

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

89bio, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

36-4946844
(I.R.S. Employer
Identification Number)

**142 Sansome Street, 2nd Floor
San Francisco, CA 94104
(415) 500-4614**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Rohan Palekar
Chief Executive Officer
89bio, Inc.
142 Sansome Street, 2nd Floor
San Francisco, CA 94104
(415) 500-4614**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

With copies to:

**Ryan A. Murr
Branden C. Berns
Gibson, Dunn & Crutcher LLP
555 Mission Street
San Francisco, CA 94105
(415) 393-8373**

**Divakar Gupta
Jonie I. Kondracki
Robert W. Phillips
Charles S. Kim
Cooley LLP
101 California Street
San Francisco, CA 94111
(415) 693-2000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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. (Check one):

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 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

| Title of Each Class of Securities to be Registered | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|---|---|----------------------------------|
| Common Stock, par value \$0.001 per share | \$69,828,000(1) | \$9,064(1) |

(1) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) of the Securities Act of 1933, as amended (the "Securities Act"), based on an aggregate of 2,530,000 shares (which includes the additional shares of that the underwriters have an option to purchase) at the assumed public offering price of \$27.60 per share, the last reported sale price of the common stock as reported on The Nasdaq Global Market on July 2, 2020.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to such Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion
Preliminary Prospectus dated July 6, 2020

PROSPECTUS

2,200,000 Shares



Common Stock

We are selling 2,200,000 shares of our common stock.

Our shares trade on The Nasdaq Global Market under the symbol “ETNB.” On July 2, 2020, the last sale price of the shares as reported on The Nasdaq Global Market was \$27.60 per share.

We are an “emerging growth company” as defined under the federal securities laws and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and may elect to do so in future filings.

Investing in the common stock involves risks that are described in the “[Risk Factors](#)” section beginning on page 13 of this prospectus.

| | Per Share | Total |
|---|------------------|--------------|
| Public offering price | \$ | \$ |
| Underwriting discounts and commissions ⁽¹⁾ | \$ | \$ |
| Proceeds, before expenses, to us | \$ | \$ |

(1) See the section titled “Underwriting” for additional information regarding compensation payable to the underwriters.

The underwriters may also exercise their option to purchase up to an additional 330,000 shares from us, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about _____, 2020.

BofA Securities

SVB Leerink

RBC Capital Markets

The date of this prospectus is _____, 2020.

| | <u>Page</u> |
|---|-------------|
| Prospectus Summary | 1 |
| Risk Factors | 13 |
| Special Note Regarding Forward-Looking Statements | 16 |
| Industry and Market Data | 18 |
| Use of Proceeds | 19 |
| Dividend Policy | 20 |
| Capitalization | 21 |
| Dilution | 22 |
| Principal Stockholders | 24 |
| Description of Capital Stock | 27 |
| Shares Eligible for Future Sale | 31 |
| Material U.S. Federal Income Tax Consequences to Non-U.S. Holders | 33 |
| Underwriting | 37 |
| Legal Matters | 45 |
| Experts | 45 |
| Where You Can Find More Information | 45 |
| Incorporation by Reference | 46 |

Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus or any free writing prospectus is accurate only as of its date, regardless of its time of delivery or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: We have not, and the underwriters have not, done anything that would permit this offering, or possession or distribution of this prospectus, in any jurisdiction where action for that purpose is required, other than the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before deciding to invest in our common stock. You should read the entire prospectus, including the information incorporated by reference herein, carefully, including the section titled “Risk Factors” included elsewhere in this prospectus and in the section titled “Risk Factors” and our financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein, before making an investment decision. Some of the statements in this summary constitute forward-looking statements, see “Special Note Regarding Forward-Looking Statements.” In this prospectus, unless the context requires otherwise, references to “we,” “us,” “our,” “89bio” or the “company” refer to (i) 89Bio Ltd. for the periods prior to the Reorganization (as defined below) and (ii) 89bio, Inc. for the periods after completion of the Reorganization, in each case together with its consolidated subsidiaries.

