Cash and restricted cash at beginning of period	2,845	50
Cash and restricted cash at end of period	<u>\$ 13,923</u>	<u>\$ 2,845</u>
<i>Reconciliation of cash and restricted cash:</i>		
Cash	\$ 13,908	\$ 2,845
Restricted cash	15	—
Total cash and restricted cash	<u>\$ 13,923</u>	<u>\$ 2,845</u>
<i>Supplemental disclosure of cash flow information:</i>		
Cash paid for income taxes	\$ —	\$ —
Cash paid for interest	<u>\$ 1</u>	<u>\$ —</u>
<i>Supplemental non-cash investing and financing transactions:</i>		
Conversion of Series A and Series B preferred stock to common	\$ 40,912	\$ —
Conversion of convertible notes to common stock	\$ 548	\$ —
Common stock and warrants issued in connection with the merger	\$ 4,466	\$ —
Net liabilities assumed in connection with the merger	\$ 1,537	\$ —
Unpaid transaction costs in accounts payable and accrued expenses related to the merger	\$ 306	\$ —
Beneficial conversion feature related to convertible notes	\$ 104	\$ 401
Operating lease right of use asset obtained in exchange for operating lease	\$ 126	\$ —

See accompanying notes.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements**

**1. The Company and Basis of Presentation**

NeuroBo Pharmaceuticals, Inc. (together with its subsidiaries, the "Company" or "NeuroBo"). formerly known as Gemphire Therapeutics Inc. ("Gemphire"), is a clinical-stage biotechnology company with three therapeutics programs designed to impact a range of indications in neurodegenerative and cardiometabolic disease:

- *NB-01*, which is primarily focused on the development of a treatment for painful diabetic neuropathy, but which the Company believes could also treat a range of neuropathic conditions, including chemotherapy-induced peripheral neuropathy and post-traumatic peripheral neuropathy;
- *NB-02*, which has the potential to treat the symptoms of cognitive impairment and modify the progression of neurodegenerative diseases associated with the malfunction of a protein called tau, and with amyloid beta plaque deposition; and
- *Gemcabene*, which is focused on developing and commercializing therapies for the treatment of dyslipidemia, a serious medical condition that increases the risk of life-threatening cardiovascular disease, focused on orphan indications such as homozygous familial hypercholesterolemia, as well as nonalcoholic fatty liver disease/nonalcoholic steatohepatitis.

The Company was originally incorporated as Gemphire Therapeutics Inc. as a C corporation in the state of Delaware. In connection with the closing of the Merger (as defined below), the Company changed its name to NeuroBo Pharmaceuticals, Inc. The operations have consisted principally of performing research and development activities, clinical development and raising capital. The Company's activities are subject to significant risks and uncertainties, including failing to secure additional funding before sustainable revenues and profit from operations are achieved.

***Merger***

On July 24, 2019, Gemphire Therapeutics Inc. ("Gemphire"), and NeuroBo Pharmaceuticals, Inc. ("Private NeuroBo") entered into a definitive agreement, which was amended on October 29, 2019 (the "Merger Agreement"). The merger closed on December 30, 2019 (the "Effective Date"), whereby Private NeuroBo merged with a wholly-owned subsidiary of the Company in an all-stock transaction (the "Merger").

Upon completion of the Merger, the Company changed its name to NeuroBo Pharmaceuticals, Inc., Private NeuroBo changed its name to NeuroBo Therapeutics, Inc., and the Company changed its ticker symbol on the Nasdaq Capital Market from "GEMP" to "NRBO". Except as otherwise indicated, references herein to "NeuroBo," "the Company," the "combined company," "we," "us," and "our," refer to NeuroBo Pharmaceuticals, Inc. on a post-Merger basis.

Pursuant to the terms of the Merger Agreement, each outstanding share of Private NeuroBo common stock outstanding immediately prior to the closing of the Merger was converted into 1.1431 shares of the Company's common stock (the "Exchange Ratio"). Immediately prior to the closing of the Merger, all shares of Private NeuroBo redeemable preferred stock then outstanding were exchanged into shares of common stock of Private NeuroBo. In addition, all outstanding options exercisable for common stock of Private NeuroBo converted into options exercisable for shares of the Company's common stock upon the Merger. Such options and their related terms were adjusted by the Exchange Ratio. Immediately following the Merger, the stockholders of Private NeuroBo owned approximately 96.2% of the outstanding common stock of the Company.

The transaction was accounted for as a reverse asset acquisition in accordance with accounting principles generally accepted in the United States of America ("GAAP"). Under this method of accounting, Private NeuroBo was deemed to be the accounting acquirer for financial reporting purposes. This determination was primarily based on the facts that, immediately following the Merger: (i) Private NeuroBo's stockholders owned substantially all of the voting rights in the combined company, (ii) Private NeuroBo designated all, but one, of the members of the initial board of directors of the combined company, and (iii) Private NeuroBo's senior management holds all key positions in the senior management of the combined company. As a result, as of the closing date of the Merger, the net assets of Gemphire were recorded at

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

their acquisition-date relative fair values in the consolidated financial statements of the Company and the reported operating results prior to the Merger are those of Private NeuroBo.

***Basis of presentation and consolidation principles***

The accompanying financial statements were prepared in conformity with GAAP.

On August 11, 2019, Private NeuroBo's board of directors and stockholders approved an amendment to the restated certificate of incorporation to affect a ten thousand-for-one (10,000-for-1) stock split of Private NeuroBo's common stock and convertible preferred stock. The par value and the authorized shares of the common and convertible preferred stock and the exercise prices of options to purchase common stock were adjusted accordingly as a result of the stock split. All issued and outstanding common stock, options for common stock, convertible preferred stock and convertible notes, as well as the exercise price of each option for common stock and the conversion price for convertible preferred stock and convertible notes, have been retroactively adjusted to reflect this stock split for all periods presented.

The consolidated financial statements of the Company include a South Korean subsidiary, NeuroBo Co., LTD., which is fully owned by Private NeuroBo. All significant intercompany accounts and transactions have been eliminated in the preparation of the financial statements.

All of the share and per share amounts presented were adjusted, on a retroactive basis, to reflect the ten thousand-for-one (10,000-for-1) stock split and the effect of the exchange of the shares of Private NeuroBo into the shares of the Company at the Exchange Ratio, except for par value and share authorizations of Private NeuroBo for periods presented prior to the Merger.

***Going Concern***

From its inception through December 31, 2019, the Company has devoted substantially all of its efforts to drug discovery and development and conducting clinical trials. The Company has a limited operating history and the sales and income potential of the Company's business and market are unproven. Successful transition to attaining profitable operations is dependent upon achieving a level of revenues adequate to support the Company's cost structure. As of December 31, 2019, the Company had \$13.9 million in cash. The Company has experienced net losses and negative cash flows from operating activities since its inception and had an accumulated deficit of \$36.9 million as of December 31, 2019.

To date, the Company has raised capital principally through the issuance of convertible notes and private placements of redeemable convertible preferred stock. The Company has raised a total of \$16.8 million from the issuance by Private NeuroBo of Series A redeemable convertible preferred stock and \$0.5 million from the issuance by Private NeuroBo of convertible notes through December 31, 2018, and \$24.2 million from the issuance by Private NeuroBo of Series B redeemable convertible preferred stock in May and June 2019. The Company will need to continue to raise a substantial amount of funds until it is able to generate revenues to fund its development activities.

The determination as to whether the Company can continue as a going concern contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The Company expects to continue to incur net losses and negative cash flows from operations into the foreseeable future. Successful transition to attaining profitable operations is dependent upon achieving a level of revenues adequate to support the Company's cost structure. The Company has incurred net losses since inception and has relied on its ability to fund its operations through debt and equity financings. These conditions raise substantial doubt about the Company's ability to continue as a going concern. The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern and do not include any adjustments that might result from the outcome of this uncertainty. This basis of accounting contemplates the recovery of the Company's assets and the satisfaction of liabilities in the normal course of business.

The Company believes that its existing cash will be sufficient to fund its operations through the fourth quarter of 2020 at the level of scientific activity described under "Current Scientific Activity; Repurposing of NB-01" in Note 16 – *Subsequent Events*. The Company plans to continue to fund its operations and capital funding needs through a combination of equity offerings, debt financings, or other sources, potentially including collaborations, licenses and

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

other similar arrangements. There can be no assurance that the Company will be able to obtain any sources of financing on acceptable terms, or at all. To the extent that the Company can raise additional funds by issuing equity securities, the Company's stockholders may experience significant dilution. Any debt financing, if available, may involve restrictive covenants that impact the Company's ability to conduct its business.

## **2. Summary of Significant Accounting Policies**

### ***Use of estimates***

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, expenses, and related disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in Company's consolidated financial statements relate to accrued expenses, the fair value of convertible debt and the fair value of stock-based compensation. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgements about the carrying values of assets and liabilities. Actual results could differ from those estimates. Changes in estimates are reflected in reported results in the period in which they become known.

### ***Concentration of Credit Risk***

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash. The Company's cash is principally held by one financial institution in the United States. Amounts on deposit may at times exceed federally insured limits. Management believes that the financial institution is financially sound, and accordingly, minimal credit risk exists with respect to the financial institution. As of December 31, 2019, the Company had deposits in excess of federally insured amounts by \$13.2 million.

### ***Fair Value of Financial Instruments***

The Company's financial instruments include principally cash, prepaid, other current assets, right of use assets, accounts payable, accrued liabilities, lease liabilities, convertible debt and preferred stock. The carrying amounts of prepaid expenses, accounts payable, and accrued liabilities are reasonable estimates of their fair value because of the short maturity of these items. See Note 12 — *Fair Value Measurements*, for further discussion of fair value.

### ***General and Administrative Expenses***

General and administrative expenses consist primarily of personnel-related costs, including salaries and stock-based compensation costs, for personnel in functions not directly associated with research and development activities. Other significant costs include legal fees related to intellectual property and corporate matters and professional fees for accounting and other services.

### ***Research and Development Costs***

Research and development costs are charged to expense as incurred. Research and development expenses are comprised of costs incurred in performing research and development activities, including clinical trial costs, manufacturing costs for both clinical and pre-clinical materials as well as other contracted services, license fees, and other external costs. Nonrefundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity is performed or when the goods have been received, rather than when payment is made, in accordance with Accounting Standards Codification ("ASC") 730, *Research and Development*.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

**Acquired In-Process Research and Development Expenses**

The Company includes costs to acquire or in-license product candidates in acquired in-process research and development expenses. These costs are immediately expensed provided that the payments do not also represent processes or activities that would constitute a “business” as defined under U.S. GAAP or provided that the product candidate has not achieved regulatory approval for marketing and absent obtaining such approval, has no alternative future use. Royalties owed on future sales of any licensed product will be expensed in the period the related revenues are recognized.

**Income Taxes**

The Company utilizes the liability method of accounting for income taxes as required by ASC 740, *Income Taxes*. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and the tax basis of assets and liabilities and are measured using enacted tax rates and laws that will be in effect when the differences are expected to reverse. Currently, there is no provision for income taxes, as the Company has incurred operating losses to date, and a full valuation allowance has been provided on the net deferred tax assets.

**Stock-Based Compensation**

The Company accounts for stock-based compensation in accordance with the provisions of ASC 718, *Compensation — Stock Compensation* (“ASC 718”). Accordingly, compensation costs related to equity instruments granted are recognized at the grant-date fair value. The Company records forfeitures when they occur. Stock-based compensation arrangements to non-employees are accounted for in accordance with the applicable provisions of ASC 718 using a fair value approach.

**Convertible Notes**

The Company evaluates all conversion and redemption features contained in a debt instrument to determine if there are any embedded features that require bifurcation as a derivative or separation as a beneficial conversion feature. The host debt instrument is discounted for the value of any embedded feature that is accounted for as either a derivative or a beneficial conversion feature. The discount is amortized and recorded to interest expense over the term of the host debt instrument using the effective interest method. The Company’s convertible debt contained an embedded beneficial conversion feature that was separated and recorded as additional paid-in capital.

**Fair Value of common stock**

In the absence of a public trading market prior to the Merger, and as a development stage company with no significant revenues, the Company believed that it was appropriate to consider a range of factors to determine the fair value of the common stock at each grant date. In determining the fair value of its common stock, the Company used methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants’ (AICPA) Audit and Accounting Practice Aid Series: *Valuation of Privately Held Company Equity Securities Issued as Compensation* (the “AICPA Practice Guide”). The valuations of Private NeuroBo common stock were prepared using a hybrid method, which used market approaches to estimate the enterprise value of Private NeuroBo. The hybrid method is a probability-weighted expected return method (“PWERM”), where the equity value in one or more of the scenarios is calculated using an option pricing method, or (“OPM”). The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for Private NeuroBo, assuming various outcomes. The common stock value was based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome was discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common stock. A discount for lack of marketability of the common stock was then applied to arrive at an indication of value for the common stock. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company’s securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceeded the

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. In addition, the Company considered various objective and subjective factors, along with input from an independent third-party valuation firm. The factors included (1) the achievement of technical and operational milestones by the Company; (2) the status of strategic relationships with collaborators; (3) the significant risks associated with the Company's stage of development; (4) capital market conditions for life science companies and, in particular, similarly situated, privately held, early-stage life science companies; (5) the Company's available cash, financial condition, and results of operations; (6) the most recent sales of the Company's preferred stock to the extent they were with outside parties; and (7) the preferential rights of the outstanding preferred stock.

**Leases**

On July 1, 2019, the Company adopted Accounting Standards Update ("ASU") No. 2016-02, *Leases* (Topic 842) ("ASU 2016-02"). The Company assesses its contracts at inception to determine whether the contract contains a lease, including evaluation of whether the contract conveys the right to control an explicitly or implicitly identified asset for a period of time. The Company has recognized right-of-use assets and lease liabilities that represent the net present value of future operating lease payments utilizing a discount rate corresponding to the Company's incremental borrowing rate and amortized over the remaining terms of the leases. For operating leases of a short-term nature, i.e., those with a term of less than twelve months, the Company recognizes lease payments as an expense on a straight-line basis over the remaining lease term. See the "Recent Accounting Pronouncements Adopted" below for additional information related to the adoption of this guidance.

**Property and Equipment**

Property and equipment is recorded at cost and reduced by accumulated depreciation. Depreciation expense is recognized over the estimated useful lives of the assets using the straight-line method. The estimated useful life for property and equipment ranges from three to five years. Tangible assets acquired for research and development activities and that have an alternative use are capitalized over the useful life of the acquired asset. Estimated useful lives are periodically reviewed, and when appropriate, changes are made prospectively. When certain events or changes in operating conditions occur, asset lives may be adjusted and an impairment assessment may be performed on the recoverability of the carrying amounts. Maintenance and repairs are charged directly to expense as incurred.

**Foreign Currency Translation**

The foreign subsidiary uses the local currency as the functional currency. The Company translates the assets and liabilities of its foreign operation into U.S. dollars based on the rates of exchange in effect as of the balance sheet date. Expenses are translated into U.S. dollars using average exchange rates for each period. The resulting adjustments from the translation process are included in accumulated other comprehensive loss in the accompanying consolidated balance sheets.

Certain transactions of the Company are settled in foreign currency and are thus translated to U.S. dollars at the rate of exchange in effect at the end of each month. Gains and losses resulting from the translation are included in other income or expense in the accompanying consolidated statements of operations and comprehensive loss.

**Patent Costs**

Costs related to filing and pursuing patent applications are expensed as incurred, as recoverability of such expenditures is uncertain. These costs are included in general and administrative expenses.

**Comprehensive Loss**

Comprehensive loss is comprised of net loss and other comprehensive income or loss. Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

than those with stockholders. Comprehensive loss currently consists of net loss and changes in foreign currency translation adjustments.

**Segment Information**

Operating segments are components of an enterprise for which separate financial information is available and is evaluated regularly by the Company's chief operating decision maker in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker is its Chief Executive Officer. The Company's Chief Executive Officer views the Company's operations and manages its business in one operating segment, which is principally the business of development and commercialization of therapeutics.

**Recent Accounting Pronouncements Adopted**

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that are adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its consolidated financial position or results of operations upon adoption.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation—Stock Compensation (Topic 718) Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"). This new guidance expands the scope of ASC 718, *Compensation—Stock Compensation* (ASC 718) to include share-based payments granted to nonemployees in exchange for goods or services used or consumed in an entity's own operations and supersedes the guidance in ASC 505-50, *Equity-Based Payments to Non-Employees* (ASC 505-50). Equity-classified nonemployee awards are measured on the grant date, rather than on the earlier of (1) the performance commitment date or (2) the date at which the nonemployee's performance is complete. Awards to nonemployees are measured by estimating the fair value of the equity instruments to be issued, rather than the fair value of the goods or services received or the fair value of the equity instruments issued, whichever can be measured more reliably. Entities may use the expected term to measure nonemployee options or elect to use the contractual term as the expected term, on an award-by-award basis. The Company adopted ASU 2018-07 in the first quarter of 2019. There was no impact on the Company's financial statements as a result of the adoption of this guidance.

In February 2016, the FASB issued ASU No. 2016-02, *Leases* ("ASU 2016-02") which establishes new accounting and disclosure requirements for leases. ASU No. 2016-02 requires lessees to classify most leases as either finance or operating leases and to initially recognize a lease liability and right-of-use asset ("ASU 2016-02"). The Company adopted ASU 2016-02 in the third quarter of 2019 using the effective date approach to recognize and measure leases as of the adoption date. The Company has elected to utilize the available practical expedient to not separate lease components from non-lease components as well as the package of practical expedients that allows the Company not to reassess (1) whether any expired or existing contracts as of the adoption date are or contain a lease, (2) lease classification for any expired or existing leases as of the adoption date and (3) initial direct costs for any existing leases as of the adoption date. The Company also made an accounting policy election to recognize lease payment as an expense on a straight-line basis over the lease term for the short-term leases (less than twelve months).

**Recent Accounting Pronouncements Not Yet Adopted**

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement (ASU 2018-13)*. The new guidance modifies the disclosure requirements in Topic 820 as follows:

- Removals: the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; the policy for timing of transfers between levels; and the valuation processes for Level 3 fair value measurements.
- Modifications: for investments in certain entities that calculate net asset value, an entity is required to disclose the timing of liquidation of an investee's assets and the date when restrictions from redemption might lapse only if the



**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

investee has communicated the timing to the entity or announced the timing publicly; and the amendments clarify that the measurement uncertainty disclosure is to communicate information about the uncertainty in measurement as of the reporting date.

- Additions: the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period; and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements.

This guidance is effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty should all be applied prospectively for only the most recent interim or annual period presented in the initial year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. Early adoption is permitted. An entity is permitted to early adopt any removed or modified disclosures upon issuance of ASU 2018-13 and delay adoption of the additional disclosures until their effective date. The Company does not expect that the new guidance will have a material impact on its consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740)* which amends the existing guidance relating to the accounting for income taxes. This ASU is intended to simplify the accounting for income taxes by removing certain exceptions to the general principles of accounting for income taxes and to improve the consistent application of GAAP for other areas of accounting for income taxes by clarifying and amending existing guidance. The ASU is effective for fiscal years beginning after December 15, 2020. The Company does not expect that the adoption of this new guidance will have a material impact on the Company's consolidated financial statements.

### **3. Balance Sheet Detail (in thousands)**

#### **Property and Equipment**

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

Property and equipment consist of the following:

	As of December 31,	
	2019	2018
Research and development equipment	\$ 158	\$ —
Office equipment	59	3
Total property and equipment	217	3
Less accumulated depreciation	(17)	—
Property and equipment, net	\$ 200	\$ 3

Depreciation expense was \$17 and less than \$1 for the years ended December 31, 2019 and 2018, respectively.

**Accrued liabilities**

Accrued liabilities consist of the following:

	December 31,	
	2019	2018
External research and development expenses	\$ 915	\$ —
Payroll related	160	20
Professional services	158	12
Other	189	17
Total	\$ 1,422	\$ 49

**4. Merger**

The Merger, which closed on December 30, 2019, was accounted for as a reverse asset acquisition pursuant to Topic 805, *Business Combinations*, as substantially all of the fair value of the assets acquired were concentrated in a group of similar non-financial assets, and the acquired assets did not have outputs or employees. Because the assets had not yet received regulatory approval, the fair value attributable to these assets was recorded as acquired in-process research and development (“IPR&D”) expenses in the Company’s consolidated statements of comprehensive loss for the year ended December 31, 2019.

**Contingent Value Rights Agreement**

On December 30, 2019, in connection with the Merger, the Company, Grand Rapids Holders’ Representative, LLC, as representative of the Company’s stockholders prior to the Merger, and Computershare Inc. and Computershare Trust Company, N.A. as the rights agent, entered into a Contingent Value Rights Agreement (the “CVR Agreement”). The Company’s stockholders of record as of immediately prior to the effective date of the Merger received one contingent value right (“CVR”) entitling such holders to receive, in the aggregate, 80% of the Gross Consideration less other Permitted Deductions (each as defined in the CVR Agreement) received during the 15-year period after the closing of the Merger (the “CVR Term”) from the grant, sale or transfer of rights to Gemcabene (other than a grant, sale or transfer of rights involving a sale or disposition of the post-Merger combined company) that is entered into during the 10-year period after the closing of the Merger or pursuant to the Beijing SL Agreement (as defined in Note 6 – *License Agreement* below), but not including the \$2.5 million upfront gross payment pursuant to the Beijing SL Agreement. Under the CVR Agreement, the Company agreed to commit up to \$1 million to support the further development of Gemcabene, to be funded following execution of the Beijing SL Agreement and the receipt by the Company of the \$2.5 million upfront gross payment payable under the Beijing SL Agreement, which the Company received in October 2019. The CVRs are not transferable, except in certain limited circumstances, will not be certificated or evidenced by any instrument, will not accrue interest and will not be registered with the U.S. Securities and Exchange Commission or

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

listed for trading on any exchange. The CVR Agreement will continue in effect until the later of the end of the CVR Term and the payment of all amounts payable thereunder. As of the December 30, 2019, the Merger closing date, and December 31, 2019, no milestones had been accrued as there were no potential milestones yet considered probable.

The total purchase price paid in the Merger has been allocated to the net assets acquired and liabilities assumed based on their fair values as of the completion of the Merger. The following summarizes the purchase price paid in the Merger (in thousands, except share and per share amounts):

Number of shares of the combined organization owned by the Company's pre-Merger stockholders	594,850
Multiplied by the fair value per share of GEMP's common stock (1)	\$ 7.50
Fair value of common stock issued to affect the Merger	4,461
Fair value of warrants issued to affect the Merger	4
Transaction costs	7,674
Purchase price	\$ 12,139

- (1) Based on the last reported sale price of the Gemphire's common stock on the Nasdaq Capital Market on December 30, 2019, the closing date of the Merger, and gives effect to the Reverse Stock Split.

The allocation of the purchase price is as follows:

Cash acquired	\$ 1,525
Net liabilities assumed	(1,537)
IPR&D (2)	12,151
Purchase price	\$ 12,139

- (2) Represents the pre-Merger research and development projects of Gemphire which were in-process, but not yet completed, and which the Company plans to advance post-Merger. This consists primarily of technology associated with the Gemcabene drug compound. Current accounting standards require that the fair value of IPR&D projects acquired in an asset acquisition with no alternative future use be allocated a portion of the consideration transferred and charged to expense on the acquisition date. The acquired assets did not have outputs or employees.

## 5. Commitments and Contingencies (in thousands)

### Operating Leases

#### Boston Leases

In April 2018, the Company entered a non-cancelable operating lease for its headquarters in Boston, MA (the "Boston Lease"). The lease was subsequently amended, and the term was extended to August 2019 with an option to extend the term on a month-to-month basis. The Company exercised the option and extended the lease term on a month-to-month basis through January 15, 2020. The lease is subject to base lease payments and additional charges for common costs related to usage of shared space. Due to its short-term nature, the Company recognizes lease payments as an expense on a straight-line basis over the remaining lease term. For the years ended December 31, 2019 and 2018, the Boston Lease expense was \$134 and \$68, respectively.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

Under ASC 840 disclosure requirements, prior to the adoption of ASC 842, the future minimum lease payments at December 31, 2018 were as follows (in thousands):

		December 31,
2019	\$	57
Total minimum payments	\$	57

In September 2019, as amended, the Company entered a non-cancelable operating lease for its new corporate headquarters located in Boston, Massachusetts (“New Boston Lease”). The agreement, effective February 1, 2020, has a one-year term, and rental costs of \$21 per month prior to the application of certain rent concessions granted by the landlord in the amount of \$32. No assets and liabilities were recognized for the New Boston Lease at December 31, 2019.

Future minimum lease payments at December 31, 2019 were as follows under the New Boston Lease (in thousands):

		December 31,
2020	\$	204
2021		21
Total minimum payments	\$	225

**Lease in Korea:**

In May 2019, the Company entered a non-cancelable operating lease for its new facility in Korea (the “Korea Lease”). The initial lease term is five years with an option to renew for an additional five-year term. The lease commenced on July 2, 2019 and expires on July 1, 2024. The operating lease is subject to a deposit, base rent payments and additional charges for utilities and other common costs. In the third quarter of 2019, the Company recognized a right-of-use asset of \$126 as well as a lease liability of \$20 in other current liabilities and \$106 in other non-current liabilities in conjunction with the commencement of the Korea Lease. The Company’s lease liability represents the net present value of future lease payments utilizing a discount rate of 10%, which corresponds to the Company’s incremental borrowing rate. As of December 31, 2019, the weighted average remaining lease term was 4.5 years. For the year ended December 31, 2019, the Company recorded non-cash expense of \$10 related to the Korea Lease. During the year ended December 31, 2019, the Company made cash payments of \$16 for amounts included in the measurement of lease liabilities.

The following table reconciles the undiscounted lease liabilities to the total lease liabilities recognized on the consolidated balance sheet as of December 31, 2019 (in thousands):

		As of December 31,
2020		32
2021		32
2022		32
2023		32
2024		16
Total lease payments	\$	144
Less effect of discounting		(28)
Total	\$	116
Short-term portion		(22)
Long-term portion	\$	94

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

**Xiehecheng Cultivation Service Agreement**

On September 1, 2018, the Company entered into a cultivation service agreement with Xiehecheng Chinese Herm Limited Corporation for the cultivation of two plants used to manufacture the Company's lead clinical asset, NB-01.

As of December 31, 2019, future minimum payments under the agreement, which is cancellable annually at the end of each research year, are as follows (in thousands):

	December 31,
2020	\$ 220
2021	220
2022	220
	<u>660</u>

**Pfizer License Agreement**

Upon the close of the Merger, the exclusive license agreement with Pfizer Inc. ("Pfizer") for the clinical product candidate Gemcabene (the "Pfizer Agreement") was assumed by the Company. Under the Pfizer Agreement, in exchange for this worldwide exclusive right and license to certain patent rights to make, use, sell, offer for sale and import the clinical product Gemcabene, the Company has agreed to certain milestone and royalty payments on future sales.

The Company agreed to make milestone payments totaling up to \$37 million upon the achievement of certain milestones, including the first new drug application (or its foreign equivalent) in any country, regulatory approval in each of the United States, Europe and Japan, the first anniversary of the first regulatory approval in any country, and upon achieving certain aggregate sales levels of Gemcabene. Future milestone payments under the Pfizer Agreement, if any, are not expected to begin for at least several years and extend over a number of subsequent years.

The Company also agreed to pay Pfizer tiered royalties on a country-by-country basis based upon the annual amount of net sales, as specified in the Pfizer Agreement, until the later of: (a) five (5) years after the first commercial sale in such country; (b) the expiration of all regulatory or data exclusivity for Gemcabene in such country; and (c) the expiration or abandonment of the last valid claim of the licensed patents, including any patent term extensions or supplemental protection certificates in such country (collectively, the Royalty Term). Under the Pfizer Agreement, the Company is obligated to use commercially reasonable efforts to develop and commercialize Gemcabene.

None of the future milestone or royalty payments were triggered as of December 31, 2019.

The Pfizer Agreement will expire upon expiration of the Royalty Term. On expiration (but not earlier termination), the Company will have a perpetual, exclusive, fully paid-up, royalty-free license under the licensed patent rights and related data to make, use, develop, commercialize, import and otherwise exploit the clinical product candidate Gemcabene. Either party may terminate the Pfizer Agreement for the other party's material breach following a cure period or immediately upon certain insolvency events relating to the other party. Pfizer may immediately terminate the Pfizer Agreement in the event that (i) the Company or any of its affiliates or sublicensees contests or challenges, or supports or assists any third party to contest or challenge, Pfizer's ownership of or rights in, or the validity, enforceability or scope of any of the patents licensed under the Pfizer Agreement or (ii) the Company or any of its affiliates or sublicensees fails to achieve the first commercial sale in at least one country by April 16, 2024.

Furthermore, upon termination of the Pfizer Agreement by Pfizer for any of the foregoing reasons, the Company grants Pfizer a non-exclusive, fully paid-up, royalty free, worldwide, transferrable, perpetual and irrevocable license to use any intellectual property rights arising from the development or commercialization of Gemcabene by the Company and any

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

trademarks identifying Gemcabene and agrees to transfer regulatory filings and approvals to Pfizer or permit Pfizer to cross-reference and rely on such regulatory filings and approvals for Gemcabene. The Company may terminate the Pfizer Agreement for convenience upon 90 days' written notice and payment of an early termination fee of \$3.0 million.

As of December 31, 2019, there was sufficient uncertainty with regard to both the outcome of the clinical trials and the ability to obtain sufficient funding to support any of the cash milestone payments under the license agreement, and as such, no liabilities were recorded related to the Pfizer Agreement.

**Contingencies**

From time to time, the Company may be subject to various claims and suits arising in the ordinary course of business. The Company does not expect that the resolution of these matters will have a material adverse effect on its financial position or results of operations.

**6. License Agreement**

***Beijing SL License and Collaboration Agreement***

Upon the close of the Merger, the License and Collaboration Agreement (the "Beijing SL Agreement") with Beijing SL Pharmaceutical Co., Ltd. ("Beijing SL") was assumed by the Company, pursuant to which the Company granted Beijing SL an exclusive royalty-bearing license to research, develop, manufacture and commercialize pharmaceutical products comprising, as an active ingredient, Gemcabene in mainland China, Hong Kong, Macau and Taiwan (each, a "region," and collectively, the "Territory"). The terms of the agreement include payments based upon achievement of milestones and royalties on net product sales. Under the Beijing SL Agreement, the Company has variable consideration in the form of milestone payments. As of December 31, 2019, no revenue under the Beijing SL Agreement has been recognized.

Under the terms of the Beijing SL Agreement, Beijing SL will be responsible, at its expense, for developing and commercializing products containing Gemcabene (each, a "Licensed Product") in the Territory, with certain assistance from the Company. To the extent mutually agreed to in writing, the Company and Beijing SL will collaborate on the Phase 3 clinical trial for homozygous familial hypercholesterolemia or other clinical trials with the Company as the sponsor designed to enroll patients both inside and outside the Territory (a "Global Study"), but Beijing SL will be responsible, at its expense, for the conduct of any Global Study to the extent solely in the Territory, subject to the Company's final decision making authority, and the Company will be responsible, at its expense, for the conduct of any Global Study to the extent solely outside of the Territory. Under a territory development plan, the parties shall develop Licensed Products with respect to the Territory. Beijing SL will be responsible for development activities, including non-clinical and clinical studies directed at obtaining regulatory approval of the Licensed Product in the Territory. Beijing SL has agreed to use commercially reasonable efforts to commercialize the Licensed Products for each indication that receives regulatory approval in the Territory and shall prepare and present a commercialization plan that shall be subject to approval by the joint steering committee.

Pursuant to the Beijing SL Agreement, Beijing SL was to make a non-refundable upfront gross payment of \$2.5 million to the Company within 45 days of the effective date of the Beijing SL Agreement; the upfront payment was received in October 2019 and such funds were fully expended prior to the close of Merger. Additionally, with respect to each Licensed Product, the Company is eligible to receive (i) payments for specified developmental and regulatory milestones (including submission of a new drug application to China's National Medical Product Administration, dosing of the first patient in a phase 3 clinical trial in mainland China and regulatory approval for the first and each additional indication of a Licensed Product in the Territory) totaling up to \$6 million in the aggregate and (ii) payments for specified global net sales milestones of up to \$20 million in the aggregate multiplied by the ratio of the net sales of a Licensed Product sold by Beijing SL in the Territory divided by the global net sales of a Licensed Product, which net sales milestone payments are payable once, upon the first achievement of such milestone.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

Beijing SL is also obligated to pay the Company tiered royalties ranging from the mid-teens to twenty percent on the net sales of all Licensed Products in the Territory until the latest of (a) the date on which any applicable regulatory exclusivity with respect to such Licensed Product expires in such region, (b) the expiration or abandonment of the last valid patent claim or joint patent claim covering such Licensed Product in each region and (c) the fifth anniversary of the first commercial sale of such Licensed Product in such region (the "Royalty Term"). Future milestone payments under the Beijing SL Agreement, if any, are not expected to begin for at least one year and will extend over a number of subsequent years. The Company cannot determine the date on which Beijing SL's potential royalty payment obligations to the Company would expire because Beijing SL has not yet developed any Licensed Products under the Beijing SL Agreement and therefore the Company cannot at this time identify the date of the first commercial sale or the periods of any regulatory exclusivity or patent claims with respect to any Licensed Product.

On a Licensed Product-by-Licensed Product and region-by-region basis upon the expiration of the Royalty Term, the license granted to Beijing SL shall be deemed perpetual, fully paid-up and royalty free with respect to such Licensed Product in such region. Either party may terminate the Agreement (x) with written notice in the event of the other party's material breach following a cure period or (y) if the other party becomes subject to certain insolvency proceedings. In addition, the Company may terminate the agreement in its entirety if Beijing SL or its affiliates or sublicensees commence a proceeding challenging the validity, enforceability or scope of any of the Company's patents.

To the extent rights granted to Beijing SL under the Beijing SL Agreement are controlled by the Company pursuant to the Pfizer Agreement, such rights are subject to the terms and conditions of such agreement with Pfizer, and Beijing SL has agreed to comply with such terms and conditions.

The Beijing SL Agreement contemplates that Beijing SL and the Company shall, no later than twelve months prior to the anticipated date of the first commercial sale of a Licensed Product, if any, negotiate in good faith and execute a commercial supply agreement, pursuant to which Beijing SL shall purchase from the Company, and the Company shall use commercially reasonable efforts to supply, Gemcabene or Licensed Product for clinical or commercial purposes, as applicable, until manufacturing and regulatory transfers are complete.

Each of the Company and Beijing SL has agreed to indemnify the other party against certain losses and expenses relating to the development or commercialization of a Licensed Product by the indemnifying party, the negligence or willful misconduct of the indemnifying party or its directors, officers, employees or agents or a breach of the indemnifying party's representations, warranties or covenants.

#### **7. Debt (in thousands, except share and per share data)**

In February 2018, the Company received a total of \$500 from the issuance by Private NeuroBo of convertible promissory notes (the "Convertible Notes") with an original maturity date of December 31, 2022. Upon the effective date of the Merger, the Convertible Notes were converted into 1,565,300 shares of common stock.

Prior to conversion, the lenders had the option to convert all of the then-unpaid note balance including principal and accrued but unpaid interest into common stock, at a conversion price of \$0.40 per share after the earlier of (A) the closing of a firmly underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale of common stock for the account of the Company in the United States of America or similar registration in the Republic of Korea, or (B) January 1, 2020. On October 23, 2019, the Convertible Notes were amended (the "Amended Convertible Notes") to require mandatory conversion upon the completion of a reverse merger transaction based on the then-unpaid note balance including principal and accrued but unpaid interest into common stock, at a conversion price of \$0.40 per share. The amendment was accounted for as an extinguishment of the Convertible Notes. As a result of the extinguishment, the Amended Convertible Notes were recorded at their fair value in the amount of \$11.2 million, the underlying beneficial conversion feature was reacquired at its intrinsic value of \$9.8 million and the remaining debt discount of \$0.3 million was reversed. Considering that the Amended Convertible Notes were issued at a substantial premium, the difference between the fair value of the Amended Convertible Notes and principal amount of the Convertible Notes was recorded as a credit to additional paid in capital in the amount of \$10.6 million. Consequently, the Company recorded a loss on the extinguishment in the amount of \$1.1 million which was reflected in the consolidated statements of operations and comprehensive loss.



**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

The Convertible Notes and Amended Convertible Notes (herein collectively referred to as the “Notes”) accrued interest at a rate of 5.00% per annum. The Company recorded interest on principal of \$25 and \$23 for the years ended December 31, 2019 and 2018, respectively.

The fair value of the common stock, as determined using an option pricing model consistent with the AICPA Practice Guide, was in excess of the conversion price of the Convertible Notes. Accordingly, the Company initially recorded a \$401 beneficial conversion feature upon issuance based on the intrinsic value of the conversion feature, which resulted in a debt discount with a corresponding amount to additional paid in capital. Subsequent to the issuance of the Convertible Notes, an additional beneficial conversion feature related to paid-in-kind interest was recorded in the amount of \$104.

Debt discount amortization related to the beneficial conversion feature was being amortized over the life of the Convertible Notes using the effective interest method as additional interest expense. Upon the conversion of the Convertible Notes into common stock on December 30, 2019, the remaining debt discount was written off to interest expense. The Company recorded interest expense of \$104 and \$18 for the years ended December 31, 2019 and 2018, respectively, related to the debt discount.

## **8. Stockholders’ Equity (Deficit)**

### ***Common Stock***

The voting, dividend, and liquidation rights of the holders of the common stock are subject to and qualified by the rights, powers, and preferences of the holders of the preferred stock when outstanding. The holders of the common stock are entitled to one vote for each share of common stock held at all meetings of stockholders.

### ***Dividend Rights***

Common stock holders are entitled to receive dividends at the sole discretion of the board of directors of the Company. There have been no dividends declared on common stock as of December 31, 2019.

### ***Voting Rights***

The holders of common stock are entitled to one vote for each share of common stock along with all other classes and series of stock of the Company on all actions to be taken by the stockholders of the Company, including actions that would amend the certificate of incorporation of the Company to increase the number of authorized shares of the common stock.

### ***Liquidation Rights***

In the event of any liquidation, dissolution, or winding-up of the Company, the holders of common stock shall be entitled to share in the remaining assets of the Company available for distribution post preferential distributions made to holders of the Company’s preferred stock.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

**Warrants**

In connection with the Merger, the following Gemphire warrants were assumed by the Company upon the close of the Merger.

Exercise Price	Number Outstanding	Weighted Average Remaining Contractual life (Years)	Number Exercisable at December 31, 2019
\$ 186.75	1,440	8.6	1,440
\$ 260.00	39,128	2.2	39,128
Total	40,568		40,568

**9. Redeemable Preferred Stock (in thousands, except share and per share data)**

Upon close of the Merger on December 30, 2019, 8,264,613 shares of Private NeuroBo Series A and Series B redeemable preferred stock (as adjusted for the Exchange Ratio) were converted to Private NeuroBo common stock on a 1:1 basis. Previously in April 2018, Private NeuroBo sold and issued in a private placement 4,801,020 shares of Series A redeemable convertible preferred stock (as adjusted for the Exchange Ratio) at \$3.50 per share, raising \$16,800 in gross proceeds. Subsequently in May and June 2019, Private NeuroBo sold and issued 3,463,593 Series B redeemable convertible preferred stock (as adjusted for the Exchange Ratio) at \$7.00 per share, raising \$24,240 in gross proceeds.

As of December 31, 2018, the redeemable preferred stock was classified outside of stockholders' equity (deficit) because the shares contained certain redemption features that were not solely within the control of the Company. Private NeuroBo did not adjust the carrying values of the convertible preferred stock to the liquidation preferences of such shares because the occurrence of any such change of control event was not deemed probable.

**10. Stock-Based Compensation (in thousands)**

Stock-based compensation expense was included in general and administrative and research and development costs as follows in the accompanying statements of comprehensive loss (in thousands):

	Year Ended December 31,	
	2019	2018
Research and development	\$ 75	\$ -
General and administrative	43	-
Total stock-based compensation	\$ 118	\$ -

**Stock Options****2018 Stock Plan**

In December 2018, Private NeuroBo adopted the NeuroBo Pharmaceuticals, Inc. 2018 Stock Plan (the "2018 Plan") and in December 2019 in connection with the Merger, the Company adopted the 2019 Equity Incentive Plan (the "2019 Plan"). 2018 Plan options to purchase Private NeuroBo common stock outstanding as of immediately prior to the Merger were assumed by the Company upon the Merger and became options to purchase the Company's common stock, as adjusted by the Exchange Ratio. The 2018 Plan and 2019 Plan provide for the grant of stock options, restricted stock and other equity awards of the Company's common stock to employees, officers, consultants, and directors. Options expire

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

within a period of not more than ten years from the date of grant. During the year ended December 31, 2019, 960,204 stock options were granted to employees and non-employee consultants with both service and performance conditions. The options granted with service conditions vest quarterly over a period between one year and fifteen months. There were no options granted under either plan during the year ended December 31, 2018.

As of December 31, 2019, 3,000,000 and 1,497,891 shares were authorized under the 2019 Plan and 2018 Plan, respectively, for issuance under these plans.

The following table summarizes the Company's stock option plan activity for the years ended December 31, 2019 as follows:

	Number of Options	Weighted Average Exercise Price	Weighted- Average Remaining Contractual Term (years)	Aggregate Intrinsic Value(1) (in thousands)
Outstanding at December 31, 2018	—	\$ —	—	\$ —
Granted	960,204	\$ 0.63	—	—
Exercised	(1,143)	\$ 0.63	—	—
Forfeited/Cancelled	(325,784)	\$ 0.63	—	—
Outstanding at December 31, 2019	633,277	\$ 0.63	9.1	\$ 5,142
Vested and expected to vest at December 31, 2019	267,485	\$ 0.63	9.1	\$ 2,172
Options exercisable at December 31, 2019	231,478	\$ 0.63	9.1	\$ 1,880

(1) The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the fair value of our common stock as of \$8.75 per share at December 31, 2019.

The weighted average fair value per share of options granted during the year ended December 31, 2019 was \$0.50.

The Company measures the fair value of stock options with service-based and performance-based vesting criteria to employees, consultants and directors on the date of grant using the Black-Scholes option pricing model. The Company does not have history to support a calculation of volatility and expected term. As such, the Company has used a weighted-average volatility considering the volatilities of several guideline companies.

For purposes of identifying similar entities, the Company considered characteristics such as industry, length of trading history, and stage of life cycle. The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. The average expected life of the options was determined based on the mid-point between the vesting date and the end of the contractual term according to the "simplified method" as described in Staff Accounting Bulletin 110. The risk-free interest rate is determined by reference to implied yields available from U.S. Treasury securities with a remaining term equal to the expected life assumed at the date of grant. The Company records forfeitures when they occur.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

The weighted-average assumptions used in the Black-Scholes option-pricing model are as follows:

	<u>Year Ended</u> <u>December 31,</u> <u>2019</u>
Expected stock price volatility	75.0 %
Expected life of options (years)	10.0
Expected dividend yield	0 %
Risk free interest rate	2.75 %

*Evergreen provision*

Under the 2019 Plan, the shares reserved automatically increase on January 1st of each year, for a period of not more than ten years commencing on January 1, 2020 and ending on (and including) January 1, 2029, to an amount equal to the lesser of 4% of the common shares outstanding as of January 1<sup>st</sup>, or a lesser amount as determined by the Board. The aggregate maximum number of shares of common stock that may be issued pursuant to the 2019 Plan under the evergreen provision is 6,680,000 shares of common stock. On January 1, 2020, 623,708 shares were added to the 2019 Plan as a result of the evergreen provision.

During the year ended December 31, 2019, 231,478 stock options vested. The weighted average fair value per share of options vesting during the year ended December 31, 2019 was \$0.50. During the year ended December 31, 2019, 325,784 stock options were forfeited. As of December 31, 2019, 3,863,471 shares in the aggregate were available for future issuance under the 2019 Plan and 2018 Plan.

Unrecognized stock-based compensation cost for the stock options issued under the both the Company's 2019 Plan and 2018 Plan was \$17 as of December 31, 2019. The unrecognized stock-based expense is expected to be recognized over a weighted average period of 0.3 years.

#### **11. Net Loss Per Common Share**

Basic net loss per share is computed by dividing the net loss by the weighted-average number of common shares outstanding for the period, without consideration for potentially dilutive securities if their effect is antidilutive. Diluted net loss per share is computed by dividing the net loss by the weighted average number of shares of common stock and dilutive common stock equivalents outstanding for the period determined using the treasury stock and if-converted methods. Dilutive common stock equivalents are comprised of convertible preferred stock, convertible notes payable, options outstanding under the Company's stock option plan and warrants. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding as inclusion of the potentially dilutive securities would be antidilutive.

The following potential common shares were not considered in the computation of diluted net loss per share as their effect would have been anti-dilutive:

	<u>Year ended</u>	
	<u>2019</u>	<u>2018</u>
Redeemable preferred stock	—	4,801,020
Convertible notes	—	1,476,047
Stock options	633,277	—
Warrants	40,568	—

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

**12. Fair Value Measurements**

The Company follows accounting guidance that emphasizes that fair value is a market-based measurement, not an entity specific measurement. Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” Fair value measurements are defined on a three level hierarchy:

**Level 1 inputs:** Unadjusted quoted prices for identical assets or liabilities in active markets;

**Level 2 inputs:** Quoted prices for similar assets and liabilities in active markets, quoted prices in markets that are not active, or inputs which are observable, whether directly or indirectly, for substantially the full term of the asset or liability;

**Level 3 inputs:** Unobservable inputs that reflect the Company’s own assumptions about the assumptions market participants would use in pricing the asset or liability in which there is little, if any, market activity for the asset or liability at the measurement date.

There were no financial instruments measured on a recurring basis as of December 31, 2019 and 2018 and on a non-recurring basis for any of the periods presented.

**13. Income Taxes**

The effective tax rate for the years ended December 31, 2019 and 2018 was zero percent. A reconciliation of income tax computed at the statutory federal income tax rate to the provision (benefit) for income taxes included in the accompanying consolidated statements of operations and comprehensive loss is as follows:

	For the Year Ended December 31,	
	2019	2018
Income tax (benefit) provision at federal statutory rate	21.0 %	21.0 %
State income tax, net of federal benefit	6.3	6.3
Acquired in-process research and development expense	(15.6)	—
Valuation allowance	(10.4)	(27.9)
Convertible notes	(1.6)	—
Research credits	0.8	1.0
Other	(0.5)	(0.4)
Effective tax rate	— %	— %

Loss before provision for taxes for the years ended December 31, 2019 and 2018 consisted of the following (in thousands):

	Year Ended December 31,	
	2019	2018
Loss before Income taxes:		
Domestic	\$ (20,935)	\$ (15,313)
Foreign	(377)	(216)
	<u>\$ (21,312)</u>	<u>\$ (15,529)</u>

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

The components of income tax provision (benefit) consisted of the following for the years ended December 31, 2019 and 2018 (in thousands) :

	Year Ended December 31,	
	2019	2018
<b>Tax Provision (Benefit):</b>		
<b>Current</b>		
Domestic	\$ —	\$ —
Foreign	—	—
<b>Total current tax provision (benefit)</b>	<b>—</b>	<b>—</b>
<b>Deferred</b>		
Domestic	(7,085)	(4,283)
Foreign	(94)	(54)
<b>Total deferred tax provision (benefit)</b>	<b>(7,179)</b>	<b>(4,337)</b>
Change in valuation allowance - Domestic	7,085	4,283
Change in valuation allowance - Foreign	94	54
<b>Total tax provision (benefit)</b>	<b>\$ —</b>	<b>\$ —</b>

Significant components of the Company's deferred tax assets and liabilities are summarized in the tables below as of (in thousands):

	Year Ended December 31,	
	2019	2018
<b>Deferred tax assets:</b>		
Federal and state operating loss carryforwards	\$ 8,805	\$ 1,791
Foreign operating loss carryforwards	148	54
Acquired intangibles	2,167	2,315
Stock-based compensation	32	—
Lease liability	32	—
Other	29	—
Research and development credit carryforwards	341	185
	11,554	4,345
Valuation allowance - Domestic	(11,372)	(4,288)
Valuation allowance - Foreign	(148)	(54)
<b>Total deferred tax assets, net of valuation allowance</b>	<b>34</b>	<b>3</b>
<b>Deferred tax liabilities:</b>		
ROU asset	(32)	—
Other	(2)	(3)
<b>Net deferred tax assets</b>	<b>\$ —</b>	<b>\$ —</b>

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

As of December 31, 2019 and 2018, the Company had deferred tax assets of approximately \$11.6 million and \$4.3 million, respectively. Realization of the deferred tax assets is primarily dependent upon future taxable income, if any, the amount and timing of which are uncertain. The Company has had significant pre-tax losses since its inception. The Company has not yet generated revenues and faces significant challenges to becoming profitable. Accordingly, the deferred tax assets have been fully offset by a valuation allowance of \$11.6 million and \$4.3 million as of December 31, 2019 and 2018, respectively. U.S. deferred tax assets will continue to require a valuation allowance until the Company can demonstrate their realizability through sustained profitability or another source of income.

As of December 31, 2019 and 2018, the Company's federal net operating loss carryforwards were approximately \$32.1 million and \$6.5 million, respectively. The Company had federal research credit carryforwards as of December 31, 2019 and 2018 of approximately \$0.1 million. The federal net operating loss incurred prior to January 1, 2018 will begin to expire in 2034 and tax credit carryforwards will begin to expire in 2038 if not utilized. Federal net operating losses incurred after December 31, 2017 will not expire. As of December 31, 2019 and 2018, the Company had state net operating loss carryforwards of approximately \$32.5 million and \$6.7 million, respectively. The Company had state research credit carryforwards of \$0.2 million and \$0.1 million as of December 31, 2019 and 2018, respectively. The state net operating loss carryforwards will begin to expire in 2026, if not utilized, and the state research credit carryforwards will begin to expire in 2033 if not utilized. Lastly, the Company had foreign net operating loss carryforwards of approximately \$0.6 million and \$0.2 million as of December 31, 2019 and 2018, respectively. The foreign net operating loss carryforwards will begin to expire in 2028.

Utilization of the net operating loss carryforwards and credits may be subject to a substantial annual limitation due to the ownership change limitations provided by Section 382 of the Internal Revenue Code of 1986, as amended, and similar state provisions. Generally, in addition to certain entity reorganizations, the limitation applies when one or more "5-percent shareholders" increase their ownership, in the aggregate, by more than 50 percentage points over a 36-month testing period, or beginning the day after the most recent ownership change, if shorter. The annual limitation may result in the expiration of net operating losses and credits before utilization. As a result of the Merger, the Company recorded deferred tax assets of \$4.9 million which are fully offset by a valuation allowance. The \$4.9 million net deferred tax assets do not include federal and state net operating loss carryforwards and federal research and development credit carryforwards that are estimated to expire under Internal Revenue Code Sections 382 and 383 as a result of the Merger.

The Company recognizes interest and/or penalties related to uncertain tax positions in income tax expense. There were no uncertain tax positions as of December 31, 2019 and 2018, and as such, no interest or penalties were recorded to income tax expense.

The Company's corporate returns are subject to examination beginning with the 2016 tax year for federal and state jurisdictions, and beginning with the 2018 tax year for one foreign jurisdiction.

#### **14. Related Party Transactions (in thousands, except per share data)**

##### ***Agreements with Dong-A ST***

###### License Agreement

In January 2018, Private NeuroBo entered into an exclusive license agreement with Dong-A ST, a holder of more than 5% of Private NeuroBo's capital stock, for an exclusive, royalty-bearing, worldwide (except for the Republic of Korea) license to make, use, offer to sell, sell and import products covered by certain Dong-A ST intellectual property rights in its proprietary compound designated as DA-9801 (NB-01). In connection with obtaining the license, Private NeuroBo paid Dong-A ST total consideration of \$2.3 million consisting of a one-time upfront license fee and shares of Private NeuroBo common stock. Private NeuroBo also entered into an Acquisition Agreement in January 2018 and a Manufacturing and Supply Agreement in September 2018 with Dong-A ST, both of which are related to Private NeuroBo's license agreement with Dong-A ST.

###### Acquisition Agreement

On January 18, 2018, Private NeuroBo entered into an asset acquisition agreement, as amended, with Dong-A ST for NB-02 for the treatment of neurodegenerative disorders. Under the terms of the Acquisition Agreement, NeuroBo has the rights to file an investigational new drug application, to conduct further clinical trials, and then produce,



**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

commercialize, and sell pharmaceuticals world-wide using NB-02. NeuroBo paid total consideration in cash and shares of NeuroBo common stock of \$6.5 million in consideration for this compound.

Manufacturing Agreement

On September 28, 2018, Private NeuroBo entered into a five year manufacturing and supply agreement with Dong-A ST for manufacturing and supply of NB-01 drug substance and placebos for the purpose of research and development to be used in Phase 3 clinical trials. Under the terms of the Manufacturing Agreement, Dong-A ST has agreed to produce for NeuroBo a specified number of tablets of the NB-01 drug substance and placebos at a supply price to be determined at the time of each individual order. In addition, prices were set for stability testing of the NB-01 drug substance and placebo. The Company recognized approximately \$383 of product manufacturing related costs within research and development expenses for the year ended December 31, 2018 and \$314 for the year ended December 31, 2019.

The Manufacturing Agreement will automatically terminate in the event that the license agreement with Dong-A ST is terminated for any reason. In addition, each of Dong-A ST and Private NeuroBo may terminate the Manufacturing Agreement (1) upon the material breach by the other party, if the breach is not cured within a specified number of days after receiving notice from the terminating party, or if the breach cannot reasonably be cured within such period and the breaching party has not started to remedy the breach within such period and diligently endeavored to cure the breach within a reasonable time thereafter, or (2) in the event that (i) the other party is the subject of a petition for bankruptcy, reorganization, or arrangement and the same is not dismissed within thirty days thereof, (ii) a receiver or trustee is appointed for all or a substantial portion of the assets of the other party, or (iii) the other party makes an assignment for the benefit of its creditors.

**Convertible Promissory Note Financing**

In February 2018, Private NeuroBo sold to investors an aggregate of \$500 of convertible promissory notes. See Note 7-*Debt*.

The participants in the convertible note financing described above included the following holders of more than 5% of Private NeuroBo's capital stock and Private NeuroBo directors (in thousands).

<b>Related Party</b>	<b>Original Principal Amount of Convertible Notes Purchase</b>	
JK BioPharma Solutions, Inc.	\$	400
Roy Freeman, M.D.	\$	100

Jeong Gyun Oh, a NeuroBo director, is President and CEO of JK Biopharma Solutions, Inc.. JK Biopharma Solutions, Inc. currently assists the Company with certain activities that are primarily related to linguistic translations. All work done to date has been done without compensation. However, Private NeuroBo issued a \$32 payment to JK BioPharma Solutions, Inc. in February 2018 as reimbursement for payments made to Private NeuroBo vendors during late 2017 and early 2018.

Roy Freeman, M.D. is a co-founder and was a Private NeuroBo director at the time of the note purchase.

In October 2019, JK BioPharma Solutions, Inc. assigned \$200 of its notes to the following holders (in thousands):

<b>Related Party</b>	<b>Principal Amount of Convertible Notes Assigned</b>	
The E&Healthcare Investment Fund II	\$	116
The E&Healthcare Investment Fund No. 6	\$	32

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

The E&Healthcare Investment Fund No. 7	\$	52
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E&Investment is the sole general partner of The E&Healthcare Investment Fund II, The E&Healthcare Investment Fund No. 6 and The E&Healthcare Investment Fund No. 7 and has voting power over the shares held by each fund. Na Yeon (Irene) Kim, a Private NeuroBo director, is the Chief Executive Officer of E&Investment, and as such has voting and investment control over the shares held by E&Investment and its affiliated funds.

The Convertible Notes were converted into shares of Private NeuroBo common stock in connection with the Merger.

***Payment of Stockholder Legal Expenses***

On December 30, 2019, the board of directors of the Company approved the payment or reimbursement of legal fees and costs incurred jointly and severally by certain stockholders of NeuroBo, including E&Healthcare Fund II, E&Healthcare Fund No. 6, E&Healthcare Fund No. 7 (collectively, the “E&Healthcare Funds”), JK BioPharma Solutions, Inc. and Eun Soo Kang, in connection with the Merger and certain other matters directly related to the Company’s business that required resolution in connection with the closing of the Merger. The total amount of such legal fees and costs was \$227,000 through December 31, 2019 and was accounted as Merger transaction costs – see Note 4 – *Merger*. Na Yeon (Irene) Kim, is the Chief Executive Officer of the sole general partner of each of the E&Healthcare Funds, and as such may be deemed to have an indirect interest in such matters. Jeong Gyun Oh is the President and Chief Executive Officer of JK BioPharma Solutions, Inc. and the spouse of Eun Soo Kang, and as such may be deemed to have an indirect interest in such matters.

**15. Defined Contribution Plan**

The Company adopted a 401(k) defined contribution plan in November 2018, effective as of January 1, 2019, for all employees over age 21. Employees can defer up to 90% of their compensation through payroll withholdings into the plan subject to federal law limits. Discretionary employer matches vest over a six-year period beginning on the second anniversary of an employee’s date of hire. Employee contributions and any employer matching contributions made to satisfy certain non-discrimination tests required by the Internal Revenue Code are 100% vested upon contribution.

No matching contributions were made during the years ended December 31, 2019 and 2018.

**16. Subsequent Events (in thousands)**

***Current Scientific Activity; Repurposing of NB-01***

In light of the present business environment, including the impact of the COVID-19 disease that emerged in December 2019 as a global threat, the Company is currently conducting the scientific activities described below with a view toward conserving financial resources.

For NB-01, the Company has determined that any attempt to conduct Phase 3 clinical trials, as previously announced, would be difficult if not impossible in the short or medium term. Accordingly, in the first quarter of 2020, the Company directed its contract research organization (“CRO”) partners and other vendors working on the Phase 3 clinical trials of NB-01 to cease all work and has terminated its existing contract arrangements with each of them. In accordance with ASC 450, *Contingencies*, the Company has determined that it is probable and estimable that approximately \$650 in termination penalties are owed to a vendor pursuant to the terms of the contract. The Company has also determined for a second vendor the termination fees, while probable of occurring, are not currently estimable due to uncertainty within the terms of the contract governing termination and ongoing negotiations of the termination provision, but would be no more than \$1,100. None of the termination fees associated with the reassessment of the Phase 3 clinical trials were accrued as of December 31, 2019.

**NeuroBo Pharmaceuticals, Inc.**  
**Notes to Consolidated Financial Statements - continued**

The Company is currently devoting scientific resources to evaluating the potential to bring the NB-01 asset to the market through a different regulatory pathway. Development of NB-01 as an orphan drug is among the alternatives that the Company is considering, and the Company may conduct feasibility studies to identify a rare disease relevant to NB-01. Additionally, the Company is considering marketing NB-01 as a nutraceutical (non-pharmaceutical) product. There is no assurance that the Company will be able to pursue any of these alternatives for NB-01.

For NB-02, which is almost ready for the submission of an IND application to the FDA, the Company intends to postpone the first human clinical trials until global health and macroeconomic conditions improve. The Company hopes to be in a position to commence commencing clinical trial activity in the first quarter of 2021, subject to availability of financing.

For Gemcabene, the Company will support activities related to getting the FDA to lift the partial clinical hold presently in effect on Gemcabene. In addition, the Company will engage in activities to support our partnership with Beijing SL with the possibility of advancing Gemcabene into trials in China.

***Stock Option Grants***

On January 13, 2020, each of the Company's six non-employee directors was granted an option to purchase 60,000 shares of common stock, which vest in a series of 36 equal monthly installments, subject to the director's continuous service through each monthly vesting date, and will vest in full upon the consummation of a corporate transaction (as defined in the 2019 Plan).

***COVID-19***

On March 11, 2020, the World Health Organization declared the outbreak of a novel coronavirus (COVID-19) as a global pandemic, which continues to spread throughout the United States and around the world. To date, except for the adjustments to scientific activity described under "Current Scientific Activity; Repurposing of NB-01" above, we have not experienced any significant changes in our business that would have a significant negative impact on our consolidated statements of position, operations or cash flows. There is uncertainty around when any disruption might occur, the duration and hence the potential impact. As a result, we are unable to estimate the potential impact on our business as of the date of this filing.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None

**ITEM 9A. CONTROLS AND PROCEDURES**

***Evaluation of Disclosure Controls and Procedures***

As required by Rules 13a-15(b) and 15d-15(b) under the Exchange Act, our management, with the participation of our principal executive officer (“PEO”) and principal financial officer (“PFO”), evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15(d)-15(e) under the Exchange Act) as of the end of the period covered by this annual report for post-Merger consolidated NeuroBo. Based upon that evaluation, our PEO and PFO concluded that our disclosure controls and procedures were not effective as of the end of the period covered by this annual report, as a result of a material weakness in our internal control over financial reporting, which is discussed further below.

**Management’s Annual Report on Internal Control Over Financial Reporting**

This report does not include a report of management’s assessment regarding internal control over financial reporting as allowed by the SEC for reverse acquisitions between an issuer and a private operating company when it is not possible to conduct an assessment of the private operating company’s internal control over financial reporting in the period between the consummation date of the reverse acquisition and the date of management’s assessment of internal control over financial reporting. See Section 215.02 of the SEC Division of Corporation Finance’s Regulation S-K Compliance & Disclosure Interpretations.

As discussed elsewhere in this report, on December 30, 2019, NeuroBo and Gemphire completed the Merger. Immediately following the Merger, former NeuroBo stockholders and optionholders owned or held rights to acquire approximately 96.2% of our (Gemphire’s) fully-diluted common stock, and Gemphire stockholders and warrant holders immediately prior to the Merger owned or held rights to acquire approximately 3.8% of our (Gemphire’s) fully-diluted common stock, excluding out-of-the-money options, which terminated and ceased to exist immediately prior to the closing of the Merger. Gemphire was the legal acquirer in the Merger. Private company NeuroBo was the accounting acquiror in the Merger under U.S. GAAP. In accordance with U.S. GAAP, the historical financial statements of private company NeuroBo are considered the financial statements of the combined company, with the merger accounted for as an acquisition of the Gemcabene family of related assets on December 30, 2019.

Prior to the Merger, private company NeuroBo was not subject to Section 404 of the Sarbanes-Oxley Act (“SOX”), while Gemphire was a publicly traded company subject to Section 404 of SOX.

The design of internal control over financial reporting for the Company post-Merger has required and will continue to require significant time and resources from management and other personnel. Because the Merger occurred immediately prior to year-end, and because NeuroBo was the accounting acquirer and not previously subject to Section 404 of SOX, management was unable, without incurring unreasonable effort or expense, to conduct an assessment of our internal control over financial reporting as of December 31, 2019. If management were to conduct an assessment regarding the Company’s internal control over financial reporting, however, its scope would include the criteria set forth by the Internal Control Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of The Treadway Commission.

Notwithstanding the foregoing, in connection with the preparation of the audited financial statements included elsewhere in this report, management has identified a material weakness related to internal control deficiencies relating to accounting for clinical trial costs. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. Specifically, for 2018 there were material correcting journal entries related to our accounting for the timing of clinical trial costs, and for 2019 there were

misstatements in clinical prepaids and expenses that were discovered during the audit process and would not have been detected by our internal control over financial reporting. See “Remediation Efforts to Address Material Weakness” below for steps we are taking to correct this material weakness.

Notwithstanding the identified material weakness, management, including our PEO and PFO, believes the consolidated financial statements included in this annual report fairly represent in all material respects our financial condition, results of operations and cash flows as of and for the periods presented in accordance with US. GAAP.

#### **Remediation Efforts to Address Material Weakness**

We are in the process of remediating, but have not yet remediated, the material weakness described above. Under the oversight of the audit committee, management is developing a detailed plan and timetable for the implementation of appropriate remedial measures to address the material weakness. As of the date of this annual report, we have taken the following actions and made the following changes in our internal control environment to help remediate the material weakness:

- " we have added more experienced accounting personnel, including an outside consultant, directly responsible for the oversight of the accounting for clinical trial expenses;
- " we have improved processes in the area of clinical site expense monitoring; and
- " we have retained additional qualified outside consultants, where necessary, to advise on highly complex technical accounting matters.

Management may decide to take additional measures to remediate the material weakness as necessary.

#### **Inherent Limitations on Internal Controls**

Our management, including our PEO and PFO, does not expect that our disclosure controls and procedures or our internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

#### **Changes in Internal Control Over Financial Reporting**

As described in more detail above, the Merger was completed on December 30, 2019, which represented a change in internal control over financial reporting. NeuroBo was a privately held company prior to the Merger, and therefore was not required to design or maintain its controls in accordance with Exchange Act Rule 13a-15 prior to the Merger. Significant time and resources from our management and other personnel have been required and will continue to be required for the design and implementation of internal control over financial reporting for the post-Merger consolidated NeuroBo. Our management will continue to evaluate our internal control over financial reporting as we execute the Merger integration activities.

Other than changes that have and may continue to result from the integration and material weakness remediation activities noted above, there have been no changes in the Company’s internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonable likely to materially affect, the Company’s internal control over financial reporting.

**ITEM 9B. OTHER INFORMATION**

None

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2019.

**ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2019.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2019.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2019.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2019.

**PART IV**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2019.

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

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

1. Financial Statements: The information required by this item is contained in Item 8 of this Form 10-K.
2. Financial Statement Schedules:

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

3. Exhibits:

<b>EXHIBIT NUMBER</b>	<b>DESCRIPTION OF DOCUMENT</b>
1.1	<a href="#">Equity Distribution Agreement, dated September 1, 2017, by and between the Registrant and Piper Jaffray &amp; Co. (incorporated by reference to Exhibit 1.2 to the Registrant's Registration Statement on Form S-3, filed on September 1, 2017).</a>
2.1++	<a href="#">Agreement and Plan of Merger, dated as of July 24, 2019, by and among Registrant, GR Merger Sub Inc. and NeuroBo Pharmaceuticals, Inc. (included as Annex A to the proxy statement/prospectus/information statement filed on November 6, 2019).</a>
2.2	<a href="#">First Amendment to Agreement and Plan of Merger, dated as of July 24, 2019, by and among Registrant, GR Merger Sub Inc. and NeuroBo Pharmaceuticals, Inc., dated as of October 29, 2019 (included in Annex A to the proxy statement/prospectus/information statement filed on November 6, 2019)</a>
3.1	<a href="#">Third Amended and Restated Certificate of Incorporation of Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed on August 10, 2016).</a>
3.2	<a href="#">Certificate of Amendment (Reverse Stock Split) to the Third Amended and Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed on December 30, 2019).</a>
3.3	<a href="#">Certificate of Amendment (Name Change) to the Third Amended and Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed on December 30, 2019).</a>
3.4*	<a href="#">Second Amended and Restated Bylaws of Registrant.</a>
4.1	<a href="#">Form of Common Stock Certificate of the Registrant (incorporated by reference to Exhibit 4.1 to the Registrant's Amendment No. 1 to the Registration Statement on Form S-1, filed on June 13, 2016).</a>
4.2	<a href="#">Investor Rights Agreement, dated as of March 31, 2015, by and among the Registrant and the Investors listed therein as amended by First Amendment to Investor Rights Agreement, dated as of April 14, 2016 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, filed on April 18, 2016).</a>
4.3	<a href="#">Form of Warrant to Purchase Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on March 13, 2017).</a>
4.4	<a href="#">Warrant to Purchase Stock, dated July 31, 2018, by and between Registrant and Silicon Valley Bank (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on August 6, 2018).</a>
4.5*	<a href="#">Description of Securities.</a>
10.1#	<a href="#">Form of Indemnification Agreement (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1, filed on April 18, 2016).</a>



- 10.2# [Form of Amended and Restated 2015 Equity Incentive Plan \(incorporated by reference to Exhibit 10.3 to the Registrant's Amendment No. 1 to the Registration Statement on Form S-1, filed on June 13, 2016\).](#)
- 10.3# [Form of 2016 Employee Stock Purchase Plan \(incorporated by reference to Exhibit 10.4 to the Registrant's Amendment No. 1 to the Registration Statement on Form S-1, filed on June 13, 2016\).](#)
- 10.4# [Non-Employee Director Compensation Policy \(incorporated by reference to Exhibit 10.15 to the Registrant's Amendment No. 1 to the Registration Statement on Form S-1, filed on June 13, 2016\).](#)
- 10.5# [Inducement Plan \(incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on October 3, 2016\).](#)
- 10.6# [Form of Stock Option Grant Notice, Option Agreement and Notice of Exercise under the Inducement Plan \(incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed on October 3, 2016\).](#)
- 10.7# [Amendment to Inducement Plan \(incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on April 12, 2018\).](#)
- 10.8# [Amendment to the Registrant's Amended and Restated 2015 Equity Incentive Plan \(incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed on May 24, 2018\).](#)
- 10.9+ [Amended and Restated License Agreement effective August 2, 2018 by and between Registrant and Pfizer Inc. \(incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on August 6, 2018\).](#)
- 10.10# [2019 Equity Incentive Plan \(incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K, filed on December 31, 2019\).](#)
- 10.11# [Form of Restricted Stock Grant Notice and Restricted Stock Agreement under the Amended and Restated 2015 Equity Incentive Plan \(Employees\) \(incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K, filed on July 25, 2019\).](#)
- 10.12# [Form of Restricted Stock Grant Notice and Restricted Stock Agreement under the Amended and Restated 2015 Equity Incentive Plan \(Directors\) \(incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K, filed on July 25, 2019\).](#)
- 10.13+++ [License and Collaboration Agreement dated as of July 23, 2019 by and between Registrant and Beijing SL Pharmaceutical Co., Ltd. \(incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K, filed on July 25, 2019\).](#)
- 10.14 [Lease Agreement by and between Invest Korea Plaza and NeuroBo Co., Ltd., dated February 21, 2018 \(incorporated by reference to Exhibit 10.34 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)

- 10.15\* [Membership Agreement by and between WeWork and NeuroBo Pharmaceuticals, Inc., dated January 9, 2020.](#)
- 10.16+++ [Manufacturing and Supply Agreement between Dong-A ST Co., Lt. and NeuroBo Pharmaceuticals, Inc., dated September 28, 2018 \(incorporated by reference to Exhibit 10.36 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.17# [Consulting Agreement by and between vZenium LLC, dated February 1, 2018; Replacement Consulting Agreement, dated May 1, 2018 and extension of such agreement, dated January 1, 2019 \(incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K, filed on December 31, 2019\).](#)
- 10.18# [Independent Contractor Agreement by and between Therabo PLLC and NeuroBo Pharmaceuticals, Inc., dated March 1, 2019 \(incorporated by reference to Exhibit 10.39 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.19 [Lease Agreement by and between Gyeonggi Urban Innovation Corporation and NeuroBo Co., Ltd., dated May 2, 2019 \(incorporated by reference to Exhibit 10.40 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.20+++ [License Agreement by and between Dong-A ST Co., Ltd. and NeuroBo Pharmaceuticals, Inc., dated January 18, 2018, as amended on April 18, 2018 and July 24, 2019 \(incorporated by reference to Exhibit 10.42 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.21+++ [Acquisition Agreement by and between Dong-A ST Co., Ltd. and NeuroBo Pharmaceuticals, Inc., dated January 18, 2018, as amended on April 18, 2018 and July 24, 2019 \(incorporated by reference to Exhibit 10.43 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.22# [2018 Stock Plan for NeuroBo Pharmaceuticals, Inc. \(incorporated by reference to Exhibit 10.44 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.23# [Form of Stock Option Agreement for NeuroBo Pharmaceuticals, Inc. 2018 Stock Plan \(incorporated by reference to Exhibit 10.45 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.24# [Form of Notice of Grant of Restricted Stock Purchase Right for NeuroBo Pharmaceuticals, Inc. to the 2018 Stock Plan \(incorporated by reference to Exhibit 10.46 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.25# [Form of Notice of Grant of Stock Option for NeuroBo Pharmaceuticals, Inc. to the 2018 Stock Plan \(incorporated by reference to Exhibit 10.47 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)
- 10.26# [Form of Notice of Grant of Restricted Stock Bonus for NeuroBo Pharmaceuticals, Inc. to the 2018 Stock Plan \(incorporated by reference to Exhibit 10.48 to the Registrant's Registration Statement on Form S-4, filed on September 3, 2019\).](#)

10.27++	<a href="#">Contingent Value Rights Agreement, dated as of December 30, 2019, by and among the Company, Grand Rapids Holders Representative, LLC, Computershare Inc. and Computershare Trust Company, N.A. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on December 31, 2019).</a>
10.28	<a href="#">Form of Lock-Up Agreement (included in Annex A to the proxy statement/prospectus/information statement filed on November 6, 2019).</a>
10.29	<a href="#">Employment Agreement, dated February 11, 2020, by and between NeuroBo Pharmaceuticals, Inc. and Richard Kang (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on February 13, 2020).</a>
10.30*	<a href="#">Offer Letter, dated as of January 29, 2020, by and between Nicola Shannon and NeuroBo Pharmaceuticals, Inc.</a>
10.31*	<a href="#">Form of Incentive Stock Option Agreement for 2019 Equity Incentive Plan.</a>
10.32*	<a href="#">Form of Restricted Stock Agreement for 2019 Equity Incentive Plan.</a>
10.33*	<a href="#">Form of Non-Qualified Stock Option Agreement for 2019 Equity Incentive Plan.</a>
10.34*	<a href="#">Form of Stock Unit Agreement for 2019 Equity Incentive Plan.</a>
21.1*	<a href="#">Subsidiaries of the Registrant</a>
23.1*	<a href="#">Consent of BDO USA, LLP</a>
31.1**	<a href="#">Certification of Principal Executive Officer and Principal Financial Officer Pursuant to Exchange Act Rule 13a-14(a) or 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes Oxley Act of 2002</a>
32.1**	<a href="#">Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

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# Indicates management contract or compensatory plan  
\* Filed herewith  
\*\* Furnished herewith

- + Registrant has omitted and filed separately with the SEC portions of the exhibit pursuant to a confidential treatment request under Rule 406 promulgated under the Securities Act.
- ++ Certain schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.
- +++ Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request. Certain portions of the exhibits that are not material and would be competitively harmful if publicly disclosed have been redacted pursuant to Item 601(b)(10)(iv) of Regulation S-K. Copies of the unredacted exhibits will be furnished to the SEC upon request.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 30, 2020

**NEUROBO PHARMACEUTICALS, INC.**

By: /s/ Richard Kang  
Richard Kang  
*President and Chief Executive Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Richard Kang</u> Richard Kang	President and Chief Executive Officer (Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer) and a Director	March 30, 2020
<u>/s/ Jason L. Groves</u> Jason L. Groves	Member of the Board of Directors	March 30, 2020
<u>/s/ Steven Gullans</u> Steven Gullans	Member of the Board of Directors	March 30, 2020
<u>/s/ Tae Heum (Ted) Jeong</u> Tae Heum (Ted) Jeong	Member of the Board of Directors	March 30, 2020
<u>/s/ Na Yeon (Irene) Kim</u> Na Yeon (Irene) Kim	Member of the Board of Directors	March 30, 2020
<u>/s/ Jeong Gyun Oh</u> Jeong Gyun Oh	Member of the Board of Directors	March 30, 2020
<u>/s/ Michael Salsbury</u> Michael Salsbury	Member of the Board of Directors	March 30, 2020

**SECOND AMENDED AND RESTATED  
BYLAWS  
OF  
GEMPHIRE THERAPEUTICS INC.  
NOW KNOWN  
AS NEUROBO THERAPEUTICS, INC.**

**ARTICLE I  
OFFICES**

**Section 1. REGISTERED OFFICE.** The registered office of the corporation in the State of Delaware shall be in the City of Wilmington, County of New Castle.

**Section 2. OTHER OFFICES.** The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the corporation's Board of Directors (the "**Board of Directors**"), and may also have offices at such other places, both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

**ARTICLE II  
CORPORATE SEAL**

**Section 3. CORPORATE SEAL.** The Board of Directors may adopt a corporate seal. The corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

**ARTICLE III  
STOCKHOLDERS' MEETINGS**

**Section 4. PLACE OF MEETINGS.** Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the General Corporation Law of the State of Delaware (the "**DGCL**").

**Section 5. ANNUAL MEETINGS.**

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 5(b) of these Second Amended and Restated Bylaws (the "**Bylaws**"), who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "**1934 Act**")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

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i. For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii) of these Bylaws and must update and supplement such written notice on a timely basis as set forth in Section 5(c) of these Bylaws. Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee; (2) the principal occupation or employment of such nominee; (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee; (4) the date or dates on which such shares were acquired and the investment intent of such acquisition; (5) with respect to each nominee for election or re-election to the Board of Directors, include a completed and signed questionnaire, representation and agreement required by Section 5(e) of these Bylaws; and (6) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(iv) of these Bylaws. The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

ii. Other than proposals sought to be included in the corporation's proxy materials pursuant to Rule 14a-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii) of these Bylaws, and must update and supplement such written notice on a timely basis as set forth in Section 5(c) of these Bylaws. Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(iv) of these Bylaws.

iii. To be timely, the written notice required by Section 5(b)(i) or 5(b)(ii) of these Bylaws must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the 90<sup>th</sup> day nor earlier than the close of business on the 120<sup>th</sup> day prior to the first anniversary of the preceding year's annual meeting; *provided, however*, that, subject to the last sentence of this Section 5(b)(iii), in the event that the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the 120<sup>th</sup> day prior to such annual meeting and not later than the close of business on the later of the 90<sup>th</sup> day prior to such annual meeting or the 10<sup>th</sup> day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

iv. The written notice required by Section 5(b)(i) or 5(b)(ii) of these Bylaws shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "**Proponent**" and collectively, the "**Proponents**"): (A) the name and address of each Proponent, as they appear on the corporation's books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(i) of these

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Bylaws) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(ii) of these Bylaws); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(i) of these Bylaws) or to carry such proposal (with respect to a notice under Section 5(b)(ii) of these Bylaws); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous 12-month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

For purposes of Sections 5 and 6 of these Bylaws, a **"Derivative Transaction"** means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

- (w) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation;
- (x) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation;
- (y) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes; or
- (z) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) A stockholder providing written notice required by Section 5(b)(i) or (ii) of these Bylaws shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five business days prior to the meeting and, in the event of any adjournment or postponement thereof, five business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(iii) of these Bylaws to the contrary, in the event that the number of directors in an Expiring Class (as defined below) is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least 10 days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(iii) of these Bylaws, a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(i) of these Bylaws, other than the timing requirements in Section 5(b)(iii) of these Bylaws, shall also be considered timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the 10th day following the day on which such public announcement is first made by the corporation. For purposes of this Section 5, an **"Expiring Class"** shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

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(e) To be eligible to be a nominee for election or re-election as a director of the corporation pursuant to a nomination under clause (iii) of Section 5(a) of these Bylaws, such proposed nominee or a person on such proposed nominee's behalf must deliver (in accordance with the time periods prescribed for delivery of notice under Section 5(b)(iii) or 5(d) of these Bylaws, as applicable) to the Secretary at the principal executive offices of the corporation a written questionnaire with respect to the background and qualification of such proposed nominee and the background of any other person or entity on whose behalf the nomination is being made (which questionnaire shall be provided by the Secretary upon written request) and a written representation and agreement (in the form provided by the Secretary upon written request) that such person: (i) is not and will not become a party to (A) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the corporation, will act or vote on any issue or question (a **"Voting Commitment"**) that has not been disclosed to the corporation in the questionnaire or (B) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the corporation, with such person's fiduciary duties under applicable law; (ii) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director of the corporation that has not been disclosed therein; and (iii) in such person's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, would be in compliance, if elected as a director of the corporation, and will comply with, all applicable publicly disclosed corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines of the corporation.

(f) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a) of these Bylaws, or in accordance with clause (iii) of Section 5(a) of these Bylaws. Except as otherwise required by law, the chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(iv)(D) and 5(b)(iv)(E) of these Bylaws, to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(g) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however*, that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii) of these Bylaws.

(h) For purposes of Sections 5 and 6 of these Bylaws,

i. **"public announcement"** shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act; and

ii. **"affiliates"** and **"associates"** shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended.

## **Section 6. SPECIAL MEETINGS.**

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total

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number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(i) of these Bylaws. In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written notice setting forth the information required by Section 5(b)(i) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the 90<sup>th</sup> day prior to such meeting or the 10<sup>th</sup> day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c) of these Bylaws. In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however*, that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

**Section 7. NOTICE OF MEETINGS.** Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is deemed given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. If sent via electronic transmission, notice is deemed given as of the sending time recorded at the time of transmission. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

**Section 8. QUORUM.** At all meetings of stockholders, except where otherwise provided by statute or by the corporation's Amended and Restated Certificate of Incorporation (the "**Certificate of Incorporation**"), or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the

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withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

**Section 9. ADJOURNMENT AND NOTICE OF ADJOURNED MEETINGS.** Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

**Section 10. VOTING RIGHTS.** For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three years from its date of creation unless the proxy provides for a longer period.

**Section 11. JOINT OWNERS OF STOCK.** If shares or other securities having voting power stand of record in the names of two or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one votes, his act binds all; (b) if more than one votes, the act of the majority so voting binds all; or (c) if more than one votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of clause (c) of this Section 11 shall be a majority or even-split in interest.

**Section 12. LIST OF STOCKHOLDERS.** The Secretary shall prepare and make, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

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**Section 13. ACTION WITHOUT MEETING.** No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or electronic transmission.

**Section 14. ORGANIZATION.**

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

**ARTICLE IV**  
**DIRECTORS**

**Section 15. NUMBER AND TERM OF OFFICE.** The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

**Section 16. POWERS.** The business and affairs of the corporation shall be managed by or under the direction of the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

**Section 17. CLASSES OF DIRECTORS**

(a) Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. Initially, directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders following the initial classification of the Board of Directors, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following such initial classification, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following such initial classification, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

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(b) Notwithstanding the foregoing provisions of this Section 17, each director shall serve until his successor is duly elected and qualified or until his earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

**Section 18. VACANCIES.**

(a) Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, *provided, however*, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

**Section 19. RESIGNATION.** Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, it shall be deemed effective at the time of delivery to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office for the unexpired portion of the term of the director whose place shall be vacated and until his successor shall have been duly elected and qualified.

**Section 20. REMOVAL.**

(a) Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitations imposed by applicable law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least 66 2/3% of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors.

**Section 21. DUTIES OF CHAIRMAN OF THE BOARD OF DIRECTORS.** The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

**Section 22. MEETINGS.**

(a) **Regular Meetings.** Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

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(b) **Special Meetings.** Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairman of the Board, the Chief Executive Officer or a majority of the authorized number of directors.

(c) **Meetings by Electronic Communications Equipment.** Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) **Notice of Special Meetings.** Notice of the time and place of all special meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least 24 hours before the date and time of the meeting. If notice is sent by U.S. mail, it shall be sent by first class mail, charges prepaid, at least three days before the date of the meeting. Notice of any meeting may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) **Waiver of Notice.** The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

### **Section 23. QUORUM AND VOTING.**

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 45 of these Bylaws for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided, however*, at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

**Section 24. ACTION WITHOUT MEETING.** Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

**Section 25. FEES AND COMPENSATION.** Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

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**Section 26. COMMITTEES.**

(a) **Executive Committee.** The Board of Directors may appoint an Executive Committee to consist of one or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) **Other Committees.** The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) **Term.** The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) or (b) of this Section 26, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) **Meetings.** Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 26 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

**Section 27. Organization.** At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his absence, any Assistant Secretary or other officer or director directed to do so by the Chairman, shall act as secretary of the meeting.

**ARTICLE V  
OFFICERS**

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**Section 28. OFFICERS DESIGNATED.** The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairman of the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

**Section 29. TENURE AND DUTIES OF OFFICERS.**

(a) **General.** All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) **Duties of Chairman of the Board of Directors.** The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. If there is no President or Chief Executive Officer, unless otherwise determined by the Board of Directors, then the Chairman of the Board of Directors shall also serve as the president of the corporation and shall have the powers and duties prescribed in paragraph (c) of this Section.

(c) **Duties of Chief Executive Officer.** The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) **Duties of President.** The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors, or the Chief Executive Officer has been appointed and is present. Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(e) **Duties of Vice Presidents.** The Vice Presidents may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(f) **Duties of Secretary.** The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or

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disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

**(g) Duties of Chief Financial Officer.** The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

**(h) Duties of Treasurer.** Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

**Section 30. DELEGATION OF AUTHORITY.** The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

**Section 31. RESIGNATIONS.** Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

**Section 32. REMOVAL.** Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the Chief Executive Officer or by other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

**ARTICLE VI**  
**EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES**  
**OWNED BY THE CORPORATION**

**Section 33. EXECUTION OF CORPORATE INSTRUMENTS.**

**(a)** The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation.

**(b)** All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

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(c) Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

**Section 34. VOTING OF SECURITIES OWNED BY THE CORPORATION.** All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

## **ARTICLE VII SHARES OF STOCK**

**Section 35. FORM AND EXECUTION OF CERTIFICATES.** The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock of the corporation, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the Chairman of the Board of Directors, the Chief Executive Officer, or the President or any Vice President and by the Chief Financial Officer, Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

**Section 36. LOST CERTIFICATES.** A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

### **Section 37. TRANSFERS.**

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

### **Section 38. FIXING RECORD DATES.**

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than 60 nor less than 10 days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to

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vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

**Section 39. REGISTERED STOCKHOLDERS.** The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

#### **ARTICLE VIII OTHER SECURITIES OF THE CORPORATION**

**Section 40. EXECUTION OF OTHER SECURITIES.** All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 35 of these Bylaws), may be signed by the Chairman of the Board of Directors, the Chief Executive Officer, President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided, however*, that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

#### **ARTICLE IX DIVIDENDS**

**Section 41. DECLARATION OF DIVIDENDS.** Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

**Section 42. DIVIDEND RESERVE.** Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

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**ARTICLE X**  
**FISCAL YEAR**

**Section 43. FISCAL YEAR.** The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

**ARTICLE XI**  
**INDEMNIFICATION**

**Section 44. INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS.**

(a) **Directors and Officers.** The corporation shall indemnify its directors and officers to the extent not prohibited by the DGCL or any other applicable law; *provided, however,* that the corporation may modify the extent of such indemnification by individual contracts with its directors and officers; and, *provided, further,* that the corporation shall not be required to indemnify any director or officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under subsection (d).

(b) **Employees and Other Agents.** The corporation shall have power to indemnify its employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether to indemnify any such employee or other agent to such officers or other persons as the Board of Directors so determines.

(c) **Expenses.** The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or officer, of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or officer in connection with such proceeding provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this Section 44 or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Section 44, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by a majority vote of directors who were not parties to the proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) **Enforcement.** Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and officers under this Section 44 shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or officer. Any right to indemnification or advances granted by this Section 44 to a director or officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within 90

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days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or officer is not entitled to be indemnified, or to such advancement of expenses, under this Section 44 or otherwise shall be on the corporation.

**(e) Non-Exclusivity of Rights.** The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

**(f) Survival of Rights.** The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director or officer, or, if applicable, employee or other agent, and shall inure to the benefit of the heirs, executors and administrators of such a person.

**(g) Insurance.** To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Section 44.

**(h) Amendments.** Any repeal or modification of this Section 44 shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

**(i) Saving Clause.** If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and officer to the full extent not prohibited by any applicable portion of this Section 44 that shall not have been invalidated, or by any other applicable law. If this Section 44 shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and officer to the full extent under any other applicable law.

**(j) Certain Definitions.** For the purposes of this Bylaw, the following definitions shall apply:

**i.** The term "**proceeding**" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

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ii. The term “*expenses*” shall be broadly construed and shall include, without limitation, court costs, attorneys’ fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

iii. The term the “*corporation*” shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Section 44 with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

iv. References to a “*director,*” “*officer,*” “*employee,*” or “*agent*” of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

v. References to “*other enterprise*” shall include employee benefit plans; references to “*fines*” shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to “*serving at the request of the corporation*” shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner “*not opposed to the best interests of the corporation*” as referred to in this Section 44.

## ARTICLE XII NOTICES

### Section 45. NOTICES.

(a) **Notice to Stockholders.** Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 of these Bylaws. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) **Notice to Directors.** Any notice required to be given to any director may be given by the method stated in subsection (a), as otherwise provided in these Bylaws, or by overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) **Affidavit of Mailing.** An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) **Methods of Notice.** It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

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(e) **Notice to Person With Whom Communication is Unlawful.** Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) **Notice to Stockholders Sharing an Address.** Except as otherwise prohibited under the DGCL, any notice given under the provisions of the DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within 60 days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

### **ARTICLE XIII** **AMENDMENTS**

**Section 46. AMENDMENTS.** Subject to the limitations set forth in Section 44(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. Any adoption, amendment or repeal of the Bylaws of the corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; *provided, however*, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

### **ARTICLE XIV** **LOANS TO OFFICERS OR EMPLOYEES**

**Section 47. LOANS TO OFFICERS OR EMPLOYEES.** Except as otherwise prohibited by applicable law, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is a director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

### **ARTICLE XV** **FORUM FOR ADJUDICATION OF DISPUTES**

**Section 48. FORUM FOR ADJUDICATION OF DISPUTES.** Unless the corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (a) any derivative action or proceeding brought on behalf of the corporation, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the corporation to the corporation or the corporation's stockholders, (c) any action asserting a claim arising pursuant to

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any provision of the DGCL, the Certificate of Incorporation or these Bylaws or (d) any action asserting a claim governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants.

This Section 48 shall not apply to actions brought to enforce a duty or liability created by the 1934 Act or the Securities Act of 1933, as amended, or any claim for which the federal courts have exclusive jurisdiction.

Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the corporation shall be deemed to have notice of and consented to the provisions of this Section 48.

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**DESCRIPTION OF THE REGISTRANT'S SECURITIES  
REGISTERED PURSUANT TO SECTION 12 OF THE  
SECURITIES EXCHANGE ACT OF 1934**

As of March 27, 2020, NeuroBo Pharmaceuticals, Inc. ("the Company") had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act")—our common stock, par value \$0.001 per share ("Common Stock").

**Description of Common Stock**

The following description of our Common Stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Third Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation") and our Second Amended and Restated Bylaws (the "Bylaws"), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.5 is a part. We encourage you to read our Certificate of Incorporation, Bylaws, and the applicable provisions of the Delaware General Corporation Law for additional information.

**Authorized Capital Shares**

Our authorized capital shares consist of 100,000,000 shares of Common Stock, \$0.001 par value per share, and 10,000,000 shares of preferred stock, \$0.001 par value per share ("Preferred Stock").

**Voting Rights**

Holders of Common Stock are entitled to one vote per share on all matters voted on by the stockholders, including the election of directors. Our Certificate of Incorporation and Bylaws do not provide for cumulative voting in the election of directors.

**Dividend Rights**

Holders of Common Stock are entitled to receive dividends, if any, as may be declared from time to time by the Board of Directors ("Board") in its discretion out of funds legally available for the payment of dividends.

**Liquidation Rights**

In the event of our liquidation, the holders of our Common Stock will be entitled to share ratably in any distribution of our assets after payment of all debts and other liabilities and the preferences payable to holders of shares of Preferred Stock then outstanding, if any.

**Applicable Anti-Takeover Provisions**

Set forth below is a summary of the provisions of the Certificate of Incorporation and the Bylaws that could have the effect of delaying or preventing a change in control of the Company. The following description is only a summary and it is qualified by reference to the Certificate of Incorporation, the Bylaws and relevant provisions of the Delaware General Corporation Law ("DGCL").

*Delaware Anti-Takeover Law*

We are subject to Section 203 of the DGCL. Section 203 generally prohibits a public Delaware corporation such as us from engaging in a "business combination" with an "interested stockholder" for a period of three years following the time that the stockholder became an interested stockholder, unless:

- prior to the time the stockholder became an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers and (b) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the time the stockholder became an interested stockholder, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions) involving the interested stockholder of 10% or more of the assets of the corporation (or its majority-owned subsidiary);
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect, directly or indirectly, of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit, directly or indirectly (except proportionately as a stockholder of such corporation), of any loans, advances, guarantees, pledges or other financial benefits, other than certain benefits set forth in Section 203, provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person that is an affiliate or associate of such entity or person.

#### *Charter Documents*

Our Certificate of Incorporation and Bylaws provide that our Board be divided into three classes of directors, as nearly equal in number as possible, with each class serving a staggered three-year term. The classification system of electing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us since the classification of the board of directors generally increases the difficulty of replacing a majority of directors. In addition, our Certificate of Incorporation and Bylaws:

- provide that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing;
- establish advance notice requirements for nominations for election to our Board or for proposing matters that can be acted upon at a stockholder meeting;
- provide that the authorized number of directors may be changed only by resolution of the board of directors; and
- provide that special meetings of our stockholders may be called only by the chairman of the Board, the chief executive officer or the Board pursuant to a resolution adopted by a majority of the total number of authorized directors.

The DGCL provides generally that the affirmative vote of a majority of the shares entitled to vote is required to amend a corporation's bylaws, unless a corporation's certificate of incorporation requires a greater percentage or also confers the power upon the corporation's directors. Our Bylaws may be amended or repealed by:

- the affirmative vote of a majority of our directors then in office; or
- the affirmative vote of the holders of at least 66-2/3% of the voting power of all then-outstanding shares of our capital stock entitled to vote generally in the election of directors.

The foregoing provisions of the Certificate of Incorporation may only be amended or repealed by the affirmative vote of a majority of directors and the affirmative vote of the holders of at least 66-2/3% of the voting power of all then-outstanding shares of our capital stock entitled to vote generally in the election of directors.

These and other provisions contained in the Certificate of Incorporation or Bylaws could delay or discourage some types of transactions involving an actual or potential change in control or change in management, including transactions in which stockholders might otherwise receive a premium for their shares over then current prices, and may limit the ability of stockholders to remove current management or approve transactions that stockholders may deem to be in their best interests and, therefore, could adversely affect the price of our common stock.

#### *Exclusive Forum Provision*

In accordance with an exclusive forum provision set forth in the Bylaws, unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) shall be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (a) any derivative action or proceeding brought on behalf of the Company, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders, (c) any action asserting a claim arising pursuant to any provision of the DGCL, the Certificate of Incorporation or the Bylaws or (d) any action asserting a claim governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. The exclusive forum provision does not apply to actions brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended, or any claim for which the federal courts have exclusive jurisdiction.

#### **Listing**

The Common Stock is traded on NASDAQ Capital Market under the trading symbol "NRBO".

#### **Transfer Agent**

The Company's transfer agent is Computershare Trust Company, N.A.

# WEWORK MEMBERSHIP AGREEMENT

## Membership Details Form

<b>Member Company Name (Legal Name):</b>	NeuroBo Pharmaceuticals, Inc.
<b>Trade Name (if different from Legal Name):</b>	
<b>Industry:</b>	Pharmaceuticals
<b>Start Date:</b>	February 1, 2020
<b>Commitment Term:</b>	12 Months
<b>Member Company Termination Notice Required (see Section 5(d) herein):</b>	3 Months
<b>Individual Office Number(s); Main Premises (include address):</b>	200 Berkeley Street, Boston, MA Office 19W115
<b>Set-Up Fee:</b>	Waived
<b>Service Retainer:</b>	<p>\$ 32,250.00</p> <p><b>You shall <u>not</u> be permitted to move into the Office Space until the Service Retainer has been fully paid, as described in Sections 4(a) and 5(a) of this Agreement.</b></p>
<b>Membership Fee:</b>	\$ 21,450.00/month (excluding tax)
<b>Discount(s)</b>	<p>February 1, 2020 – February 29, 2020: \$21,450.00</p> <p>March 1, 2020 – March 31, 2020: \$10,725.00</p>
<b>Payment Method:</b>	ACH
<b>Conference Room Credits (per month):</b>	68
<b>Print and Copy Credits (per month):</b>	3,480 black and white and 580 color prints
<b>Number of Individual Memberships/Capacity:</b>	29
<b>Parking Fees (if applicable):</b>	N/A
<b>Parking Spaces (if applicable):</b>	
<b>Notes:</b>	Notwithstanding anything in this agreement, Section 2(a)(i) shall be removed and replaced in its entirety with the following:

	<p><i>“Dedicated access to and use of the Office Space at all time (24/7/365), subject to our access as set forth in this Agreement, provided that no other members shall have access to your Office Space.”</i></p>
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\*Service Retainer and Set-Up Fee due on the date hereof.

**Contact Information – For Company**

*Primary Member*

Primary Member Name: Princess Bulandi

Phone Number: 818-802-3271

Alternate Phone: Richard Kang 617-313-7331

Email: princess@neuropharma.com

Address: 177 Huntington Ave, Suite 1700, Boston, MA 02115

If the Primary Member is also the Authorized Signatory, please check here: \_\_\_\_\_

If the Primary Member is also the Billing Contact, please check here:

Authorized Signatory  
(if different than Primary Member)

Authorized Signatory Name: Richard Kang

Title: President & CEO

Phone Number: 617-313-7331

Email: rkang@neuropharma.com

Address: 177 Huntington Ave, Suite 1700, Boston, MA 02115

*Billing Contact (if different than Primary Member or Authorized Signatory)*

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_



Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Contact Email – For WeWork:**

This Agreement, including the Terms and Conditions and Membership Details Form, will be effective when signed by both parties. In the event of any conflict between the Terms and Conditions and the Membership Details Form, the Membership Details Form shall prevail.

By signing this Agreement you represent to us that you have the proper authority to execute this Agreement on behalf of the company listed above and incur the obligations described in this Agreement on behalf of such company.

**WeWork Signature**

WeWork Entity: 200 Berkeley Street Tenant LLC  
Signature: /s/ Kyle Backstrom  
Name (Print): Kyle Backstrom  
Title: Account Manager  
Date: January 29, 2020

**Company Signature**

Company Name: NeuroBo Pharmaceuticals, Inc.  
Signature: /s/ Richard Kang  
Name (Print): Richard Kang  
Title: President & CEO  
Date: January 29, 2020

Signed By (Select One):

Primary Member

Authorized Signatory

# TERMS & CONDITIONS

## 1. THE L INGO

“Agreement” means, collectively, these Terms & Conditions (the “Terms and Conditions”), the attached Membership Details Form cover page(s) (the “Membership Details Form”), and any other attachments, exhibits, and/or supplements.

“Authorized Signatory” means an individual authorized to legally bind your company.

“Capacity” means the maximum number of Memberships allotted to your Office Space as set forth in the Membership Details Form.

“Commitment Term” means the period of time from the Start Date to the last day of the period set forth on the Membership Details Form under “Commitment Term” with respect to each Individual Office Number, and which may be extended upon mutual agreement of the parties.

“Individual Office Number” means each individual office number and/or workspace location as may be specified in the Membership Details Form. If the symbol “Ø” is included on the Membership Details Form, we will provide the Individual Office Number(s) for the agreed upon Capacity prior to the Start Date.

“Landlord” means our landlord(s) at the Main Premises.

“Lease” means our lease with our Landlord at the Main Premises.

“Main Premises” means the Premises in which the Office Space is located, as set forth in the Membership Details Form.

“Member” means each person you authorize to receive the Services (defined below) (each Member granted a “Membership”).

“Member Company” or “you” means the company, entity, or individual entering into this Agreement as listed in the Membership Details Form.

“Office Space” means the actual office or workspace corresponding to the Individual Office Number(s), taken together.

“Premises” means a building or portion of a building in which WeWork offers offices, workstations, other workspaces, and/or other services to Members.

“Primary Member” means the primary in-Premises Member contact for WeWork.

“Regular Business Days” are all weekdays, except local bank/government holidays.

“Regular Business Hours” are generally from 9:00 a.m. to 6:00 p.m. on Regular Business Days.

“Set-Up Fee” means the fee you will be charged for each individual Membership included in the Capacity of your Office Space; you are obligated to pay the Set-Up Fee for each Individual Office that you occupy, including such Set-up Fees as may be due upon transfer, including upgrade or downgrade (i.e. transferring to an Office Space with a higher or lower Capacity), of Office Space.

“Start Date” means the date set forth in the Membership Details Form upon which the Services will begin being provided with respect to each Individual Office Number.

“WeWork,” “we” or “us” means the WeWork entity you are contracting with.

“WeWork Member Network” means the WeWork members-only online community accessed through the internet or our mobile app.

## 2. THE BENEFITS OF MEMBERSHIP

- a. **Services.** Subject to the terms and conditions of this Agreement, and any other policies we make available to you with prior notice from time to time, during the Term (defined below), WeWork will use commercially reasonable efforts to provide you (and your Members, as applicable) the services described below. These services are referred to in this Agreement as the “Services.”
  - i. Non-exclusive access to and use of the Office Space.
  - ii. Regular maintenance of the Office Space.
  - iii. Furnishings for the Office Space of the quality and in the quantity typically provided to other member companies with similar office space, workstations, and/or other workspace, as applicable, in the Premises.
  - iv. Access to and use of the WeWork Member Network in accordance with the terms of services available on our website.
  - v. Access to and use of the shared Internet connection in accordance with the terms of services available on our website.

- vi. Use of the printers, copiers and/or scanners available to our members and member companies, in accordance with the terms described herein.
- vii. Use of the conference rooms in your Main Premises and use of conference rooms in any other WeWork Premises during Regular Business Hours, in each case subject to availability and your prior reservation of such conference rooms, in accordance with the terms described herein.
- viii. Heat and air-conditioning in the Office Space during Regular Business Hours.
- ix. Electricity for reasonably acceptable office use.
- x. Use of kitchens and beverages made available to our members and member companies.
- xi. Acceptance of mail and deliveries on behalf of your business during Regular Business Hours.
- xii. Opportunity to participate in members-only events, benefits and promotions.

Other services may be provided for an additional fee, such as car parking space, phone service, and IT services, subject to availability at the Main Premises and any additional terms and expenses applicable to those services.

- b. **Our Reserved Rights.** We are entitled to access your Office Space, with or without notice, in connection with our provision of the Services, for safety or emergency purposes or for any other purposes. We may temporarily move furnishings contained in your Office Space. We reserve the right to alter or relocate your Office Space, provided that we will not do so in a manner that substantially decreases the square footage of your assigned Office Space or related amenities. We may also modify or reduce the list of Services or furnishings provided for your Office Space at any time. The Services may be provided by us, an affiliate or a third party.
- c. **Office Space Not Timely Available.** If we are unable to make the Office Space available by the Start Date we will not be subject to any liability related to such inability, nor will such inability affect the enforceability of this Agreement. This Agreement shall remain in full force and effect, provided that: **(i)** the failure to provide access to the Office Space does not last longer than two (2) months **and** **(ii)** at our sole discretion we will either **(x)** provide you with alternate office space (which may or may not be within a WeWork building) with reasonably comparable Capacity during such period and charge your Membership Fee **or** **(y)** not charge you the

Membership Fee during the period the Office Space is not available to you. Following the two (2) month period set forth in (i) above, you shall have the ability to terminate this Agreement upon seven (7) days' prior notice to us. If we do provide you alternate office space as described in clause (x) above, during the period we provide you with such alternate office space, the individuals named as Members shall be deemed to be Members and otherwise shall be fully subject to the terms of this Agreement.

Notwithstanding anything in this paragraph to the contrary, if the delay in providing the Office Space is due to your actions or inactions or due to changes in or work to the Office Space requested by you, we will not be subject to any liability related to such delay nor will such delay affect the validity of this Agreement and we shall have no obligations to provide you with the benefits described in subsections (x) and (y) of this paragraph and you shall not be entitled to terminate this Agreement and shall be liable for the payment of the Membership Fees from the Start Date.

- d. **Access Prior to Start Date.** If we, in our sole discretion, provide you with access to your Office Space for any period of time prior to your Start Date (a "Soft Open Period"), during any such Soft Open Period you and your Members shall be fully subject to the terms of this Agreement, regardless of whether we choose to charge you the Membership Fee during any such Soft Open Period.

### 3. YOUR MEMBERS

- a. **Member List.** You are responsible for maintaining the accuracy of your list of Members on the WeWork Member Network (your "Member List"). Only those individuals included on the Member List will be deemed to be "Members" and entitled to receive the Services described in this Agreement. To the extent permitted by law, all of your Members shall be required to provide valid government issued identification in order to be issued an activated key card to access the Premises. If the number of Members or other individuals regularly using your Office Space exceeds the Capacity, you will be required to pay the then current additional fee as set forth on our website. In no event will the number of Members exceed 1.5 times the Capacity, regardless of additional fees paid; however affiliated members with other active memberships offered by WeWork such as We Membership, Hot Desk, and/or separate Dedicated Desk Memberships using desks outside of the Office Space will not count towards this limit. We reserve the right to further limit the number of Members allowed at any point.

Upon the addition of a Member to the Member List,

WeWork will create a profile for such Member on the WeWork Member Network. Such profile will be viewable by us, our employees and agents, and other members. The created profile will include only the Member's name and the Member Company; any additional information, including a photograph, shall be added solely as determined by you or your Members.

- b. **Changes to or Removal of Primary Member or Authorized Signatory.** An Authorized Signatory generally has the sole authority to make changes to or terminate this Agreement. A Primary Member will generally serve as WeWork's primary contact regarding matters that involve your Members, the physical Office Space or the Premises. If no Authorized Signatory other than the Primary Member is designated by you on the Membership Details Form, the Primary Member will serve as the Authorized Signatory. We will be entitled to rely on communications to or from the Authorized Signatory or Primary Member as notice to or from the applicable Member Company. However, an executive officer of the applicable Member Company ("Executive Officer") will have the authority to override the request of an Authorized Signatory or Primary Member, as applicable, provided that we receive such a request within 24 hours following such Authorized Signatory's or Primary Member's request. We will be entitled to request reasonable documentation to confirm that an individual claiming to be an Executive Officer truly is one and to exercise our discretion in determining whether a particular position constitutes an "Executive Officer." An Executive Officer will also have the authority to remove or replace the individual serving as the Authorized Signatory and/or Primary Member. Unless we receive instructions from the Authorized Signatory or Executive Officer, if the individual designated as the Primary Member ceases to provide services to the Member Company or ceases using the Office Space regularly, we will use our reasonable judgment in designating a replacement Primary Member.

#### 4. MEMBERSHIP FEES; PAYMENTS

- a. **Payments Due Upon Signing.** Upon submitting a signed and completed Agreement, you will be obligated to deliver to us, in the amount(s) set forth on your Membership Details Form, (i) the Service Retainer and (ii) the Set-Up Fee.
- b. **Membership Fee.** During the Term (defined below) of this Agreement, your Membership Fee will be due monthly and in advance as of the first (1st) day of each month. You are obligated to make payment of all Membership Fees owed throughout the Commitment Term and this obligation is absolute

notwithstanding any early termination of the Agreement by you (“Membership Fee Obligations”). You agree to pay promptly: (i) all sales, use, excise, value added, and any other taxes which you are required to pay to any other governmental authority (and, at our request, will provide to us evidence of such payment) and (ii) all sales, use, excise, value added and any other taxes attributable to your Membership as shown on your invoice. The Membership Fee set forth on the Membership Details Form covers the Services for only the number of Members indicated in the Membership Details Form. Additional Members will result in additional fees as set forth on our website.

On each anniversary of the Start Date (including during any Commitment Term) the Membership Fee will be subject to an automatic three and a half percent (3.5%) increase over the then current Membership Fee. Following any Commitment Term, we reserve the right to further increase or decrease the Membership Fee at our sole discretion upon thirty (30) days’ prior notice to you in advance of and in accordance with the Termination Notice Period described below in Section 5(d).

- c. **Invoices; Financial Information.** WeWork will send or otherwise provide invoices and other billing-related documents, information and notices to the Primary Member or, if a Billing Contact is indicated on the Membership Details Form, the Billing Contact. Change of the Billing Contact will require notice from the Authorized Signatory in accordance with this Agreement.
- d. **Credits; Overage Fees.** Each month, you will receive a certain number of credits for conference room use and a certain number of credits for color and black and white copies and printouts, as specified on the Membership Details Form. These allowances may not be rolled over from month to month. If these allocated amounts are exceeded, you will be responsible for paying fees for such overages. The current overage fee schedule is listed on our website. All overage fees are subject to increase from time to time at our sole discretion.
- e. **Late Fees.** If payment for the Membership Fee or any other accrued and outstanding fee is not made by the tenth (10th) of the month in which such payment is due, you will be responsible for paying the then- current late charge. The current late fee schedule is listed on our website. All late fees are subject to increase from time to time at our sole discretion.
- f. **Form of Payment.** We accept payment of all amounts specified in this Agreement solely by the methods we communicate to you during the membership sign up

process or from time to time during the Term. You are required to inform us promptly of any changes to your payment information. Changing your payment method may result in a change in the amount required under this Agreement to be held as the Service Retainer.

- g. **Outstanding Fees.** Any outstanding fees will be charged in arrears on a monthly basis. When we receive funds from you, we will first apply funds to any balances which are in arrears (including any outstanding late fees) and to the earliest month due first. Once past balances are satisfied, any remaining portion of the funds will be applied to current fees due. If any payments remain outstanding after we provide notice to you, we may, in our sole discretion, withhold Services or terminate this Agreement in accordance with Section 5.
- h. **No Refunds.** Except as otherwise provided for herein, there are no refunds of any fees or other amounts paid by you or your Members in connection with the Services.

## 5. TERM AND TERMINATION

- a. **Term.** This Agreement will be effective when signed by both parties (“Effective Date”); provided that we have no obligations to provide you with the Services until the later of (i) the date on which payment of your Service Retainer, Set-Up Fee and first month’s Membership Fee has been received by us or (ii) the Start Date. Unless otherwise set forth on the Membership Details Form, following the Commitment Term, this Agreement shall continue on a month-to-month basis (any term after the Commitment Term, a “Renewal Term”), subject to the Termination Notice Periods (defined below). The Commitment Term and all subsequent Renewal Terms shall constitute the “Term.” If no Commitment Term is indicated on your Membership Details Form, the default Commitment Term shall commence on the Start Date and end one (1) full calendar month after the Start Date. This Agreement will continue until terminated in accordance with this Agreement.
- b. **Move In / Move Out.** If the Start Date is a Regular Business Day, you will be entitled to move into the Office Space no earlier than 11:00 a.m. on the Start Date, provided you have complied with the payment obligations described in Section 5(a). If the Start Date is not a Regular Business Day, you will be entitled to move into the Office Space no earlier than 11:00 a.m. on the first Regular Business Day after the Start Date. On the last Regular Business Day of the Termination Effective Month (defined below), you must vacate the Office Space by no later than 4:00 p.m.



- c. **Termination Prior to Start Date by You.** In addition to any other remedies we may pursue, terminating this Agreement prior to the Start Date will result in the immediate forfeiture of the Set-Up Fee and Service Retainer as well as any amounts expended by WeWork at your request to prepare the Office Space for your use. You remain obligated to pay such amounts in the event you have not paid any portion thereof at the time of the termination.
- d. **Termination by You.** You may terminate this Agreement by providing written notice to us prior to the month in which you intend to terminate this Agreement (“Termination Effective Month”) in accordance with the notice periods set forth in the chart below (the “Termination Notice Period(s)”). The applicable Termination Notice Period shall be determined by the Commitment Term and Capacity for the relevant Individual Office Number, as depicted in the chart below, and as displayed on the Membership Details Form. The Termination Notice Periods shall apply to any termination by you during the Term. After receiving such notice we will deliver to you the WeWork Exit Form (“Exit Form”), which you must complete and submit to us. The termination will be effective on the later of the last Regular Business Day of the Termination Effective Month and the expiration of the Commitment Term. **No termination by you shall be effective during the Commitment Term (except pursuant to Section 2(c)), and termination by you during the Commitment Term is a breach of this Agreement. Downgrade of the Office Space (i.e. transferring to an office space with a lower Capacity) is also not permitted during the Commitment Term. If you terminate this Agreement prior to the end of the Commitment Term (or during any relevant Termination Notice Period), your Membership Fee Obligations shall become immediately due. In addition to any rights, claims and remedies we choose to pursue in our discretion, your Service Retainer shall be forfeited immediately as a result of your breach. Notice must be provided during Regular Business Hours.** The Exit Form needs to be completely filled out and signed by the Authorized Signatory; **however, please note that the termination of your Agreement on the last Regular Business Day of the Termination Effective Month will be triggered upon your provision of written notice of termination to us, regardless of when you complete and submit the Exit Form.** You will not be entitled to pro ration with respect to the last month's Membership Fee. For instance, if you vacate your Office Space before the last Regular Business Day of April, you will still owe us the full Membership Fee for the full month of April.

**Member Company Termination Notice Periods Required:**

Commitment Term	Capacity		
	0 - 24	25 - 74	75 +
1 - 11 months	1 month	2 months	3 months
12 - 23 months	2 months	3 months	6 months
24 + months	3 months	6 months	6 months

□ **Example:** If the Capacity for the Office Space is between twenty-five (25) and seventy-four (74) Members, and the Commitment Term is between one (1) and eleven (11) months, the applicable Termination Notice Period would be two (2) months, and to terminate this Agreement effective the last Regular Business Day of April (provided that the Commitment Term shall have expired by such date) the last opportunity to provide notice to us would be during Regular Business Hours on the last Regular Business Day of February.

- e. **Termination or Suspension by Us.** We may withhold Services or immediately terminate this Agreement: (i) upon breach of this Agreement by you or any Member; (ii) upon termination, expiration or material loss of our rights in the Premises; (iii) if any outstanding fees are still due after we provide notice to you; (iv) if you or any of your Members fail to comply with the terms and conditions of the WeWork Member Network Terms of Service, our Wireless Network Terms of Service, or any other policies or instructions provided by us or applicable to you; or (v) at any other time, when we, in our sole discretion, see fit to do so. You will remain liable for past due amounts, and we may exercise our rights to collect due payment, despite termination or expiration of this Agreement.

An individual Member will no longer receive the Services and is no longer authorized to access the Main Premises or other Premises upon the earlier of (x) the termination or expiration of this Agreement; (y) your removal of such Member from the Member

List or (z) our notice to you that such Member violated this Agreement. We may withhold or terminate Services of individual Members for any of the foregoing reasons; in such circumstances this Agreement will continue in full force and effect to the exclusion of the relevant Member.

- f. **Service Retainer.** The Service Retainer will be held as a retainer for performance of all your obligations under this Agreement, including the Membership Fee Obligations, and is not intended to be a reserve from which fees may be paid. In the event you owe us other fees, you may not rely on deducting them from the Service Retainer, but must pay them separately. We will return the Service Retainer, or any balance after deducting outstanding fees and other costs due to us, including any unsatisfied Membership Fee Obligations, to you by bank transfer or other method that we communicate to you within thirty (30) days (or earlier if required by applicable law) after the later of (i) the termination or expiration of this Agreement and (ii) the date on which you provide to us all account information necessary for us to make such payment. Return of the Service Retainer is also subject to your complete performance of all your obligations under this Agreement, including full satisfaction of your Membership Fee Obligations and any additional obligations applicable following termination or expiration of this Agreement.
- g. **Removal of Property Upon Termination.** Prior to the termination or expiration of this Agreement, you will remove all of your, your Members', and your or their guests' property from the Office Space and Premises. After providing you with reasonable notice, we will be entitled to dispose of any property remaining in or on the Office Space or Premises after the termination or expiration of this Agreement and will not have any obligation to store such property, and you waive any claims or demands regarding such property or our handling or disposal of such property. You will be responsible for paying any fees reasonably incurred by us regarding such removal. We shall have no implied obligations as a bailee or custodian, and you hereby indemnify us and agree to keep us indemnified in respect of any claims of any third parties in respect of such property. Following the termination or expiration of this Agreement, we will not forward or hold mail or other packages delivered to us.

6. HOUSE RULES

In addition to any rules, policies and/or procedures that are specific to a Premises used by you:

- a. **You acknowledge and agree that:**

- i. keys, key cards and other such items used to gain physical access to the Premises, or the Office Space remain our property. You will cause your Members to safeguard our property and you shall promptly notify us and be liable for replacement fees should any such property be lost, stolen or destroyed;
- ii. you shall promptly notify us of any change to your contact and/or payment information;
- iii. we will provide notice to you of any changes to Services, fees, or other updates via email. It is your responsibility to read such emails and to ensure your Members are aware of any changes, regardless of whether we notify such Members directly;
- iv. carts, dollies and other freight items which may be made available may not be used in the passenger elevator except at our discretion;
- v. for security reasons, we may, but have no obligation to, regularly record certain areas in the Premises via video;
- vi. all of your Members are at least 18 years of age;
- vii. you shall be solely and fully responsible for ensuring that alcohol is consumed responsibly by your individual Members and that no alcohol is consumed by any of your Members or guests who is younger than the legal age for consuming alcohol in the applicable jurisdiction;
- viii. common spaces are to be enjoyed by all our member companies, members and guests unless otherwise instructed by us, and are for temporary use and not as a place for continuous, everyday work;
- ix. you will provide us with reasonable notice of and complete all required paperwork prior to hosting any event at the Premises;
- x. you will be responsible for any damage to your Office Space other than normal wear and tear;
- xi. you will be responsible for replacement fees for any item(s) provided to you by the WeWork community team for temporary use should any such property be lost, stolen or destroyed;
- xii. we are not liable for any mail or packages received without a WeWork employee's signature indicating acceptance;
- xiii. you may not make any structural or nonstructural alterations or installations

(including, but not limited to, wall attachments, furniture, IT equipment, and/or glass paneling) in the Office Space or elsewhere in the Premises without prior approval by us. In the event that any alterations or installations are made, you shall be responsible for the full cost and expense of the alteration or installation and, prior to the termination of this Agreement, the removal of such items and the restoration necessitated by any such alterations, and we shall deduct any such costs not otherwise paid by you from the Service Retainer. In no event are you permitted to perform any of these actions. **Only a member of our facilities staff is entitled to perform an alteration, installation, removal or restoration. Reach out to a member of your community team for more information;**

- xiv. you and your Members' computers, tablets, mobile devices and other electronic equipment must be (a) kept up-to-date with the latest software updates provided by the software vendor and (b) kept clean of any malware, viruses, spyware, worms, Trojans, or anything that is designed to perform malicious, hostile and/or intrusive operations. We reserve the right to remove any device from our networks that poses a threat to our networks or users until the threat is remediated; and
- xv. you consent to our non-exclusive, non-transferable use of your Member Company name and/or logo in connection with identifying you as a Member Company of WeWork, alongside those of other member companies, on a public-facing "Membership" display on our website, as well as in video and other marketing materials. You warrant that your logo does not infringe upon the rights of any third party and that you have full authority to provide this consent. You may terminate this consent at any time upon thirty (30) days' prior notice.

**b. No Member will:**

- i. perform any activity or cause or permit anything that is reasonably likely to be disruptive or dangerous to us or any other member companies, or our or their employees, guests or property, including without limitation the Office Space or the Premises;
- ii. use the Services, the Premises or the Office Space to conduct or pursue any illegal or offensive activities or comport themselves to the community in a similar manner; all Members shall act in a respectful manner towards other member companies and our and their employees and guests;

- iii. misrepresent himself or herself to the WeWork community, either in person or on the WeWork Member Network;
- iv. take, copy or use any information or intellectual property belonging to other member companies or their members or guests, including without limitation any confidential or proprietary information, personal names, likenesses, voices, business names, trademarks, service marks, logos, trade dress, other identifiers or other intellectual property, or modified or altered versions of the same, and this provision will survive termination of this Agreement;
- v. take, copy or use for any purpose (a) the name "We", "WeWork" or any of our other business names, trademarks, service marks, logos, designs, copyrights, patents, trade secrets, trade dress, marketing material, other identifiers or other intellectual property ("Intellectual Property"); (b) any derivations, modifications or similar versions of the same; or (c) any photographs or illustrations of any portion of a Premises, for any purpose, including competitive purposes, without our prior consent, provided that during the term of this Agreement you will be able to use "WeWork" in plain text to accurately identify an address or office location. You acknowledge that WeWork owns all right, title and interest in and to its Intellectual Property. You may not file for ownership rights of any of our Intellectual Property with any governmental authority or use our Intellectual Property in any advertising, including domain names, social media handles, or any form of media invented in the future. You may not, directly or indirectly, interfere with or object to, in any manner, our ownership rights or the use of our Intellectual Property or engage in any conduct that is likely to cause confusion between WeWork and yourself, without our prior consent, and this provision will survive termination of this Agreement;
- vi. film within any Premises, including within the Office Space, without completing all required paperwork and receiving express written consent from WeWork;
- vii. use the Office Space in a retail, medical, or other capacity involving frequent visits by members of the public, as a residential or living space, or for any exclusively non-business purpose;
- viii. sell, manufacture or distribute any controlled substance, including alcoholic beverages, from the Office Space, or obtain a license for such sale, manufacture, importation, or distribution using the Office Space or the address of the Main Premises;

- ix. use our mail and deliveries services for fraudulent or unlawful purposes, and we shall not be liable for any such use;
- x. store significant amounts of currency or other valuable goods or commodities in the Office Space that are not commonly kept in commercial offices; in the event that you do so, we will not be liable for any such loss;
- xi. make any copies of any keys, keycards or other means of entry to the Office Space or the Premises or lend, share or transfer any keys or keycards to any third party, unless authorized by us in advance;
- xii. install any locks to access the Office Space or anywhere within the Premises, unless authorized by us in advance;
- xiii. allow any guest(s) to enter the building without registering such guest(s) and performing any additional required steps according to our policies;
- xiv. operate any equipment within the Premises that has a higher heat output or electrical consumption than in a typical personal office environment, or places excessive strain on our electrical, IT, HVAC or structural systems, with such determination to be made in our sole discretion, without our prior approval; or
- xv. bring any weapons of any kind, or any other offensive, dangerous, hazardous, inflammable or explosive materials into the Office Space or the Premises.

You are responsible for ensuring your Members comply with all House Rules and with all rules, policies and/or procedures that are specific to a Premises used by you, and agree that in the event of any penalty or fine resulting from the breach of any such rules, policies and/or procedures, you will be responsible for paying such penalty or fine.

## 7. ADDITIONAL AGREEMENT S

- a. **Information Technology.** In order to utilize all the functionalities offered by us, it may be necessary to install software onto a Member's computer, tablet, mobile device or other electronic equipment. In addition, a Member may request that we troubleshoot problems a Member may have with respect to printing, accessing the network connection

or other issues. If we provide such services, we will not be responsible for any damage to your equipment.

- b. **Network Connection.** WeWork provides shared Internet access to Members via a wireless or wired network connection. For those Members wishing to implement a private wired network, WeWork may allow you to install a firewall device for your exclusive access and use, subject to WeWork IT approval, and you will be responsible for removal of the same. Prior to any such installation or removal, you shall coordinate with the WeWork IT team to discuss the actual setup, appropriate time, manner and means for such installation or removal and any additional fees that may result from the request. To the extent that we incur any costs in connection with such installation or removal, which are not otherwise paid by you, we shall deduct such costs from the Service Retainer. You shall also be responsible for any monthly fees incurred relating to your private, secured wired network.
- c. **Waiver of Claims.** To the extent permitted by law, you, on your own behalf and on behalf of your Members, employees, agents, guests and invitees, waive any and all claims and rights against us and our affiliates, parents, and successors and each of our and their employees, assignees, officers, agents and directors (collectively, the “WeWork Parties”) and our landlords at the Premises resulting from injury or damage to, or destruction, theft, or loss of, any property, person or pet, except to the extent caused by the gross negligence, willful misconduct or fraud of the WeWork Parties.
- d. **Limitation of Liability.** To the extent permitted by law, the aggregate monetary liability of any of the WeWork Parties to you or your Members, employees, agents, guests or invitees for any reason and for all causes of action, will not exceed the total Membership Fees paid by you to us under this Agreement in the twelve (12) months prior to the claim arising. None of the WeWork Parties will be liable under any cause of action, for any indirect, special, incidental, consequential, reliance or punitive damages, or any loss of profits or business interruption. You acknowledge and agree that you may not commence any action or proceeding against any of the WeWork Parties, whether in contract, tort, or otherwise, unless the action, suit, or proceeding is commenced within one (1) year of the cause of action’s accrual. Notwithstanding anything contained in this Agreement to the contrary, you acknowledge and agree that you shall not commence any action or proceeding against any of the WeWork Parties other than the WeWork Party you are directly contracting with hereunder and the assets of such entity for any



amounts due or for the performance of any obligations in connection with this Agreement.

- e. **Indemnification.** You will indemnify the WeWork Parties from and against any and all claims, including third party claims, liabilities, and expenses including reasonable attorneys' fees, resulting from any breach or alleged breach of this Agreement by you or your Members or your or their guests, invitees or pets or any of your or their actions or omissions, except to the extent a claim results from the gross negligence, willful misconduct or fraud of the WeWork Parties. You are responsible for the actions of and all damages caused by all persons and pets that you, your Members or your or their guests invite to enter any of the Premises, including but not limited to any vendors hired by you that enter the Premises. You shall not make any settlement that requires a materially adverse act or admission by us or imposes any obligation upon any of the WeWork Parties unless you have first obtained our or the relevant WeWork Party's written consent. None of the WeWork Parties shall be liable for any obligations arising out of a settlement made without its prior written consent.
  
- f. **Insurance.** You are responsible for maintaining, at your own expense and at all times during the Term, personal property insurance and commercial general liability insurance covering you and your Members for property loss and damage, injury to your Members and your Members' guests or pets and prevention of or denial of use of or access to, all or part of the Premises, in form and amount appropriate to your business. In addition you are responsible for maintaining, at your own expense and at all times during the Term, workers' compensation insurance providing statutory benefits in accordance with the law and employer's liability in an amount appropriate to your business. You will ensure that WeWork and the Landlord shall each be named as additional insureds on your commercial general liability policy and that all insurance policies shall include a clause stating that the insurer waives all rights of recovery, under subrogation or otherwise, you may have against WeWork and the Landlord. You shall provide proof of insurance upon our request.
  
- g. **Pets.** If the Office Space is in Premises designated by us to be one in which pets are permitted, and if any Member plans on regularly bringing a pet into the Office Space or otherwise into the Premises, we may require this Member to produce proof of vaccination for such pet and evidence of compliance with applicable local regulations. If any of your Members brings a pet into the Premises, you will be responsible for any injury or damage caused by this pet to other members or guests or other occupants of the Premises or to the property of (i) WeWork or any

employees, members or guests or (ii) the owner(s) or other occupants of the Premises. None of the WeWork Parties will be responsible for any injury to such pets. We reserve the right to restrict any Member's right to bring a pet into the Premises in our sole discretion.

- h. **Other Members.** We do not control and are not responsible for the actions of other Member Companies, Members, or any other third parties. If a dispute arises between Member Companies, members or their invitees or guests, we shall have no responsibility or obligation to participate, mediate or indemnify any party.
  - i. **Third Party Services.** Services do not include, and we are not involved in or liable for, the provision of products or services by third parties ("Third Party Services") that you may elect to purchase in connection with your Membership, including via the WeWork Services Store, even if they appear on your WeWork invoice. Third Party Services are provided solely by the applicable third party ("Third Party Service Providers") and pursuant to separate arrangements between you and the applicable Third Party Service Providers. These Third Party Service Providers' terms and conditions will control with respect to the relevant Third Party Services. By adding a Member to the Member List, you are thereby authorizing that Member to access and use the WeWork Services Store in accordance with the terms of service available on our website.
  - j. **Privacy.** We collect, process, transfer and secure personal data about you and your Members pursuant to the terms of our Privacy Policy, which can be found on our website ([www.wework.com/legal/privacy](http://www.wework.com/legal/privacy)), and in accordance with all applicable data protection laws. Note that you are not obligated to provide us with personal information and any information collected by us will be provided by you at your own will and with your explicit consent granted herein by execution of this Agreement. You hereby (i) undertake, where necessary, to obtain consent from such Member to the collection, processing, transferring and securing of data described herein and (ii) confirm that you in fact collect and process such Member's personal data in accordance with applicable law.
- 8. ARBITRATION AND CLASS ACTION WAIVER**
- a. **Governing Law.** This Agreement and the transactions contemplated hereby shall be governed by and construed under the law of the State of New York, U.S.A. and the United States without regard to conflicts of laws provisions thereof and without

regard to the United Nations Convention on Contracts for the International Sale of Goods.

- b. **Venue.** Except that either party may seek equitable or similar relief from any court of competent jurisdiction, any dispute, controversy or claim arising out of or in relation to this Agreement, or at law, or the breach, termination or invalidity of this Agreement, that cannot be settled amicably by agreement of the parties to this Agreement shall be finally settled in accordance with the arbitration rules of JAMS then in force, by one or more arbitrators appointed in accordance with said rules. The place of arbitration shall be New York, New York, U.S.A.
- c. **Proceedings; Judgment.** The proceedings shall be confidential and in English. The award rendered shall be final and binding on both parties. Judgment on the award may be entered in any court of competent jurisdiction. In any action, suit or proceeding to enforce rights under this Agreement, the prevailing party shall be entitled to recover, in addition to any other relief awarded, the prevailing party's reasonable attorneys' fees and other fees, costs and expenses of every kind in connection with the action, suit or proceeding, any appeal or petition for review, the collection of any award or the enforcement of any order, as determined by the arbitrator(s) or court, as applicable. This Agreement shall be interpreted and construed in the English language, which is the language of the official text of this Agreement.
- d. **Class Action Waiver.** Any proceeding to resolve or litigate any dispute in any forum will be conducted solely on an individual basis. Neither you nor we will seek to have any dispute heard as a class action or in any other proceeding in which either party acts or proposes to act in a representative capacity. No proceeding will be combined with another without the prior written consent of all parties to all affected proceedings. You also agree not to participate in claims brought in a private attorney general or representative capacity, or any consolidated claims involving another person's account, if we are a party to the proceeding. **YOU ARE GIVING UP YOUR RIGHT TO PARTICIPATE AS A CLASS REPRESENTATIVE OR CLASS MEMBER ON ANY CLASS CLAIM YOU MAY HAVE AGAINST US INCLUDING ANY RIGHT TO CLASS ARBITRATION OR ANY CONSOLIDATION OF INDIVIDUAL ARBITRATIONS.**

**9. MISCELLANEOUS**

- a. **Nature of the Agreement; Relationship of the Parties.** The whole of the Premises and Office Space remains in our possession and control. Your agreement with us is a contract for the provision of services and we are giving you the right to share with

us the use of the Office Space so that we can provide the Services to you. Notwithstanding anything in this Agreement to the contrary, you and we agree that our relationship is not that of landlord-tenant or lessor-lessee and this Agreement in no way shall be construed as to grant you or any Member any title, easement, lien, possession or related rights in our business, the Premises, the Office Space or anything contained in or on the Premises or Office Space. This Agreement creates no tenancy interest, leasehold estate, or other real property interest. The parties hereto shall each be independent contractors in the performance of their obligations under this Agreement, and this Agreement shall not be deemed to create a fiduciary or agency relationship, or partnership or joint venture, for any purpose. You acknowledge and agree that you are entering into this Agreement for the purposes of and in the course of your trade, business and/or profession, and not as a consumer. Neither party will in any way misrepresent our relationship.

- b. **Updates to the Agreement.** Changes to membership and overage fees, will be governed by Section 4(b) and 4(d) of this Agreement, respectively. We may from time to time update this Agreement and will provide notice to you of these updates. You will be deemed to have accepted the new terms of the Agreement following the completion of two (2) full calendar months after the date of notice of the update(s). Continued use of the Office Space or Services beyond this time will constitute acceptance of the new terms.
- c. **Waiver.** Neither party shall be deemed by any act or omission to have waived any of its rights or remedies hereunder unless such waiver is in writing and signed by the waiving party.
- d. **Subordination.** This Agreement is subject and subordinate to our Lease and to any supplemental documentation and to any other agreements to which our Lease is subject or subordinate. However, the foregoing does not imply any sublease or other similar relationship involving an interest in real property.
- e. **Extraordinary Events.** WeWork will not be liable for, and will not be considered in default or breach of this Agreement on account of, any delay or failure to perform as required by this Agreement as a result of any causes or conditions that are beyond WeWork's reasonable control, including without limitation (i) any delays or changes in construction of, or WeWork's ability to procure any space in, any Premises, and (ii) any delays or failure to perform caused by conditions under the control of our landlord at the applicable Premises.

- f. **Severable Provisions.** Each provision of this Agreement shall be considered severable. To the extent that any provision of this Agreement is prohibited or otherwise limited, this Agreement shall be considered amended to the smallest degree possible in order to make the Agreement effective under applicable law.
- g. **Survival.** Sections 1, 2(b), 4 (to the extent any payments remain outstanding), 5(d), 5(f), 5(g), 6(b), 7(a) through 7(f), 7(h), 8, and 9 and all other provisions of this Agreement reasonably expected to survive the termination or expiration of this Agreement will do so.
- h. **Notices.** Any and all notices under this Agreement will be given via email, and will be effective on the first business day after being sent. All notices will be sent via email to the email addresses specified on the Membership Details Form, except as otherwise provided in this Agreement. WeWork may send notices to either (or both) the Primary Member or the Authorized Signatory, as WeWork determines in its reasonable discretion. Notices related to the physical Office Space, Premises, Members, other Member Companies or other issues in the Premises should be sent by the Primary Member. Notices related to this Agreement or the business relationship between you and WeWork should be sent by your Authorized Signatory. In the event that we receive multiple notices from different individuals within your company containing inconsistent instructions, the Authorized Signatory's notice will control unless we decide otherwise in our reasonable discretion.
- i. **Headings; Interpretation.** The headings in this Agreement are for convenience only and are not to be used to interpret or construe any provision of this Agreement. Any use of "including," "for example" or "such as" in this Agreement shall be read as being followed by "without limitation" where appropriate. References to any times of day in this Agreement refer to the time of day in the Office Space's time zone.
- j. **No Assignment.** Except in connection with a merger, acquisition, corporate reorganization, or sale of all or substantially all of the shares or assets of you or your parent corporation, you may not transfer or otherwise assign any of your rights or obligations under this Agreement (including by operation of law) without our prior consent. We may assign this Agreement without your consent.
- k. **Sanctions.** You hereby represent and warrant that (i) during the term of this Agreement you and your Members will comply with all applicable U.S. and non-U.S. economic sanctions and export control laws and

regulations, including but not limited to the economic sanctions regulations implemented under statutory authority and/or Executive Orders and administered by the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC") (31 C.F.R. Part 500 et seq.), the U.S. Commerce Department's Export Administration Regulations (15 C.F.R. Part 730 et seq.), the economic sanctions rules and regulations of the European Council, United Kingdom, and EU Member States, and EU's Dual-use Regulation 428/2009 (collectively, "Trade Control Laws"); (ii) neither you nor any of your Members, subsidiaries or affiliates, nor directors or officers is (a) a citizen or resident of, an entity organized under the laws of, or otherwise located in, a country subject to comprehensive territorial sanctions maintained by OFAC (hereinafter referred to as "Sanctioned Countries"), (b) identified on U.S. Government restricted party lists including the Specially Designated Nationals List and Foreign Sanctions Evaders List administered by OFAC; the Denied Parties List, Unverified List or Entity List maintained by the U.S. Commerce Department Bureau of Industry and Security; or the List of Statutorily Debarred Parties maintained by the U.S. State Department Directorate of Defense Trade Controls, (c) a listed person or entity on the Consolidated List of persons and entities subject to asset-freezing measures or other sanctions maintained by the European Union, and by the Member States of the European Union, or (d) a person or entity subject to asset-freezing measures or other sanctions maintained by the United Kingdom's HM Treasury (collectively referred to herein as "Restricted Parties"); (iii) neither you nor any of your Members, subsidiaries and/or affiliates are 50% or more owned, individually or in the aggregate, directly or indirectly by one or more Restricted Parties or otherwise controlled by Restricted Parties; (iv) less than 10% of your total annual revenues are, and will continue to be for the duration of the Agreement, generated from activities involving, directly or indirectly, one or more of the Sanctioned Countries; and (v) neither you nor any of your Members will, at any time during the Term, engage in any activity under this Agreement, including the use of Services provided by WeWork in connection with this Agreement, that violates applicable Trade Control Laws or causes WeWork to be in violation of Trade Control Laws.

1. **Anti-Money Laundering.** You hereby represent and warrant that at all times you and your Members have conducted and will conduct your operations in accordance with all laws that prohibit commercial or public bribery and money laundering (the "Anti-Money Laundering Laws"), and that all funds which you will use to comply with your payments obligations under this Agreement will be derived from

legal sources, pursuant to the provisions of Anti- Money Laundering Laws. You will provide us with all information and documents that we from time to time may request in order to comply with all Anti- Money Laundering Laws.

- m. **Anti-Corruption Laws.** Neither you nor any of your Members, your directors, officers, employees, agents, subcontractors, representatives or anyone acting on your behalf, (i) has, directly or indirectly, offered, paid, given, promised, or authorized the payment of any money, gift or anything of value to: (A) any Government Official or any commercial party, (B) any person while knowing or having reason to know that all or a portion of such money, gift or thing of value will be offered, paid or given, directly or indirectly, to any Government Official or any commercial party, or (C) any employee or representative of WeWork for the purpose of (1) influencing an act or decision of the Government Official or commercial party in his or her official capacity, (2) inducing the Government Official or commercial party to do or omit to do any act in violation of the lawful duty of such official, (3) securing an improper advantage or (4) securing the execution of this Agreement, (ii) will authorize or make any payments or gifts or any offers or promises of payments or gifts of any kind, directly or indirectly, in connection with this Agreement, the Services or the Office Space. For purposes this section, "Government Official" means any officer, employee or person acting in an official capacity for any government agency or instrumentality, including state-owned or controlled companies, and public international organizations, as well as a political party or official thereof or candidate for political office.
- n. **Compliance with Laws.** You hereby represent and warrant that at all times you and your Members have conducted and will conduct your operations ethically and in accordance with all applicable laws.
- o. **Brokers.** Except as may be provided for through the WeWork broker referral program, you hereby represent and warrant that you have not used a broker or realtor in connection with the membership transaction covered by this Agreement. If you seek to terminate this Agreement or cease to pay your monthly Membership Fee except as otherwise explicitly permitted herein (each, an "Early Exit"), within fifteen (15) days of doing so, you shall reimburse WeWork for any fees previously paid by WeWork to a broker or realtor corresponding to the period following such Early Exit. You hereby indemnify and hold us harmless against any claims arising from the breach of any warranty or representation of this paragraph.

- p. **Counterparts and Electronic Signature.** This Agreement may be executed in any number of counterparts by either handwritten or electronic signature, each of which when executed shall constitute a duplicate original, but all the counterparts shall together constitute the one agreement, and each of which counterparts may be delivered by emailing the other party to this Agreement signed scanned document or electronically signed portable document format (pdf) version of the contract (as applicable). Each party agrees to the execution of this Agreement in this manner, and the parties acknowledge that execution in this manner creates a binding contract between the parties on the Effective Date.
- q. **Entire Agreement.** This Agreement constitutes the entire agreement between the parties relating to the subject matter hereof and shall not be changed in any manner except by a writing executed by both parties or as otherwise permitted herein. All prior agreements and understandings between the parties regarding the matters described herein have merged into this Agreement.



Nicola Shannon  
3 Laird Road  
Medford, MA  
02155

Dear Nikki:

It is my pleasure to extend the following offer of employment to you on behalf of NeuroBo Pharmaceuticals, Inc.

**Title: VP of Clinical Operations.** This position is a full-time position and is classified as “exempt” for purposes of the federal and state wage and hour laws. Therefore, your salary is intended to cover all hours worked and you are not entitled to overtime pay for hours worked over forty (40) in a workweek or overtime as otherwise mandated by applicable federal and state law. We will review opportunities for advancement and promotion annually.

**Reporting Relationship:** The position will report to the Chief Medical Officer

**Base Salary:** Your annual salary will be \$280,000, payable bi-weekly, and is subject to deductions for taxes and other withholdings as required by law and/or the policies of the company.

**2019 Bonus Payment:** In recognition of your hard work and dedication, the Board has approved a discretionary bonus award to you in the amount of \$66,250.00, representing 25% of your current annual base salary. This discretionary bonus shall be paid on or before February 28, 2020 and will be subject to deductions for taxes and other withholdings as required by law and/or the policies of the company.

**Bonus Potential:** The company has discretion to award you a bonus of up to 25% of your then-current annual base salary. The actual amount of such bonus, if any, shall be determined by the Company in its sole discretion. The company may take into consideration its assessment of your performance and that of the Company against goals established by the Board. Any bonus awarded during this calendar year would be prorated, and any bonus awarded shall not be deemed accrued and earned by you until such time as the Company pays such bonus. Additional details regarding bonuses will be provided to you upon commencing employment.

**Confidentiality Agreement:** Our standard confidentiality agreement must be signed prior to your start date.

**Company Policies and Benefits:** During your employment, you will be subject to all of the policies, rules and regulations applicable to employees of the company, as they currently exist and subject to any future modifications in the company's discretion. Consistent with the company's practices and in accordance with the terms of applicable benefit plans, your will benefits include:

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**Benefits:** The company offers competitive medical, life, disability, and dental insurance coverages as well as a 401(k) Plan. More information on the benefits plans can be found in the attached documents. Employee contribution to payment for benefit plans is determined annually. Employee contribution to payment for benefit plans is determined annually.

**Stock Options:** The company expects to implement a stock option plan in the future. No stock options are currently available at this time.

**Paid Time Off:** The company is in the process of developing its paid time off policy. We anticipate that our policy will provide for the equivalent of three to four weeks of paid time off on an annual basis, in accordance with the new policy.

**Effective Date:** January 1, 2020

**AT-WILL EMPLOYMENT:**

**YOUR EMPLOYMENT WITH NEUROBO PHARMACEUTICALS, INC. IS AT-WILL AND EITHER PARTY CAN TERMINATE THE RELATIONSHIP AT ANY TIME WITH OR WITHOUT CAUSE AND WITH OR WITHOUT NOTICE. NEUROBO PHARMACEUTICALS, INC. RESERVES THE RIGHT TO CHANGE THE TERMS AND CONDITIONS OF YOUR EMPLOYMENT AT ANY TIME, INCLUDING CHANGES TO BONUS ARRANGEMENTS AND OTHER EMPLOYEE BENEFIT PLANS AND PROGRAMS. THIS OFFER LETTER IS MERELY A SUMMARY OF THE PRINCIPAL TERMS OF OUR EMPLOYMENT OFFER AND IS NOT A CONTRACT OF EMPLOYMENT FOR ANY DEFINITE PERIOD OF TIME. FURTHER, THIS LETTER SUPERSEDES ANY PRIOR OR SUBSEQUENT ORAL OR WRITTEN REPRESENTATIONS REGARDING THE TERMS OF POTENTIAL EMPLOYMENT WITH THE COMPANY.**

If the terms of this offer are acceptable, please indicate your acceptance by signing both this letter and the Invention, Non-Disclosure, and Non-Competition Agreement included with this offer. Please return one copy of each to Amy Breckenridge by no later than January 31, 2020.

We are extremely enthusiastic about continuing to work with you at NeuroBo.

Signatures:

<u>/s/ Richard Kang</u>	<u>1/29/2020</u>
Richard Kang, CEO	Date
NeuroBo Pharmaceuticals, Inc.	

<u>/s/ Nicola Shannon</u>	<u>1/29/2020</u>
Nicola Shannon	Date

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## Incentive Stock Option Agreement

This Incentive Stock Option Agreement (this “**Agreement**”) is made and entered into as of the below Grant Date by and between NeuroBo Pharmaceuticals, Inc., a Delaware corporation (the “**Company**”), and \_\_\_\_\_ (the “**Participant**”). Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Company’s 2019 Equity Incentive Plan (the “**Plan**”).

Grant Date: \_\_\_\_\_  
 Exercise Price per Share: \_\_\_\_\_  
 Number of Option Shares: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_

### 1. Grant of Option.

1.1 Grant; Type of Option. The Company hereby grants to the Participant an incentive stock option (the “**Option**”) to purchase up to the total number of Option Shares set forth above, at the Exercise Price per Share set forth above. The Option is being granted pursuant to the terms of the Plan. The Option is intended to be an Incentive Stock Option within the meaning of Section 422 of the Code to the maximum extent permitted by applicable law. If Participant ceases to be an Employee of the Company or an Affiliate, but continues to provide Service, this Option will be treated as a Non-Qualified Stock Option on the day after the date that is three (3) months after Participant ceases to be an Employee (i) even if Participant continues to provide Service after his/her employment has terminated or (ii) if termination of employment was for any reason other than due to Participant’s death or Disability. In addition, to the extent that all or part of this Option exceeds the \$100,000 limitation rule of section 422(d) of the Code, this Option or the lesser excess part will be treated as a Non-Qualified Stock Option.

1.2 Consideration; Subject to Plan. The grant of the Option is made in consideration of the Services to be rendered by the Participant to the Company and is subject to the terms and conditions of the Plan.

### 2. Exercise Period; Vesting.

2.1 Vesting Schedule. Subject to the Participant’s continuous Service, the Option shall become vested and exercisable with respect to one-twelfth (1/12) of the Option Shares on the last day of each calendar quarter commencing with the calendar quarter following the calendar quarter of the Grant Date (provided however that the last such quarterly vesting installment shall instead occur on the third anniversary of the Grant Date). The unvested portion of the Option shall never be exercisable including for avoidance of doubt on or after the Participant’s termination of Service.

2.2 Expiration. The Option shall expire on the Expiration Date set forth above, or earlier as provided in this Agreement or the Plan.

3. Termination of Service. For purposes of this Agreement, “Service” means Participant’s service as an Employee, Consultant, or non-employee director of the Company or Company Affiliate. Service will be deemed terminated as soon as the entity to which Service is being provided is no longer either (i) the Company or (ii) an Affiliate. The Administrator determines

when Service commences and when Service terminates. The Administrator may determine whether any Company transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in termination of Service for purposes of this Agreement and the Administrator's decision shall be final, conclusive and binding.

3.1 Termination for Reasons Other Than Cause, Death, Disability. If the Participant's Service is terminated for any reason other than Cause, death, or Disability, the Participant may exercise the vested portion of the Option, but only within such period of time ending on the earlier of (a) the date three (3) months following the termination of the Participant's Service or (b) the Expiration Date or (c) the date that this Option is not assumed or continued after a Corporate Transaction.

3.2 Termination for Cause. If Participant's Service is terminated for Cause, the Option (both vested and unvested portions) shall immediately terminate without consideration and cease to be exercisable. The provisions of Plan Paragraph 15 will apply to this Agreement.

3.3 Termination due to Disability. If Participant's Service terminates as a result of Participant's Disability, then the provisions of Plan Paragraph 16 will apply to this Agreement and the Participant may exercise the vested portion of the Option, but only within such period of time ending on the earlier of (a) the date twelve (12) months following the Participant's termination of Service or (b) the Expiration Date or (c) the date that this Option is not assumed or continued after a Corporate Transaction.

3.4 Termination due to Death. If Participant's Service terminates as a result of Participant's death, then the provisions of Plan Paragraph 17 will apply to this Agreement and the vested portion of the Option may be exercised by the Participant's estate, by a person who acquired the right to exercise the Option by bequest or inheritance, or by the person designated to exercise the Option upon the Participant's death, but only within the time period ending on the earlier of (a) the date twelve (12) months following the Participant's termination of Service or (b) the Expiration Date or (c) the date that this Option is not assumed or continued after a Corporate Transaction.

3.5 Extension of Termination Date. If, following the Participant's termination of Service for any reason (other than for Cause) the exercise of the vested portion of this Option is prohibited because the exercise of the Option would violate the registration requirements under the Securities Act or any other state or federal securities law or the rules of any securities exchange or interdealer quotation system, then the expiration of the Option shall be tolled until the date that is thirty (30) days after the end of the period during which the exercise of the Option would be in violation of such registration or other securities requirements but in no event tolled later than the earlier of the Expiration Date or the date that this Option is not assumed or continued after a Corporate Transaction.

4. Leaves of Absence. For purposes of the Option, the Participant's Service does not terminate when he or she goes on a bona fide leave of absence that was approved by the Company in writing, if the terms of the leave of absence provide for Service crediting, or when Service crediting is required by applicable law. The Participant's Service terminates in any event when the approved leave of absence ends unless the Participant immediately returns to active work. The

Administrator determines which leaves of absence count for this purpose (along with determining the effect of a leave of absence on vesting of the Option), and when the Participant's Service terminates for all purposes under the Plan. For income tax purposes, if the period of leave exceeds three (3) months and Participant's right to reemployment is not provided either by statute or by contract, then this Option will be treated as a Non-Qualified Stock Option if the exercise of this Option occurs after the expiration of six (6) months from the commencement of such leave of absence.

5. Manner of Exercise.

5.1 Election to Exercise. To exercise the Option, the Participant (or in the case of exercise after the Participant's death or incapacity, the Participant's executor, administrator, heir, or legatee, as the case may be) must deliver to the Company a notice of intent to exercise in the manner designated by the Administrator.

If someone other than the Participant exercises the Option, then such person must submit documentation reasonably acceptable to the Company verifying that such person has the legal right to exercise the Option.

5.2 Payment of Exercise Price. The entire Exercise Price of the Option Shares being acquired shall be payable in full at the time of exercise to the extent permitted by applicable statutes and regulations, either:

- (a) in cash or by certified or bank check at the time the Option is exercised; or
- (b) in the discretion of the Administrator, upon such terms as the Administrator shall approve including the below:
  - (i) by delivery to the Company of other Shares, duly endorsed for transfer to the Company, with an aggregate Fair Market Value on the date of delivery equal to the aggregate Exercise Price (or portion thereof) due for the number of Shares being acquired, or by means of attestation, whereby the Participant identifies for delivery specific Shares that have a Fair Market Value on the date of attestation equal to the aggregate Exercise Price (or portion thereof) and receives a number of Shares equal to the difference between the number of Shares thereby purchased and the number of identified attestation Shares;
  - (ii) through a "cashless exercise program" established with a broker;
  - (iii) by reduction in the number of Shares otherwise deliverable upon exercise of this Option with a Fair Market Value equal to the aggregate Exercise Price at the time of exercise;
  - (iv) by any combination of the foregoing methods; or
  - (v) in any other form of legal consideration that may be acceptable to the Administrator.

5.3 Withholding. Prior to the issuance of Shares upon the exercise of the Option, the Participant must make arrangements satisfactory to the Company to pay or provide for any applicable federal, state, and local withholding obligations of the Company. The Participant may satisfy any federal, state, or local tax withholding obligation relating to the exercise of the Option by any of the following means:

(a) tendering a cash payment;

(b) in the discretion of the Administrator, authorizing the Company to withhold Shares from the Shares otherwise issuable to the Participant as a result of the exercise of the Option; provided, however, that no Shares are withheld with a value exceeding the statutory maximum amount of tax required to be withheld by law; or

(c) in the discretion of the Administrator, delivering to the Company previously owned and unencumbered Shares.

The Company also has the right to withhold from any compensation paid to a Participant.

5.4 Issuance of Shares. Provided that the completed and signed exercise notice and payment are in form and substance satisfactory to the Company, the Company shall issue the Shares registered in the name of the Participant, the Participant's authorized assignee, or the Participant's legal representative, and shall deliver certificates representing the Shares with the appropriate legends affixed thereto.

6. Stockholder Rights. The Participant, or his or her estate, shall have no rights as a stockholder of the Company with regard to the Option until the Participant has been issued the applicable Option Shares by the Company and has satisfied all other conditions specified in the Plan. No adjustment shall be made for cash or stock dividends or other rights for which the record date is prior to the date when such applicable Option Shares are issued, except as may be provided in the Plan.

7. Transfer of Option. Prior to the Participant's death, only the Participant may exercise the Option. The Participant cannot gift, transfer, assign, alienate, pledge, hypothecate, attach, sell, or encumber the Option. If the Participant attempts to do any of these things, the Option will immediately become invalid. The Participant may, however, dispose of the Option by will or it may be transferred by the laws of descent and distribution. Regardless of any marital property settlement agreement, the Company is not obligated to honor a notice of exercise from the Participant's spouse, nor is the Company obligated to recognize any spousal interest in the Option in any other way.

8. Restrictions on Exercise and Resale. By signing this Agreement, the Participant agrees not to (i) exercise this Option ("**Exercise Prohibition**"), or (ii) sell, transfer, dispose of, pledge, hypothecate, make any short sale of, or otherwise effect a similar transaction of any Shares acquired under this Option (each a "**Sale Prohibition**") at a time when applicable laws, regulations or Company or underwriter trading policies prohibit the exercise or disposition of Shares. The Company will not permit the Participant to exercise this Option if the issuance of Shares at that time would violate any law or regulation. The Company shall have the right to designate one or more periods of time, each of which generally will not exceed one hundred eighty (180) days in

length (provided however, that such period may be extended in connection with the Company's release (or announcement of release) of earnings results or other material news or events), and to impose an Exercise Prohibition and/or Sale Prohibition, if the Company determines (in its sole discretion) that such limitation(s) is needed in connection with a public offering of Shares or to comply with an underwriter's request or trading policy, or could in any way facilitate a lessening of any restriction on transfer pursuant to the Securities Act or any state securities laws with respect to any issuance of securities by the Company, facilitate the registration or qualification of any securities by the Company under the Securities Act or any state securities laws, or facilitate the perfection of any exemption from the registration or qualification requirements of the Securities Act or any applicable state securities laws for the issuance or transfer of any securities. The Company may issue stop/transfer instructions and/or appropriately legend any stock certificates issued pursuant to the Option in order to ensure compliance with the foregoing. Any such Exercise Prohibition shall not alter the Vesting Schedule set forth in this Agreement other than to limit the periods during which the Option shall be exercisable.

If the sale of Option Shares acquired under this Agreement is not registered under the Securities Act, but an exemption is available which requires an investment representation or other representation and warranty, the Participant shall represent and agree that the Shares being acquired are being acquired for investment, and not with a view to the sale or distribution thereof, and shall make such other representations and warranties as are deemed necessary or appropriate by the Company and its counsel.

The Participant may also be required, as a condition of exercise of the Option, to enter into any Company stockholder agreement or other agreements that are applicable to stockholders.

If Participant sells or otherwise disposes of any of the Option Shares acquired pursuant to the exercise of this Option on or before the later of (i) the date that is two years after the Grant Date or (ii) the date that is one year after the applicable exercise of this Option, then Participant shall within ten days of any and all such sales or dispositions provide the Company with written notice of such transactions including without limitation the date of each disposition, the number of Option Shares that Participant disposed of in each transaction and their original Grant Date, and the amount of proceeds Participant received from each disposition.

9. Clawback Policy. The Participant expressly acknowledges and agrees to be bound by Paragraph 35 of the Plan, which contains provisions addressing the Company's policy on recoupment of equity or other compensation.

10. No Retention Rights. The Participant's Option or this Agreement does not give the Participant the right to be retained by the Company (or any Affiliate) in any capacity. The Company (and its Affiliates) reserves the right to terminate the Participant's Service at any time and for any reason.

11. Adjustments. In the event of a Corporate Transaction, the provisions of Plan Paragraph 25(b) shall apply as is to this Option. In addition, the provisions of Plan Paragraphs 25(a) and 25(c) shall also apply as is to this Option. The Option shall be subject to the terms of the agreement of merger, liquidation or reorganization in the event the Company is subject to such corporate activity.

12. Legends. All certificates or book entries representing the Shares issued under this Option may, where applicable, have endorsed thereon any notation or legend the Company determines appropriate.
13. Taxes and Withholding. The Participant will be solely responsible for payment of any and all applicable taxes, including without limitation any penalties or interest based upon such tax obligations, associated with this Option. The Participant will not be allowed to exercise this Option unless acceptable arrangements are made to pay any withholding or other taxes that may be due as a result of the Option exercise or sale of Shares acquired under this Option.
14. Code Section 409A. This Option will be administered and interpreted to be exempt from (or comply with) Code Section 409A.
15. Legal Compliance with Law. The Company (and any Affiliate) is not responsible for the Participant's legal compliance requirements relating to this Option, including, but not limited to, tax reporting.
16. Regulatory Compliance. The issuance of Common Stock pursuant to this Agreement shall be subject to full compliance with all applicable requirements of law and the requirements of any stock exchange or interdealer quotation system upon which the Common Stock may be listed or traded.
17. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of his or her personal data as described in this document by the Company for the exclusive purpose of implementing, administering and managing his or her participation in the Plan. The Participant understands that the Company holds certain personal information about him or her, including, but not limited to, name, home address and telephone number, date of birth, gender, social security or insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all awards or any other entitlement to Shares awarded, cancelled, purchased, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of implementing, managing and administering the Plan ("**Data**"). The Participant understands that the Data may be transferred to any third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in his or her country or elsewhere and that the recipient country may have different data privacy laws and protections than his or her country. The Participant authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing his or her participation in the Plan, including any requisite transfer of such Data, as may be required to a broker or other third party with whom the Participant may elect to deposit any Shares acquired under the Plan.
18. Notice. Any notice to be given or delivered to the Company relating to this Agreement shall be in writing and addressed to the Company at its principal corporate offices. All notices shall be deemed effective upon personal delivery or upon deposit in the postal mail, postage prepaid and properly addressed to the Company. Any notice to be given or delivered to the Participant relating to this Agreement may be delivered by electronic form including without limitation by email (including prospectuses required by the Securities and Exchange Commission) as well as all



other documents that the Company is required to deliver to its security holders (including annual reports and proxy statements). The Company may also deliver these documents by posting them on a web site maintained by the Company or by a third party under contract with the Company.

19. Other Information. The Participant agrees to receive stockholder information, including copies of any annual report, proxy statement and periodic report, from the Company's website, if the Company wishes to provide such information through its website. The Participant acknowledges that copies of the Plan, Plan prospectus, Plan information and stockholder information are also available upon written or telephonic request to the Administrator.

20. Further Assistance. The Participant agrees to provide assistance (either before or after termination of Service) reasonably requested by the Company in connection with actions taken by the Participant while providing Services to the Company, including but not limited to assistance in connection with any lawsuits or other claims against the Company arising from events during the period in which the Participant rendered Service.

21. Additional Conditions. If the Company shall determine, in its sole discretion, that the consent or approval of any governmental authority is necessary or desirable as a condition to the payment of benefits to the Participant pursuant to the Plan, such payment shall not occur until such registration, qualification, consent or approval shall have been effected or obtained free of any conditions not acceptable to the Company.

22. Enforcement. The Company will be entitled to enforce its rights under this Agreement specifically, to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights to which it may be entitled. The Participant agrees and acknowledges that money damages may not be an adequate remedy for breach of the provisions of this Agreement and that the Company may in its sole discretion apply to any court of law or equity of competent jurisdiction for specific performance and/or injunctive relief in order to enforce or prevent any violations of the provisions of this Agreement.

23. Nondisclosure of Confidential Information. The Participant acknowledges that the businesses of the Company are highly competitive and that the Company's strategies, methods, books, records, and documents, technical information concerning their products, equipment, services, and processes, procurement procedures and pricing techniques, the names of and other information (such as credit and financial data) concerning former, present or prospective customers and business affiliates, all comprise confidential business information and trade secrets which are valuable, special, and unique assets which the Company uses in their business to obtain a competitive advantage over competitors. The Participant further acknowledges that protection of such confidential business information and trade secrets against unauthorized disclosure and use is of critical importance to the Company in maintaining its competitive position. The Participant acknowledges that by reason of the Participant's duties to and association with the Company, the Participant has had and will have access to and have and will become informed of confidential business information which is a competitive asset of the Company. The Participant hereby agrees that he or she will not, at any time during or after employment, make any unauthorized disclosure of any confidential business information or trade secrets of the Company, or make any use thereof, except in the carrying out of services responsibilities. The Participant shall take all necessary and appropriate steps to safeguard confidential business information and protect it against disclosure,

misappropriation, misuse, loss and theft. Confidential business information shall not include information in the public domain (but only if the same becomes part of the public domain through a means other than a disclosure prohibited hereunder). The above notwithstanding, a disclosure shall not be unauthorized if (i) it is required by law or by a court of competent jurisdiction or (ii) it is in connection with any judicial, arbitration, dispute resolution or other legal proceeding in which the Participant's legal rights and obligations as a Service provider or under this Agreement are at issue; provided, however, that the Participant shall, to the extent practicable and lawful in any such events, give prior notice to the Company of his or her intent to disclose any such confidential business information in such context so as to allow the Company an opportunity (which the Participant will not oppose) to obtain such protective orders or similar relief with respect thereto as may be deemed appropriate. In the event of any conflict in terms between this Section 23 and the terms of any Company confidentiality or proprietary information agreement the Participant has executed, the terms of such other confidentiality or proprietary information agreement shall prevail and govern.

24. Applicable Law. This Agreement will be interpreted and enforced under the laws of the State of Delaware without reference to the conflicts of law provisions thereof.

25. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Administrator for review. The resolution of such dispute by the Administrator shall be final and binding on the Participant and the Company.

26. Option is Subject to Plan. This Option and this Agreement is subject to the Plan. The terms and provisions of the Plan as it may be amended from time to time are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan shall govern and prevail.

27. Binding Effect; No Third Party Beneficiaries. This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. This Agreement shall not confer any rights or remedies upon any person other than the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. The parties agree that this Agreement shall survive the settlement or termination of the Option. The Company may assign any of its rights under this Agreement.

28. Severability. The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.

29. Voluntary Participant. The Participant acknowledges that he or she is voluntarily participating in the Plan.

30. No Rights to Future Awards. The Participant's rights, if any, in respect of or in connection with the Option or any other awards are derived solely from the discretionary decision of the Company to permit the Participant to participate in the Plan and to benefit from a discretionary

future award. By accepting this Option, the Participant expressly acknowledges that there is no obligation on the part of the Company to continue the Plan and/or grant any additional awards to the Participant or benefits in lieu of Options or any other awards even if awards have been granted repeatedly in the past. All decisions with respect to future awards, if any, will be at the sole discretion of the Administrator. Any amendment, modification, or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Participant's Service.

31. No Right to Damages. The Participant will have no right to bring a claim or to receive damages if any portion of the Option is cancelled or expires unexercised. The loss of existing or potential profit in the Option will not constitute an element of damages in the event of the termination of the Participant's Service for any reason, even if the termination is in violation of an obligation of the Company or Affiliate to the Participant.

32. Future Value. The future value of the underlying Shares is unknown and cannot be predicted with certainty. If the underlying Shares do not increase in value after the Date of Option Grant, the Option will have little or no value. If the Participant exercises the Option and obtains Shares, the value of the Shares acquired upon exercise may decrease in value, even below the Exercise Price.

33. Amendment. The Administrator has the right to amend, alter, suspend, discontinue, or cancel the Option, prospectively or retroactively; provided, that, no such amendment or other action shall adversely affect the Participant's material rights under this Agreement without the Participant's consent.

34. Extraordinary Compensation. The Option and the Shares subject to the Option are not intended to constitute or replace any pension rights or compensation and are not to be considered compensation of a continuing or recurring nature, or part of the Participant's normal or expected compensation, and in no way represent any portion of the Participant's salary, compensation or other remuneration for any purpose, including but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.

35. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Counterpart signature pages to this Agreement transmitted by facsimile transmission, by electronic mail in portable document format (.pdf), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, shall have the same effect as physical delivery of the paper document.

36. No Advice Regarding Award. The Company has not provided any tax, legal or financial advice, nor has the Company made any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

37. Acceptance. The Participant hereby acknowledges receipt of a copy of the Plan, the Plan prospectus and this Agreement. The Participant has read and understands the terms and provisions

thereof, and accepts the Option subject to all of the terms and conditions of the Plan and this Agreement. The Participant acknowledges that there may be adverse tax consequences upon the grant, vesting or exercise of the Option or disposition of the underlying Shares and that the Participant should consult a tax advisor prior to such exercise or disposition.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the Grant Date.

**NEUROBO PHARMACEUTICALS, INC.**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**PARTICIPANT**

By: \_\_\_\_\_

Name: \_\_\_\_\_

**NEUROBO PHARMACEUTICALS, INC.  
2019 EQUITY INCENTIVE PLAN**

**STOCK GRANT AGREEMENT**

The Company hereby awards a Stock Grant (the “Restricted Stock”) to the Participant named below. The terms and conditions of the Stock Grant are set forth in this cover sheet and the attached Stock Grant Agreement and in the Plan. This cover sheet is incorporated into and a part of the attached Stock Grant Agreement (together, the “Agreement”).

Date of Award:

Name of Participant:

Number of Shares of Restricted Stock Awarded (“Shares”):

Amount Paid by Participant for the Shares of Restricted Stock Awarded: \$

Fair Market Value of a Share on Date of Award: \$

Vesting Calculation Date: \_\_\_\_\_, [YEAR]

Vesting Schedule:

As long as you render continuous Service to the Company (or its Parent, Subsidiary or Affiliate), you will become incrementally vested as to one-third of the total number of Shares of Restricted Stock awarded (rounded down to the nearest whole number), as shown above on the cover sheet, on each of the first three anniversaries of the Vesting Calculation Date. In the event that your Service ceases prior to the third anniversary of the Vesting Calculation Date, you will forfeit to the Company without consideration (except for any amount paid by you to the Company for the unvested Shares) all of the unvested Shares subject to this Award.

***By signing this cover sheet, you agree to all terms and conditions described in the attached Stock Grant Agreement and in the Plan. You specifically acknowledge that you have carefully read the section entitled "Code Section 83(b) Election" and you further acknowledge that you are solely responsible for filing any Code Section 83(b) election, and that such election must be filed within thirty (30) days after the Date of Award in order to be effective. You are also acknowledging receipt of this Agreement and a copy of the Plan and Plan prospectus.***

Company:

Participant:

By: \_\_\_\_\_

Its: \_\_\_\_\_

Attachments \_\_\_\_\_



**NEUROBO PHARMACEUTICALS, INC.**  
**2019 EQUITY INCENTIVE PLAN**

**STOCK GRANT AGREEMENT**

**The Plan and Other Agreements**

The text of the Plan is incorporated in this Agreement by this reference. You and the Company agree to execute such further instruments and to take such further action as may reasonably be necessary to carry out the intent of this Agreement. Unless otherwise defined in this Agreement, certain capitalized terms used in this Agreement are defined in the Plan.

This Agreement, the attached Exhibits and the Plan constitute the entire understanding between you and the Company regarding this Award of Restricted Stock. Any prior agreements, commitments or negotiations are superseded.

For purposes of this Agreement, "Service" means Participant's service as an Employee, Consultant, or non-employee director of the Company or Company Affiliate. Service will be deemed terminated as soon as the entity to which Service is being provided is no longer either (i) the Company or (ii) an Affiliate. The Administrator determines when Service commences and when Service terminates. The Administrator may determine whether any Company transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in termination of Service for purposes of this Agreement and the Administrator's decision shall be final, conclusive and binding.

**Award of Restricted Stock**

The Company awards you the number of shares of Restricted Stock shown on the cover sheet of this Agreement. The Award is subject to the terms and conditions of this Agreement and the Plan. This Award is not intended to constitute a nonqualified deferred compensation plan within the meaning of section 409A of the Code and will be interpreted accordingly. You will also be required, as a condition of this Award, to enter into any Stockholders Agreement or other agreements that are applicable to stockholders. In the event of any conflict in terms between the Stockholders Agreement and this Agreement, the terms of the Stockholders Agreement shall prevail and govern.

**Vesting**

This Award will vest according to the Vesting Schedule on the attached cover sheet.

**Escrow**

The Company shall issue the Shares of Restricted Stock either (i) in certificate form or (ii) in book entry form, registered in the name of Participant, with legends, or notations, as applicable, referring to the terms, conditions and restrictions applicable to the Award. Any certificate(s) for the Restricted Stock shall be deposited in escrow with the Secretary of the Company (or his/her designee) to be held in accordance with the provisions of this paragraph. Each deposited certificate shall be accompanied by a duly

executed Assignment Separate from Certificate in the form attached hereto as Exhibit A. Any deposited certificates shall remain in escrow until such time as the certificates are to be released or otherwise surrendered for cancellation as discussed below.

All dividends whether in cash or in stock, if any, on the Restricted Stock shall also be held in escrow and subject to the same vesting terms and conditions as the Restricted Stock and such dividends shall only be paid to Participant upon vesting of the underlying Shares of Restricted Stock.

If and when your interest in the Restricted Stock vests, the Company shall, as applicable, either remove the notations on any such Shares of Restricted Stock issued in book entry form or deliver to Participant a stock certificate representing a number of Shares, equal to the number of Shares of Restricted Stock with respect to which have become vested; provided, however, that the minimum number of Shares released to you in any individual release of Shares must be for at least twenty-five (25) Shares (unless the release represents your final release of Shares from escrow).

Upon termination of your Service for any reason prior to vesting and in which no vesting is provided upon such termination, any unvested Restricted Stock subject to this Agreement shall be immediately surrendered to the Company.

**Code Section 83(b)  
Election**

You represent and warrant that you understand the Federal, state and local income tax consequences of the granting of this Restricted Stock. Under Section 83 of the Code, the Fair Market Value of the Restricted Stock on the date any forfeiture restrictions applicable to such Restricted Stock lapse will be reportable as ordinary income at that time. For this purpose, "forfeiture restrictions" include surrender to the Company of unvested Restricted Stock as described above. You may voluntarily elect to be taxed at the time the Restricted Stock is acquired to the extent that the Fair Market Value of the Restricted Stock exceeds the amount of consideration paid by you (if any) for such Restricted Stock at that time rather than when such Restricted Stock ceases to be subject to such forfeiture restrictions, by filing an election under Section 83(b) of the Code with the Internal Revenue Service within thirty (30) days after the Date of Award. A form for making this election is attached as Exhibit B hereto. Failure to make this filing within the thirty (30) day period will result in the recognition of ordinary income by you as the forfeiture restrictions lapse. **YOU ACKNOWLEDGE THAT IT IS YOUR SOLE RESPONSIBILITY, AND NOT THE COMPANY'S, TO FILE A TIMELY ELECTION UNDER CODE SECTION 83(b), EVEN IF YOU REQUEST THE COMPANY OR ITS REPRESENTATIVES TO MAKE THIS FILING ON YOUR BEHALF. MOREOVER, YOU ARE RELYING SOLELY ON YOUR OWN ADVISORS WITH RESPECT TO THE DECISION AS TO WHETHER OR NOT TO FILE A CODE SECTION 83(b) ELECTION.**



**Voting and Other Rights**

Subject to the terms of this Agreement, you shall have all the rights and privileges of a stockholder of the Company while the Restricted Stock is held in escrow, including the right to vote and to receive dividends (if any).

**Leave of Absence**

For purposes of this Agreement, while you are a common-law employee, your Service does not terminate when you go on a *bona fide* leave of absence that was approved by the Company (or Affiliate) in writing, if the terms of the leave provide for continued Service crediting, or when continued Service crediting is required by applicable law. Your Service terminates in any event when the approved leave ends, unless you immediately return to active work.

The Company determines which leaves count for this purpose (along with determining the effect of a leave of absence on vesting of the Award), and when your Service terminates for all purposes under the Plan.

**No Assignment**

The Shares subject to this Award shall not be sold, anticipated, assigned, attached, garnished, optioned, transferred or made subject to any creditor's process, whether voluntarily, involuntarily or by operation of law. However, this shall not preclude a transfer of vested Shares by will or by the laws of descent and distribution. In addition, pursuant to Company procedures, you may designate a beneficiary who will receive any outstanding vested Shares in the event of your death. Regardless of any marital property settlement agreement, the Company is not obligated to recognize your spouse's interest in your Award in any way.

**Restrictions on Issuance and Resale**

The Company will not issue any Shares if the issuance of such Shares at that time would violate any law or regulation.

By signing this Agreement, you agree not to sell, transfer, dispose of, pledge, hypothecate, make any short sale of, or otherwise effect a similar transaction of any Shares acquired under this Award (each a "Sale Prohibition") at a time when applicable laws, regulations or Company or underwriter trading policies prohibit the exercise or disposition of Shares. The Company shall have the right to designate one or more periods of time, each of which generally will not exceed one hundred eighty (180) days in length (provided however, that such period may be extended in connection with the Company's release (or announcement of release) of earnings results or other material news or events), and to impose a Sale Prohibition, if the Company determines (in its sole discretion) that such limitation(s) is needed in connection with a public offering of Shares or to comply with an underwriter's request or trading policy, or could in any way facilitate a lessening of any restriction on transfer pursuant to the Securities Act or any state securities laws with respect to any issuance of securities by the Company, facilitate the registration or qualification of any securities by the Company under the Securities Act or any state securities laws, or facilitate the perfection of any exemption from the registration or qualification requirements of the Securities Act or any applicable state securities laws for

the issuance or transfer of any securities. The Company may issue stop/transfer instructions and/or appropriately legend any stock certificates issued pursuant to this Award in order to ensure compliance with the foregoing.

If the sale of Shares acquired under this Award is not registered under the Securities Act, but an exemption is available which requires an investment representation or other representation and warranty, you shall represent and agree that the Shares being acquired are being acquired for investment, and not with a view to the sale or distribution thereof, and shall make such other representations and warranties as are deemed necessary or appropriate by the Company and its counsel.

If the sale of Shares acquired under this Agreement is not registered under the Securities Act, but an exemption is available which requires an investment representation or other representation and warranty, the Participant shall represent and agree that the Shares being acquired are being acquired for investment, and not with a view to the sale or distribution thereof, and shall make such other representations and warranties as are deemed necessary or appropriate by the Company and its counsel.

The Participant may also be required, as a condition of the Award, to enter into any Company stockholder agreement or other agreements that are applicable to stockholders.

<b>Clawback Policy</b>	The Participant expressly acknowledges and agrees to be bound by Paragraph 35 of the Plan, which contains provisions addressing the Company's policy on recoupment of equity or other compensation.
<b>No Retention Rights</b>	The Participant's Award or this Agreement does not give the Participant the right to be retained by the Company (or any Affiliate) in any capacity. The Company (and its Affiliates) reserves the right to terminate the Participant's Service at any time and for any reason.
<b>Adjustments</b>	In the event of a Corporate Transaction, the provisions of Plan Paragraph 25(b) shall apply as is to this Award. In addition, the provisions of Plan Paragraphs 25(a) and 25(c) shall also apply as is to this Award. The Award shall be subject to the terms of the agreement of merger, liquidation or reorganization in the event the Company is subject to such corporate activity.
<b>Legends</b>	All certificates or book entries representing the Shares issued under this Award may, where applicable, have endorsed thereon any notation or legend the Company determines appropriate.
<b>Taxes and Withholding</b>	The Participant will be solely responsible for payment of any and all applicable taxes, including without limitation any penalties or interest based upon such tax obligations, associated with this Award. The Participant will

not be allowed to receive benefits from this Award unless acceptable arrangements are made to pay any withholding or other taxes that may be due as a result of the Award or sale of Shares acquired under this Award.

<b>Code Section 409A</b>	This Award will be administered and interpreted to be exempt from (or comply with) Code Section 409A.
<b>Legal Compliance with Law</b>	The Company (and any Affiliate) is not responsible for the Participant's legal compliance requirements relating to this Award, including, but not limited to, tax reporting.
<b>Regulatory Compliance</b>	The issuance of Common Stock pursuant to this Agreement shall be subject to full compliance with all applicable requirements of law and the requirements of any stock exchange or interdealer quotation system upon which the Common Stock may be listed or traded.
<b>Data Privacy</b>	The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of his or her personal data as described in this document by the Company for the exclusive purpose of implementing, administering and managing his or her participation in the Plan. The Participant understands that the Company holds certain personal information about him or her, including, but not limited to, name, home address and telephone number, date of birth, gender, social security or insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all awards or any other entitlement to Shares awarded, cancelled, purchased, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of implementing, managing and administering the Plan (" <b>Data</b> "). The Participant understands that the Data may be transferred to any third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in his or her country or elsewhere and that the recipient country may have different data privacy laws and protections than his or her country. The Participant authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing his or her participation in the Plan, including any requisite transfer of such Data, as may be required to a broker or other third party with whom the Participant may elect to deposit any Shares acquired under the Plan.
<b>Notice</b>	Any notice to be given or delivered to the Company relating to this Agreement shall be in writing and addressed to the Company at its principal corporate offices. All notices shall be deemed effective upon personal delivery or upon deposit in the postal mail, postage prepaid and properly addressed to the Company. Any notice to be given or delivered to the Participant relating to this Agreement may be delivered by electronic form including without limitation by email (including prospectuses required by the Securities and Exchange Commission) as well as all other documents

that the Company is required to deliver to its security holders (including annual reports and proxy statements). The Company may also deliver these documents by posting them on a web site maintained by the Company or by a third party under contract with the Company.

- Other Information** The Participant agrees to receive stockholder information, including copies of any annual report, proxy statement and periodic report, from the Company's website, if the Company wishes to provide such information through its website. The Participant acknowledges that copies of the Plan, Plan prospectus, Plan information and stockholder information are also available upon written or telephonic request to the Administrator.
- Further Assistance** The Participant agrees to provide assistance (either before or after termination of Service) reasonably requested by the Company in connection with actions taken by the Participant while providing Services to the Company, including but not limited to assistance in connection with any lawsuits or other claims against the Company arising from events during the period in which the Participant rendered Service.
- Additional Conditions** If the Company shall determine, in its sole discretion, that the consent or approval of any governmental authority is necessary or desirable as a condition to the payment of benefits to the Participant pursuant to the Plan, such payment shall not occur until such registration, qualification, consent or approval shall have been effected or obtained free of any conditions not acceptable to the Company.
- Enforcement** The Company will be entitled to enforce its rights under this Agreement specifically, to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights to which it may be entitled. The Participant agrees and acknowledges that money damages may not be an adequate remedy for breach of the provisions of this Agreement and that the Company may in its sole discretion apply to any court of law or equity of competent jurisdiction for specific performance and/or injunctive relief in order to enforce or prevent any violations of the provisions of this Agreement.
- Nondisclosure of Confidential Information** The Participant acknowledges that the businesses of the Company are highly competitive and that the Company's strategies, methods, books, records, and documents, technical information concerning their products, equipment, services, and processes, procurement procedures and pricing techniques, the names of and other information (such as credit and financial data) concerning former, present or prospective customers and business affiliates, all comprise confidential business information and trade secrets which are valuable, special, and unique assets which the Company uses in their business to obtain a competitive advantage over competitors. The Participant further acknowledges that protection of such confidential business information and trade secrets against unauthorized disclosure and use is of critical importance to the Company in maintaining its competitive

position. The Participant acknowledges that by reason of the Participant's duties to and association with the Company, the Participant has had and will have access to and have and will become informed of confidential business information which is a competitive asset of the Company. The Participant hereby agrees that he or she will not, at any time during or after employment, make any unauthorized disclosure of any confidential business information or trade secrets of the Company, or make any use thereof, except in the carrying out of services responsibilities. The Participant shall take all necessary and appropriate steps to safeguard confidential business information and protect it against disclosure, misappropriation, misuse, loss and theft. Confidential business information shall not include information in the public domain (but only if the same becomes part of the public domain through a means other than a disclosure prohibited hereunder). The above notwithstanding, a disclosure shall not be unauthorized if (i) it is required by law or by a court of competent jurisdiction or (ii) it is in connection with any judicial, arbitration, dispute resolution or other legal proceeding in which the Participant's legal rights and obligations as a Service provider or under this Agreement are at issue; provided, however, that the Participant shall, to the extent practicable and lawful in any such events, give prior notice to the Company of his or her intent to disclose any such confidential business information in such context so as to allow the Company an opportunity (which the Participant will not oppose) to obtain such protective orders or similar relief with respect thereto as may be deemed appropriate. In the event of any conflict in terms between this Section and the terms of any Company confidentiality or proprietary information agreement the Participant has executed, the terms of such other confidentiality or proprietary information agreement shall prevail and govern.

<b>Applicable Law</b>	This Agreement will be interpreted and enforced under the laws of the State of Delaware without reference to the conflicts of law provisions thereof.
<b>Interpretation</b>	Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Administrator for review. The resolution of such dispute by the Administrator shall be final and binding on the Participant and the Company.
<b>Award is subject to Plan</b>	This Award and this Agreement is subject to the Plan. The terms and provisions of the Plan as it may be amended from time to time are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan shall govern and prevail.
<b>Binding Effect; No Third Party Beneficiaries</b>	This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. This Agreement shall not confer any rights or remedies upon any person other than the Company and the Participant and any respective heirs, representatives, successors and

permitted assigns. The parties agree that this Agreement shall survive the settlement or termination of the Award. The Company may assign any of its rights under this Agreement.

<b>Severability</b>	The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.
<b>Voluntary Participant</b>	You acknowledge that you are voluntarily participating in the Plan.
<b>No Rights to Future Awards</b>	Your rights, if any, in respect of or in connection with this Award or any other awards are derived solely from the discretionary decision of the Company to permit you to participate in the Plan and to benefit from a discretionary future award. By accepting this Award, you expressly acknowledge that there is no obligation on the part of the Company to continue the Plan and/or grant any additional awards to you or benefits in lieu of other awards even if awards have been granted repeatedly in the past. All decisions with respect to future awards, if any, will be at the sole discretion of the Administrator.
<b>No Right to Damages</b>	You will have no right to bring a claim or to receive damages if any portion of the Award is cancelled or expires. The loss of existing or potential profit in the Award will not constitute an element of damages in the event of the termination of your Service for any reason, even if the termination is in violation of an obligation of the Company or an Affiliate to you.
<b>Future Value</b>	The future value of the underlying Shares is unknown and cannot be predicted with certainty. If the underlying Shares do not increase in value after the Date of Award, the Award could have little or no value.
<b>Amendment</b>	The Administrator has the right to amend, alter, suspend, discontinue, or cancel the Award, prospectively or retroactively; provided, that, no such amendment or other action shall adversely affect the Participant's material rights under this Agreement without the Participant's consent.
<b>Extraordinary Compensation</b>	The Award and the Shares subject to the Award are not intended to constitute or replace any pension rights or compensation and are not to be considered compensation of a continuing or recurring nature, or part of the Participant's normal or expected compensation, and in no way represent any portion of the Participant's salary, compensation or other remuneration for any purpose, including but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.
<b>Counterparts</b>	This Agreement may be executed in counterparts, each of which shall be

deemed an original but all of which together shall constitute one and the same instrument. Counterpart signature pages to this Agreement transmitted by facsimile transmission, by electronic mail in portable document format (.pdf), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, shall have the same effect as physical delivery of the paper document.

**No Advice  
Regarding Award**

The Company has not provided any tax, legal or financial advice, nor has the Company made any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

**Acceptance**

The Participant hereby acknowledges receipt of a copy of the Plan, the Plan prospectus and this Agreement. The Participant has read and understands the terms and provisions thereof, and accepts the Stock Grant subject to all of the terms and conditions of the Plan and this Agreement. The Participant acknowledges that there may be adverse tax consequences upon the grant or vesting of the Stock Grant or disposition of the underlying Shares and that the Participant should consult a tax advisor prior to such disposition.

***By signing the cover sheet of this Agreement, you agree to all of the terms and conditions described above and in the Plan. Any inconsistency between this Agreement and the Plan shall be resolved by reference to the Plan.***

**EXHIBIT A**

**ASSIGNMENT SEPARATE FROM CERTIFICATE**

FOR VALUE RECEIVED and pursuant to that certain Stock Grant Agreement dated as of [            ], the undersigned hereby sells, assigns and transfers unto [            ] shares of the Common Stock of NeuroBo Pharmaceuticals, Inc., a Delaware corporation, standing in the undersigned's name on the books of said corporation represented by certificate No. \_\_\_\_\_, herewith, and does hereby irrevocably constitute and appoint \_\_\_\_\_ attorney-in-fact to transfer the said stock on the books of the said corporation with full power of substitution in the premises.

Dated: [Month] [Day], 20\_\_

\_\_\_\_\_

\_\_\_\_\_



**EXHIBIT B**

**ELECTION UNDER SECTION 83(b) OF  
THE INTERNAL REVENUE CODE**

The undersigned taxpayer hereby elects, pursuant to § 83(b) of the Internal Revenue Code of 1986, as amended, to include in gross income as compensation for services the excess (if any) of the fair market value of the shares described below over the amount paid for those shares.

1. The name, taxpayer identification number, address of the undersigned, and the taxable year for which this election is being made are:

TAXPAYER'S NAME: \_\_\_\_\_

TAXPAYER'S SOCIAL SECURITY NUMBER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

TAXABLE YEAR: Calendar Year 20\_\_

2. The property which is the subject of this election is \_\_\_\_\_ shares of common stock of NeuroBo Pharmaceuticals, Inc.
3. The property was transferred to the undersigned on [DATE].
4. The property is subject to the following restrictions: [Describe restrictions.]
5. The fair market value of the property at the time of transfer (determined without regard to any restriction other than a nonlapse restriction as defined in § 1.83-3(h) of the Income Tax Regulations) is: \$\_\_\_\_\_ per share x \_\_\_\_\_ shares = \$\_\_\_\_\_.
6. For the property transferred, the undersigned paid \$\_\_\_\_\_ per share x \_\_\_\_\_ shares = \$\_\_\_\_\_.
7. The amount to include in gross income is \$\_\_\_\_\_. [The result of the amount reported in Item 5 minus the amount reported in Item 6.]

The undersigned taxpayer will file this election with the Internal Revenue Service office with which taxpayer files his or her annual income tax return not later than 30 days after the date of transfer of the property. A copy of the election also will be furnished to the person for whom the services were performed. The undersigned is the person performing the services in connection with which the property was transferred.

Dated: \_\_\_\_\_ Taxpayer

## Non-Qualified Stock Option Agreement

This Non-Qualified Stock Option Agreement (this “**Agreement**”) is made and entered into as of the below Grant Date by and between NeuroBo Pharmaceuticals, Inc., a Delaware corporation (the “**Company**”), and \_\_\_\_\_ (the “**Participant**”). Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Company’s 2019 Equity Incentive Plan (the “**Plan**”).

Grant Date: \_\_\_\_\_  
 Exercise Price per Share: \_\_\_\_\_  
 Number of Option Shares: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_

1. Grant of Option.

1.1 Grant; Type of Option. The Company hereby grants to the Participant a non-qualified stock option (the “**Option**”) to purchase up to the total number of Option Shares set forth above, at the Exercise Price per Share set forth above. The Option is being granted pursuant to the terms of the Plan. The Option is intended to be a Non-Qualified Stock Option and not an Incentive Stock Option within the meaning of Section 422 of the Code.

1.2 Consideration; Subject to Plan. The grant of the Option is made in consideration of the Services to be rendered by the Participant to the Company and is subject to the terms and conditions of the Plan.

2. Exercise Period; Vesting.

2.1 Vesting Schedule. Subject to the Participant’s continuous Service, the Option shall become vested and exercisable with respect to one-twelfth (1/12) of the Option Shares on the last day of each calendar quarter commencing with the calendar quarter following the calendar quarter of the Grant Date (provided however that the last such quarterly vesting installment shall instead occur on the third anniversary of the Grant Date). The unvested portion of the Option shall never be exercisable including for avoidance of doubt on or after the Participant’s termination of Service.

2.2 Expiration. The Option shall expire on the Expiration Date set forth above, or earlier as provided in this Agreement or the Plan.

3. Termination of Service. For purposes of this Agreement, “Service” means Participant’s service as an Employee, Consultant, or non-employee director of the Company or Company Affiliate. Service will be deemed terminated as soon as the entity to which Service is being provided is no longer either (i) the Company or (ii) an Affiliate. The Administrator determines when Service commences and when Service terminates. The Administrator may determine whether any Company transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in termination of Service for purposes of this Agreement and the Administrator’s decision shall be final, conclusive and binding.

3.1 Termination for Reasons Other Than Cause, Death, Disability. If the Participant’s Service is terminated for any reason other than Cause, death, or Disability, the Participant may

exercise the vested portion of the Option, but only within such period of time ending on the earlier of (a) the date three (3) months following the termination of the Participant's Service or (b) the Expiration Date or (c) the date that this Option is not assumed or continued after a Corporate Transaction.

3.2 Termination for Cause. If Participant's Service is terminated for Cause, the Option (both vested and unvested portions) shall immediately terminate without consideration and cease to be exercisable. The provisions of Plan Paragraph 15 will apply to this Agreement.

3.3 Termination due to Disability. If Participant's Service terminates as a result of Participant's Disability, then the provisions of Plan Paragraph 16 will apply to this Agreement and the Participant may exercise the vested portion of the Option, but only within such period of time ending on the earlier of (a) the date twelve (12) months following the Participant's termination of Service or (b) the Expiration Date or (c) the date that this Option is not assumed or continued after a Corporate Transaction.

3.4 Termination due to Death. If Participant's Service terminates as a result of Participant's death, then the provisions of Plan Paragraph 17 will apply to this Agreement and the vested portion of the Option may be exercised by the Participant's estate, by a person who acquired the right to exercise the Option by bequest or inheritance, or by the person designated to exercise the Option upon the Participant's death, but only within the time period ending on the earlier of (a) the date twelve (12) months following the Participant's termination of Service or (b) the Expiration Date or (c) the date that this Option is not assumed or continued after a Corporate Transaction.

3.5 Extension of Termination Date. If, following the Participant's termination of Service for any reason (other than for Cause) the exercise of the vested portion of this Option is prohibited because the exercise of the Option would violate the registration requirements under the Securities Act or any other state or federal securities law or the rules of any securities exchange or interdealer quotation system, then the expiration of the Option shall be tolled until the date that is thirty (30) days after the end of the period during which the exercise of the Option would be in violation of such registration or other securities requirements but in no event tolled later than the earlier of the Expiration Date or the date that this Option is not assumed or continued after a Corporate Transaction.

4. Leaves of Absence. For purposes of the Option, the Participant's Service does not terminate when he or she goes on a bona fide leave of absence that was approved by the Company in writing, if the terms of the leave of absence provide for Service crediting, or when Service crediting is required by applicable law. The Participant's Service terminates in any event when the approved leave of absence ends unless the Participant immediately returns to active work. The Administrator determines which leaves of absence count for this purpose (along with determining the effect of a leave of absence on vesting of the Option), and when the Participant's Service terminates for all purposes under the Plan.

5. Manner of Exercise.

5.1 Election to Exercise. To exercise the Option, the Participant (or in the case of exercise after the Participant's death or incapacity, the Participant's executor, administrator, heir, or legatee, as the case may be) must deliver to the Company a notice of intent to exercise in the manner designated by the Administrator.

If someone other than the Participant exercises the Option, then such person must submit documentation reasonably acceptable to the Company verifying that such person has the legal right to exercise the Option.

5.2 Payment of Exercise Price. The entire Exercise Price of the Option Shares being acquired shall be payable in full at the time of exercise to the extent permitted by applicable statutes and regulations, either:

(a) in cash or by certified or bank check at the time the Option is exercised; or

(b) in the discretion of the Administrator, upon such terms as the Administrator shall approve including the below:

(i) by delivery to the Company of other Shares, duly endorsed for transfer to the Company, with an aggregate Fair Market Value on the date of delivery equal to the aggregate Exercise Price (or portion thereof) due for the number of Shares being acquired, or by means of attestation, whereby the Participant identifies for delivery specific Shares that have a Fair Market Value on the date of attestation equal to the aggregate Exercise Price (or portion thereof) and receives a number of Shares equal to the difference between the number of Shares thereby purchased and the number of identified attestation Shares;

(ii) through a "cashless exercise program" established with a broker;

(iii) by reduction in the number of Shares otherwise deliverable upon exercise of this Option with a Fair Market Value equal to the aggregate Exercise Price at the time of exercise;

(iv) by any combination of the foregoing methods; or

(v) in any other form of legal consideration that may be acceptable to the Administrator.

5.3 Withholding. Prior to the issuance of Shares upon the exercise of the Option, the Participant must make arrangements satisfactory to the Company to pay or provide for any applicable federal, state, and local withholding obligations of the Company. The Participant may satisfy any federal, state, or local tax withholding obligation relating to the exercise of the Option by any of the following means:

(a) tendering a cash payment;

(b) in the discretion of the Administrator, authorizing the Company to withhold Shares from the Shares otherwise issuable to the Participant as a result of the exercise of the

Option; provided, however, that no Shares are withheld with a value exceeding the statutory maximum amount of tax required to be withheld by law; or

(c) in the discretion of the Administrator, delivering to the Company previously owned and unencumbered Shares.

The Company also has the right to withhold from any compensation paid to a Participant.

5.4 Issuance of Shares. Provided that the completed and signed exercise notice and payment are in form and substance satisfactory to the Company, the Company shall issue the Shares registered in the name of the Participant, the Participant's authorized assignee, or the Participant's legal representative, and shall deliver certificates representing the Shares with the appropriate legends affixed thereto.

6. Stockholder Rights. The Participant, or his or her estate, shall have no rights as a stockholder of the Company with regard to the Option until the Participant has been issued the applicable Option Shares by the Company and has satisfied all other conditions specified in the Plan. No adjustment shall be made for cash or stock dividends or other rights for which the record date is prior to the date when such applicable Option Shares are issued, except as may be provided in the Plan.

7. Transfer of Option. Prior to the Participant's death, only the Participant may exercise the Option. The Participant cannot gift, transfer, assign, alienate, pledge, hypothecate, attach, sell, or encumber the Option. If the Participant attempts to do any of these things, the Option will immediately become invalid. The Participant may, however, dispose of the Option by will or it may be transferred by the laws of descent and distribution. Regardless of any marital property settlement agreement, the Company is not obligated to honor a notice of exercise from the Participant's spouse, nor is the Company obligated to recognize any spousal interest in the Option in any other way.

8. Restrictions on Exercise and Resale. By signing this Agreement, the Participant agrees not to (i) exercise this Option ("**Exercise Prohibition**"), or (ii) sell, transfer, dispose of, pledge, hypothecate, make any short sale of, or otherwise effect a similar transaction of any Shares acquired under this Option (each a "**Sale Prohibition**") at a time when applicable laws, regulations or Company or underwriter trading policies prohibit the exercise or disposition of Shares. The Company will not permit the Participant to exercise this Option if the issuance of Shares at that time would violate any law or regulation. The Company shall have the right to designate one or more periods of time, each of which generally will not exceed one hundred eighty (180) days in length (provided however, that such period may be extended in connection with the Company's release (or announcement of release) of earnings results or other material news or events), and to impose an Exercise Prohibition and/or Sale Prohibition, if the Company determines (in its sole discretion) that such limitation(s) is needed in connection with a public offering of Shares or to comply with an underwriter's request or trading policy, or could in any way facilitate a lessening of any restriction on transfer pursuant to the Securities Act or any state securities laws with respect to any issuance of securities by the Company, facilitate the registration or qualification of any securities by the Company under the Securities Act or any state securities laws, or facilitate the perfection of any exemption from the registration or qualification requirements of the Securities

Act or any applicable state securities laws for the issuance or transfer of any securities. The Company may issue stop/transfer instructions and/or appropriately legend any stock certificates issued pursuant to the Option in order to ensure compliance with the foregoing. Any such Exercise Prohibition shall not alter the Vesting Schedule set forth in this Agreement other than to limit the periods during which the Option shall be exercisable.

If the sale of Option Shares acquired under this Agreement is not registered under the Securities Act, but an exemption is available which requires an investment representation or other representation and warranty, the Participant shall represent and agree that the Shares being acquired are being acquired for investment, and not with a view to the sale or distribution thereof, and shall make such other representations and warranties as are deemed necessary or appropriate by the Company and its counsel.

The Participant may also be required, as a condition of exercise of the Option, to enter into any Company stockholder agreement or other agreements that are applicable to stockholders.

9. Clawback Policy. The Participant expressly acknowledges and agrees to be bound by Paragraph 35 of the Plan, which contains provisions addressing the Company's policy on recoupment of equity or other compensation.<sup>1</sup>

10. No Retention Rights. The Participant's Option or this Agreement does not give the Participant the right to be retained by the Company (or any Affiliate) in any capacity. The Company (and its Affiliates) reserves the right to terminate the Participant's Service at any time and for any reason.

11. Adjustments. In the event of a Corporate Transaction, the provisions of Plan Paragraph 25(b) shall apply as is to this Option. In addition, the provisions of Plan Paragraphs 25(a) and 25(c) shall also apply as is to this Option. The Option shall be subject to the terms of the agreement of merger, liquidation or reorganization in the event the Company is subject to such corporate activity.

12. Legends. All certificates or book entries representing the Shares issued under this Option may, where applicable, have endorsed thereon any notation or legend the Company determines appropriate.

13. Taxes and Withholding. The Participant will be solely responsible for payment of any and all applicable taxes, including without limitation any penalties or interest based upon such tax obligations, associated with this Option. The Participant will not be allowed to exercise this Option unless acceptable arrangements are made to pay any withholding or other taxes that may be due as a result of the Option exercise or sale of Shares acquired under this Option.

14. Code Section 409A. This Option will be administered and interpreted to be exempt from (or comply with) Code Section 409A.

15. Legal Compliance with Law. The Company (and any Affiliate) is not responsible for the Participant's legal compliance requirements relating to this Option, including, but not limited to, tax reporting.
16. Regulatory Compliance. The issuance of Common Stock pursuant to this Agreement shall be subject to full compliance with all applicable requirements of law and the requirements of any stock exchange or interdealer quotation system upon which the Common Stock may be listed or traded.
17. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of his or her personal data as described in this document by the Company for the exclusive purpose of implementing, administering and managing his or her participation in the Plan. The Participant understands that the Company holds certain personal information about him or her, including, but not limited to, name, home address and telephone number, date of birth, gender, social security or insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all awards or any other entitlement to Shares awarded, cancelled, purchased, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of implementing, managing and administering the Plan ("**Data**"). The Participant understands that the Data may be transferred to any third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in his or her country or elsewhere and that the recipient country may have different data privacy laws and protections than his or her country. The Participant authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing his or her participation in the Plan, including any requisite transfer of such Data, as may be required to a broker or other third party with whom the Participant may elect to deposit any Shares acquired under the Plan.
18. Notice. Any notice to be given or delivered to the Company relating to this Agreement shall be in writing and addressed to the Company at its principal corporate offices. All notices shall be deemed effective upon personal delivery or upon deposit in the postal mail, postage prepaid and properly addressed to the Company. Any notice to be given or delivered to the Participant relating to this Agreement may be delivered by electronic form including without limitation by email (including prospectuses required by the Securities and Exchange Commission) as well as all other documents that the Company is required to deliver to its security holders (including annual reports and proxy statements). The Company may also deliver these documents by posting them on a web site maintained by the Company or by a third party under contract with the Company.
19. Other Information. The Participant agrees to receive stockholder information, including copies of any annual report, proxy statement and periodic report, from the Company's website, if the Company wishes to provide such information through its website. The Participant acknowledges that copies of the Plan, Plan prospectus, Plan information and stockholder information are also available upon written or telephonic request to the Administrator.
20. Further Assistance. The Participant agrees to provide assistance (either before or after termination of Service) reasonably requested by the Company in connection with actions taken by the Participant while providing Services to the Company, including but not limited to assistance

in connection with any lawsuits or other claims against the Company arising from events during the period in which the Participant rendered Service.

21. Additional Conditions. If the Company shall determine, in its sole discretion, that the consent or approval of any governmental authority is necessary or desirable as a condition to the payment of benefits to the Participant pursuant to the Plan, such payment shall not occur until such registration, qualification, consent or approval shall have been effected or obtained free of any conditions not acceptable to the Company.

22. Enforcement. The Company will be entitled to enforce its rights under this Agreement specifically, to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights to which it may be entitled. The Participant agrees and acknowledges that money damages may not be an adequate remedy for breach of the provisions of this Agreement and that the Company may in its sole discretion apply to any court of law or equity of competent jurisdiction for specific performance and/or injunctive relief in order to enforce or prevent any violations of the provisions of this Agreement.

23. Nondisclosure of Confidential Information. The Participant acknowledges that the businesses of the Company are highly competitive and that the Company's strategies, methods, books, records, and documents, technical information concerning their products, equipment, services, and processes, procurement procedures and pricing techniques, the names of and other information (such as credit and financial data) concerning former, present or prospective customers and business affiliates, all comprise confidential business information and trade secrets which are valuable, special, and unique assets which the Company uses in their business to obtain a competitive advantage over competitors. The Participant further acknowledges that protection of such confidential business information and trade secrets against unauthorized disclosure and use is of critical importance to the Company in maintaining its competitive position. The Participant acknowledges that by reason of the Participant's duties to and association with the Company, the Participant has had and will have access to and have and will become informed of confidential business information which is a competitive asset of the Company. The Participant hereby agrees that he or she will not, at any time during or after employment, make any unauthorized disclosure of any confidential business information or trade secrets of the Company, or make any use thereof, except in the carrying out of services responsibilities. The Participant shall take all necessary and appropriate steps to safeguard confidential business information and protect it against disclosure, misappropriation, misuse, loss and theft. Confidential business information shall not include information in the public domain (but only if the same becomes part of the public domain through a means other than a disclosure prohibited hereunder). The above notwithstanding, a disclosure shall not be unauthorized if (i) it is required by law or by a court of competent jurisdiction or (ii) it is in connection with any judicial, arbitration, dispute resolution or other legal proceeding in which the Participant's legal rights and obligations as a Service provider or under this Agreement are at issue; provided, however, that the Participant shall, to the extent practicable and lawful in any such events, give prior notice to the Company of his or her intent to disclose any such confidential business information in such context so as to allow the Company an opportunity (which the Participant will not oppose) to obtain such protective orders or similar relief with respect thereto as may be deemed appropriate. In the event of any conflict in terms between this Section 23 and the terms of any Company confidentiality or proprietary information agreement the



Participant has executed, the terms of such other confidentiality or proprietary information agreement shall prevail and govern.

24. Applicable Law. This Agreement will be interpreted and enforced under the laws of the State of Delaware without reference to the conflicts of law provisions thereof.

25. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Administrator for review. The resolution of such dispute by the Administrator shall be final and binding on the Participant and the Company.

26. Option is Subject to Plan. This Option and this Agreement is subject to the Plan. The terms and provisions of the Plan as it may be amended from time to time are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan shall govern and prevail.

27. Binding Effect; No Third Party Beneficiaries. This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. This Agreement shall not confer any rights or remedies upon any person other than the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. The parties agree that this Agreement shall survive the settlement or termination of the Option. The Company may assign any of its rights under this Agreement.

28. Severability. The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.

29. Voluntary Participant. The Participant acknowledges that he or she is voluntarily participating in the Plan.

30. No Rights to Future Awards. The Participant's rights, if any, in respect of or in connection with the Option or any other awards are derived solely from the discretionary decision of the Company to permit the Participant to participate in the Plan and to benefit from a discretionary future award. By accepting this Option, the Participant expressly acknowledges that there is no obligation on the part of the Company to continue the Plan and/or grant any additional awards to the Participant or benefits in lieu of Options or any other awards even if awards have been granted repeatedly in the past. All decisions with respect to future awards, if any, will be at the sole discretion of the Administrator. Any amendment, modification, or termination of the Plan shall not constitute a change or impairment of the terms and conditions of the Participant's Service.

31. No Right to Damages. The Participant will have no right to bring a claim or to receive damages if any portion of the Option is cancelled or expires unexercised. The loss of existing or potential profit in the Option will not constitute an element of damages in the event of the termination of the Participant's Service for any reason, even if the termination is in violation of an obligation of the Company or Affiliate to the Participant.

32. Future Value. The future value of the underlying Shares is unknown and cannot be predicted with certainty. If the underlying Shares do not increase in value after the Date of Option Grant, the Option will have little or no value. If the Participant exercises the Option and obtains Shares, the value of the Shares acquired upon exercise may decrease in value, even below the Exercise Price.

33. Amendment. The Administrator has the right to amend, alter, suspend, discontinue, or cancel the Option, prospectively or retroactively; provided, that, no such amendment or other action shall adversely affect the Participant's material rights under this Agreement without the Participant's consent.

34. Extraordinary Compensation. The Option and the Shares subject to the Option are not intended to constitute or replace any pension rights or compensation and are not to be considered compensation of a continuing or recurring nature, or part of the Participant's normal or expected compensation, and in no way represent any portion of the Participant's salary, compensation or other remuneration for any purpose, including but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.

35. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Counterpart signature pages to this Agreement transmitted by facsimile transmission, by electronic mail in portable document format (.pdf), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, shall have the same effect as physical delivery of the paper document.

36. No Advice Regarding Award. The Company has not provided any tax, legal or financial advice, nor has the Company made any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

37. Acceptance. The Participant hereby acknowledges receipt of a copy of the Plan, the Plan prospectus and this Agreement. The Participant has read and understands the terms and provisions thereof, and accepts the Option subject to all of the terms and conditions of the Plan and this Agreement. The Participant acknowledges that there may be adverse tax consequences upon the grant, vesting or exercise of the Option or disposition of the underlying Shares and that the Participant should consult a tax advisor prior to such exercise or disposition.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the Grant Date.

**NEUROBO PHARMACEUTICALS, INC.**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**PARTICIPANT**

By: \_\_\_\_\_

Name: \_\_\_\_\_

NEUROBO PHARMACEUTICALS, INC.  
2019 EQUITY INCENTIVE PLAN

STOCK-BASED AWARD

STOCK UNIT AGREEMENT

The Company hereby awards Stock Units to the Participant named below. The terms and conditions of the Award are set forth in this cover sheet, in the attached Stock Unit Agreement and in the Plan. This cover sheet is incorporated into and a part of the attached Stock Unit Agreement (together, the "Agreement").

Date of Award: \_\_\_\_\_, 202\_\_

Name of Participant: \_\_\_\_\_

Number of Stock Units Awarded: \_\_\_\_\_

Fair Market Value of a Share on Date of Award: \$\_\_\_\_.\_\_\_\_

Vesting Calculation Date: \_\_\_\_\_, [YEAR]

***By signing this cover sheet, you agree to all of the terms and conditions described in the attached Stock Unit Agreement and in the Plan. You are also acknowledging receipt of this Agreement and a copy of the Plan and Plan prospectus.***

Participant: \_\_\_\_\_  
(Signature)

Company: \_\_\_\_\_  
(Signature)

Title: \_\_\_\_\_

Attachment \_\_\_\_\_



**NEUROBO PHARMACEUTICALS, INC.**  
**2019 EQUITY INCENTIVE PLAN**

**STOCK-BASED AWARD**

**STOCK UNIT AGREEMENT**

**The Plan and  
Other Agreements**

The text of the Plan is incorporated in this Agreement by this reference. You and the Company agree to execute such further instruments and to take such further action as may reasonably be necessary to carry out the intent of this Agreement. Unless otherwise defined in this Agreement, certain capitalized terms used in this Agreement are defined in the Plan.

This Agreement and the Plan constitute the entire understanding between you and the Company regarding this Award of Stock Units. Any prior agreements, commitments or negotiations are superseded.

For purposes of this Agreement, "Service" means Participant's service as an Employee, Consultant, or non-employee director of the Company or Company Affiliate. Service will be deemed terminated as soon as the entity to which Service is being provided is no longer either (i) the Company or (ii) an Affiliate. The Administrator determines when Service commences and when Service terminates. The Administrator may determine whether any Company transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in termination of Service for purposes of this Agreement and the Administrator's decision shall be final, conclusive and binding.

**Award of Stock  
Units**

The Company awards you the number of Stock Units shown on the cover sheet of this Agreement. The Award is subject to the terms and conditions of this Agreement and the Plan.

**Vesting**

As long as you render continuous Service to the Company (or Affiliate), you will become incrementally vested as to one-third of the total number of Stock Units awarded (rounded down to the nearest whole number), as shown above on the cover sheet, on each of the first three anniversaries of the Vesting Calculation Date. In the event that your Service ceases prior to the third anniversary of the Vesting Calculation Date, you will forfeit to the Company without consideration all of the unvested Stock Units subject to this Award.

**Settlement**

To the extent a Stock Unit becomes vested and subject to your satisfaction of any tax withholding obligations as discussed below, each vested Stock Unit will entitle you to receive one Share (or a cash amount equal to the Fair Market Value of a Share on such date of vesting and the Administrator in its discretion may decide to settle vested Stock Units with cash and/or Shares)

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which will be distributed to you on the applicable vesting date(s) (or the first business day thereafter if the vesting date is not a business day) in exchange for such Stock Unit. Issuance of such Shares and/or cash shall be in complete satisfaction of such vested Stock Units. Such settled Stock Units shall be immediately cancelled and no longer outstanding and you shall have no further rights or entitlements related to those settled Stock Units.

**Code Section 409A** This Award is not intended to be deferred compensation under section 409A of the Code and will be interpreted accordingly.

Notwithstanding anything to the contrary, if, upon your "separation from service" (as defined in Code Section 409A), you are then a Company "specified employee" (as defined in Code Section 409A), then to the extent necessary to comply with Code Section 409A, the Company shall defer payment of certain of the nonqualified deferred compensation amounts owed to you under this Agreement until the earlier of (i) ten (10) days after the Company receives written confirmation of your death or (ii) the first business day of the seventh month following your separation from service. Any such delayed payments shall be made to you (or your beneficiaries) without interest. If settlement of this Award is subject to the foregoing delay in payment, then on or before your separation from service the Company shall determine how many vested Shares subject to this Award (if any) will be settled with cash ("Cash Settled Shares") and the Fair Market Value of a Share as of your separation from service shall be used for purposes of determining the value of this cash amount that will be paid to you (without interest) with respect to the Cash Settled Shares.

**Stockholder Rights** Subject to the terms of this Agreement, you shall have all the rights and privileges of a stockholder of the Company only after Shares have been issued to you. You have no stockholder rights with respect to the Stock Units that you hold.

**Leave of Absence** For purposes of this Agreement, while you are a common-law employee, your Service does not terminate when you go on a *bona fide* leave of absence that was approved by the Company (or Affiliate) in writing, if the terms of the leave provide for continued Service crediting, or when continued Service crediting is required by applicable law. Your Service terminates in any event when the approved leave ends, unless you immediately return to active work.

The Company determines which leaves count for this purpose (along with determining the effect of a leave of absence on vesting of the Award), and when your Service terminates for all purposes under the Plan.

**No Assignment** The Stock Units subject to this Award shall not be sold, anticipated, assigned, attached, garnished, optioned, transferred or made subject to any creditor's process, whether voluntarily, involuntarily or by operation of law. However, this shall not preclude a transfer of vested Stock Units by will or

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by the laws of descent and distribution. In addition, pursuant to Company procedures, you may designate a beneficiary who will receive any outstanding vested Stock Units in the event of your death. Regardless of any marital property settlement agreement, the Company is not obligated to recognize your spouse's interest in your Award in any way.

**Restrictions on  
Issuance and  
Resale**

The Company will not issue any Shares if the issuance of such Shares at that time would violate any law or regulation.

By signing this Agreement, you agree not to sell, transfer, dispose of, pledge, hypothecate, make any short sale of, or otherwise effect a similar transaction of any Shares acquired under this Award (each a "Sale Prohibition") at a time when applicable laws, regulations or Company or underwriter trading policies prohibit the exercise or disposition of Shares. The Company shall have the right to designate one or more periods of time, each of which generally will not exceed one hundred eighty (180) days in length (provided however, that such period may be extended in connection with the Company's release (or announcement of release) of earnings results or other material news or events), and to impose a Sale Prohibition, if the Company determines (in its sole discretion) that such limitation(s) is needed in connection with a public offering of Shares or to comply with an underwriter's request or trading policy, or could in any way facilitate a lessening of any restriction on transfer pursuant to the Securities Act or any state securities laws with respect to any issuance of securities by the Company, facilitate the registration or qualification of any securities by the Company under the Securities Act or any state securities laws, or facilitate the perfection of any exemption from the registration or qualification requirements of the Securities Act or any applicable state securities laws for the issuance or transfer of any securities. The Company may issue stop/transfer instructions and/or appropriately legend any stock certificates issued pursuant to this Award in order to ensure compliance with the foregoing.

If the sale of Shares acquired under this Award is not registered under the Securities Act, but an exemption is available which requires an investment representation or other representation and warranty, you shall represent and agree that the Shares being acquired are being acquired for investment, and not with a view to the sale or distribution thereof, and shall make such other representations and warranties as are deemed necessary or appropriate by the Company and its counsel.

If the sale of Shares acquired under this Agreement is not registered under the Securities Act, but an exemption is available which requires an investment representation or other representation and warranty, the Participant shall represent and agree that the Shares being acquired are being acquired for investment, and not with a view to the sale or distribution thereof, and shall make such other representations and warranties as are

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deemed necessary or appropriate by the Company and its counsel.

The Participant may also be required, as a condition of the Award, to enter into any Company stockholder agreement or other agreements that are applicable to stockholders.

<b>Clawback Policy</b>	The Participant expressly acknowledges and agrees to be bound by Paragraph 35 of the Plan, which contains provisions addressing the Company's policy on recoupment of equity or other compensation.
<b>No Retention Rights</b>	The Participant's Award or this Agreement does not give the Participant the right to be retained by the Company (or any Affiliate) in any capacity. The Company (and its Affiliates) reserves the right to terminate the Participant's Service at any time and for any reason.
<b>Adjustments</b>	In the event of a Corporate Transaction, the provisions of Plan Paragraph 25(b) shall apply as is to this Award. In addition, the provisions of Plan Paragraphs 25(a) and 25(d) shall also apply as is to this Award. The Award shall be subject to the terms of the agreement of merger, liquidation or reorganization in the event the Company is subject to such corporate activity.
<b>Legends</b>	All certificates or book entries representing the Shares issued under this Award may, where applicable, have endorsed thereon any notation or legend the Company determines appropriate.
<b>Taxes and Withholding</b>	The Participant will be solely responsible for payment of any and all applicable taxes, including without limitation any penalties or interest based upon such tax obligations, associated with this Award. The Participant will not be allowed to receive benefits from this Award unless acceptable arrangements are made to pay any withholding or other taxes that may be due as a result of the Award or sale of Shares acquired under this Award.
<b>Legal Compliance with Law</b>	The Company (and any Affiliate) is not responsible for the Participant's legal compliance requirements relating to this Award, including, but not limited to, tax reporting.
<b>Regulatory Compliance</b>	The issuance of Common Stock pursuant to this Agreement shall be subject to full compliance with all applicable requirements of law and the requirements of any stock exchange or interdealer quotation system upon which the Common Stock may be listed or traded.
<b>Data Privacy</b>	The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of his or her personal data as described in this document by the Company for the exclusive purpose of implementing, administering and managing his or her participation in the Plan. The Participant understands that the Company holds certain personal information about him or her, including, but not limited to, name, home address and telephone number, date of birth, gender, social security or

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insurance number or other identification number, salary, nationality, job title, any shares of stock or directorships held in the Company, details of all awards or any other entitlement to Shares awarded, cancelled, purchased, exercised, vested, unvested or outstanding in the Participant's favor for the purpose of implementing, managing and administering the Plan ("**Data**"). The Participant understands that the Data may be transferred to any third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in his or her country or elsewhere and that the recipient country may have different data privacy laws and protections than his or her country. The Participant authorizes the recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing his or her participation in the Plan, including any requisite transfer of such Data, as may be required to a broker or other third party with whom the Participant may elect to deposit any Shares acquired under the Plan.

**Notice**

Any notice to be given or delivered to the Company relating to this Agreement shall be in writing and addressed to the Company at its principal corporate offices. All notices shall be deemed effective upon personal delivery or upon deposit in the postal mail, postage prepaid and properly addressed to the Company. Any notice to be given or delivered to the Participant relating to this Agreement may be delivered by electronic form including without limitation by email (including prospectuses required by the Securities and Exchange Commission) as well as all other documents that the Company is required to deliver to its security holders (including annual reports and proxy statements). The Company may also deliver these documents by posting them on a web site maintained by the Company or by a third party under contract with the Company.

**Other Information**

The Participant agrees to receive stockholder information, including copies of any annual report, proxy statement and periodic report, from the Company's website, if the Company wishes to provide such information through its website. The Participant acknowledges that copies of the Plan, Plan prospectus, Plan information and stockholder information are also available upon written or telephonic request to the Administrator.

**Further Assistance**

The Participant agrees to provide assistance (either before or after termination of Service) reasonably requested by the Company in connection with actions taken by the Participant while providing Services to the Company, including but not limited to assistance in connection with any lawsuits or other claims against the Company arising from events during the period in which the Participant rendered Service.

**Additional Conditions**

If the Company shall determine, in its sole discretion, that the consent or approval of any governmental authority is necessary or desirable as a condition to the payment of benefits to the Participant pursuant to the Plan, such payment shall not occur until such registration, qualification, consent or

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approval shall have been effected or obtained free of any conditions not acceptable to the Company.

**Enforcement**

The Company will be entitled to enforce its rights under this Agreement specifically, to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights to which it may be entitled. The Participant agrees and acknowledges that money damages may not be an adequate remedy for breach of the provisions of this Agreement and that the Company may in its sole discretion apply to any court of law or equity of competent jurisdiction for specific performance and/or injunctive relief in order to enforce or prevent any violations of the provisions of this Agreement.

**Nondisclosure of Confidential Information**

The Participant acknowledges that the businesses of the Company are highly competitive and that the Company's strategies, methods, books, records, and documents, technical information concerning their products, equipment, services, and processes, procurement procedures and pricing techniques, the names of and other information (such as credit and financial data) concerning former, present or prospective customers and business affiliates, all comprise confidential business information and trade secrets which are valuable, special, and unique assets which the Company uses in their business to obtain a competitive advantage over competitors. The Participant further acknowledges that protection of such confidential business information and trade secrets against unauthorized disclosure and use is of critical importance to the Company in maintaining its competitive position. The Participant acknowledges that by reason of the Participant's duties to and association with the Company, the Participant has had and will have access to and have and will become informed of confidential business information which is a competitive asset of the Company. The Participant hereby agrees that he or she will not, at any time during or after employment, make any unauthorized disclosure of any confidential business information or trade secrets of the Company, or make any use thereof, except in the carrying out of services responsibilities. The Participant shall take all necessary and appropriate steps to safeguard confidential business information and protect it against disclosure, misappropriation, misuse, loss and theft. Confidential business information shall not include information in the public domain (but only if the same becomes part of the public domain through a means other than a disclosure prohibited hereunder). The above notwithstanding, a disclosure shall not be unauthorized if (i) it is required by law or by a court of competent jurisdiction or (ii) it is in connection with any judicial, arbitration, dispute resolution or other legal proceeding in which the Participant's legal rights and obligations as a Service provider or under this Agreement are at issue; provided, however, that the Participant shall, to the extent practicable and lawful in any such events, give prior notice to the Company of his or her intent to disclose any such confidential business information in such context so as to allow the Company an opportunity (which the Participant will not oppose) to obtain such protective orders or

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similar relief with respect thereto as may be deemed appropriate. In the event of any conflict in terms between this Section and the terms of any Company confidentiality or proprietary information agreement the Participant has executed, the terms of such other confidentiality or proprietary information agreement shall prevail and govern.

<b>Applicable Law</b>	This Agreement will be interpreted and enforced under the laws of the State of Delaware without reference to the conflicts of law provisions thereof.
<b>Interpretation</b>	Any dispute regarding the interpretation of this Agreement shall be submitted by the Participant or the Company to the Administrator for review. The resolution of such dispute by the Administrator shall be final and binding on the Participant and the Company.
<b>Award is subject to Plan</b>	This Award and this Agreement is subject to the Plan. The terms and provisions of the Plan as it may be amended from time to time are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained herein and a term or provision of the Plan, the applicable terms and provisions of the Plan shall govern and prevail.
<b>Binding Effect; No Third Party Beneficiaries</b>	This Agreement shall be binding upon and inure to the benefit of the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. This Agreement shall not confer any rights or remedies upon any person other than the Company and the Participant and any respective heirs, representatives, successors and permitted assigns. The parties agree that this Agreement shall survive the settlement or termination of the Award. The Company may assign any of its rights under this Agreement.
<b>Severability</b>	The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.
<b>Voluntary Participant No Rights to Future Awards</b>	<p>You acknowledge that you are voluntarily participating in the Plan.</p> <p>Your rights, if any, in respect of or in connection with this Award or any other awards are derived solely from the discretionary decision of the Company to permit you to participate in the Plan and to benefit from a discretionary future award. By accepting this Award, you expressly acknowledge that there is no obligation on the part of the Company to continue the Plan and/or grant any additional awards to you or benefits in lieu of other awards even if awards have been granted repeatedly in the past. All decisions with respect to future awards, if any, will be at the sole discretion of the Administrator.</p>

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<b>No Right to Damages</b>	You will have no right to bring a claim or to receive damages if any portion of the Award is cancelled or expires. The loss of existing or potential profit in the Award will not constitute an element of damages in the event of the termination of your Service for any reason, even if the termination is in violation of an obligation of the Company or an Affiliate to you.
<b>Future Value</b>	The future value of the underlying Shares is unknown and cannot be predicted with certainty. If the underlying Shares do not increase in value after the Date of Award, the Award could have little or no value.
<b>Amendment</b>	The Administrator has the right to amend, alter, suspend, discontinue, or cancel the Award, prospectively or retroactively; provided, that, no such amendment or other action shall adversely affect the Participant's material rights under this Agreement without the Participant's consent.
<b>Extraordinary Compensation</b>	The Award and the Stock Units subject to the Award are not intended to constitute or replace any pension rights or compensation and are not to be considered compensation of a continuing or recurring nature, or part of the Participant's normal or expected compensation, and in no way represent any portion of the Participant's salary, compensation or other remuneration for any purpose, including but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, pension or retirement benefits or similar payments.
<b>Counterparts</b>	This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Counterpart signature pages to this Agreement transmitted by facsimile transmission, by electronic mail in portable document format (.pdf), or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, shall have the same effect as physical delivery of the paper document.
<b>No Advice Regarding Award</b>	The Company has not provided any tax, legal or financial advice, nor has the Company made any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.
<b>Acceptance</b>	The Participant hereby acknowledges receipt of a copy of the Plan, the Plan prospectus and this Agreement. The Participant has read and understands the terms and provisions thereof, and accepts the Stock Units subject to all of the terms and conditions of the Plan and this Agreement. The Participant acknowledges that there may be adverse tax consequences upon the grant or vesting of the Stock Units or disposition of the underlying Shares and that

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the Participant should consult a tax advisor prior to such disposition.

***By signing the cover sheet of this Agreement, you agree to all of the terms and conditions described above and in the Plan. Any inconsistency between this Agreement and the Plan shall be resolved by reference to the Plan.***

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## SUBSIDIARIES OF NEUROBO PHARMACEUTICALS, INC.

Name	Jurisdiction of Organization
Neurobo Therapeutics, Inc.	Delaware
NeuroBo Co., Ltd.	A Korean limited company

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

NeuroBo Pharmaceuticals, Inc.  
Boston, Massachusetts

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-220315 and 333-217296) and Form S-8 (Nos. 333-232667, 333-225435, 333-222675, 333-213946 and 333-213014) of NeuroBo Pharmaceuticals, Inc. (the "Company") of our report dated March 30, 2020, relating to the consolidated financial statements, which appears in this Annual Report on Form 10-K. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ BDO USA, LLP

Boston, Massachusetts  
March 30, 2020

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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER**

I, Richard Kang, certify that:

1. I have reviewed this annual report on Form 10-K of NeuroBo Pharmaceuticals, Inc. (the “Registrant”);
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 annual report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial; 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.

March 30, 2020

/s/ Richard Kang  
Richard Kang  
*President and Chief Executive Officer (Principal Executive Officer and Principal Financial Officer)*

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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of NeuroBo Pharmaceuticals, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Richard Kang, Chief Executive Officer of the Company, 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.

March 30, 2020

/s/ Richard Kang

Richard Kang

*President and Chief Executive Officer (Principal  
Executive Officer and Principal Financial Officer)*

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