Our Company

Overview

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of liver and cardio-metabolic diseases. Our lead product candidate, BIO89-100, a specifically engineered glycoPEGylated analog of fibroblast growth factor 21 (“FGF21”), is currently being developed for the treatment of nonalcoholic steatohepatitis (“NASH”) and for the treatment of severe hypertriglyceridemia (“SHTG”). NASH is a severe form of nonalcoholic fatty liver disease (“NAFLD”), characterized by inflammation and fibrosis in the liver that can progress to cirrhosis, liver failure, hepatocellular carcinoma and death. There are currently no approved products for the treatment of NASH. FGF21 is a clinically-validated mechanism that has been shown in humans to reduce steatosis, improve the histological features of NASH and address cardio-metabolic dysregulation. We believe BIO89-100 may be a differentiated FGF21 therapy based on its robust and durable biological effects and a favorable tolerability profile, as well as its potential for a longer dosing interval. Combining these characteristics with the ability to address the key liver pathologies in NASH, as well as the underlying metabolic dysregulation in NASH patients, BIO89-100 has the potential to become a mainstay of NASH therapy. We successfully completed a Phase 1a, first-in-human, single ascending dose (“SAD”) clinical trial with 58 healthy volunteers. The magnitude and significance of BIO89-100’s biological effects after a single dose on lipid parameters were robust and durable. In April 2020, we closed enrollment of our proof of concept (“POC”) Phase 1b/2a clinical trial in patients with NASH or patients with NAFLD and a high risk of NASH with 81 patients enrolled. We expect to report topline data in the late third quarter to the early fourth quarter of 2020. We expect to initiate our Phase 2b/3 clinical trial in patients with NASH in the first half of 2021.

We are also developing BIO89-100 for the treatment of SHTG, a condition identified by severely elevated levels of triglycerides (greater than or equal to 500 mg/dL), which is associated with an increased risk of NASH, cardiovascular events and acute pancreatitis. We expect to initiate our Phase 2 trial in SHTG patients, in the third quarter of 2020, subject to the external environment with respect to COVID-19 remaining conducive to executing the trial safely and effectively, and to report topline data in the second half of 2021. The Phase 2 trial in SHTG patients will evaluate the ability of BIO89-100 to reduce fasting plasma triglyceride levels compared to baseline levels. In May 2020, the U.S. Food and Drug Administration (“FDA”) cleared our Investigational New Drug application for SHTG. We have adequate clinical supplies for our ongoing Phase 1b/2a clinical trial in NASH patients and our planned Phase 2 trial in SHTG patients.

Based on FDA guidance for the development of SHTG treatments, as well as the regulatory path followed by other companies that have successfully developed SHTG therapies, we believe that a combination of smaller clinical trials and shorter development timelines could mean that SHTG potentially represents a quicker

path to market for BIO89-100. We believe BIO89-100 has the potential to address multiple drivers underlying metabolic dysregulation, which would make it an ideal candidate for selected liver and cardio-metabolic diseases.

The prevalence of NAFLD, which affects approximately 25% of the global population, and NASH, which develops in approximately 20% to 25% of NAFLD patients, is growing and is driven primarily by the worldwide obesity epidemic. NAFLD and NASH patients have an excessive accumulation of fat in the liver resulting primarily from a caloric intake above and beyond energy needs. In NAFLD patients, this abnormal liver fat contributes to the progression to NASH, a liver necro-inflammatory state, that can lead to scarring, also known as fibrosis, and, for some, can progress to cirrhosis and liver failure. The critical pathophysiologic mechanisms underlying the development and progression of NASH include reduced ability to handle lipids, increased insulin resistance, injury to hepatocytes and liver fibrosis in response to hepatocyte injury. Patients with NASH frequently have other significant metabolic co-morbidities such as obesity, hyperglycemia, dyslipidemia and systemic hypertension (a constellation of which is commonly referred to as metabolic syndrome) and these further contribute to the risk of cardiovascular disease. The number of NASH cases in the United States is projected to expand from 16.5 million in 2015 to 27 million in 2030, with similar prevalence growth expected in Europe. Diet and exercise are currently the standard of care for NAFLD and NASH, but adherence to this treatment regimen is poor and there remains a high unmet need in the treatment of NASH.

Our Lead Product Candidate, BIO89-100

BIO89-100 is a specifically engineered FGF21 analog that we believe has the potential to address the critical pathophysiologic mechanisms underlying NASH. FGF21 is a metabolic hormone that regulates energy expenditure and glucose and lipid metabolism. FGF21 has been clinically shown to reduce steatosis in the liver, as well as improve key histological features of the disease. It is also thought to exert effects on liver fibrosis by improving metabolic regulation, which reduces ongoing liver injury thus giving the liver time to heal. FGF21 also generates an on-target effect to increase adiponectin, a hormone released from adipose tissue that, among other functions, can suppress development and progression of hepatic fibrosis. However, FGF21 in its native form suffers from a short half-life and a tendency to aggregate in solution, both of which impact its suitability as a viable drug. To address these challenges, we have specifically engineered BIO89-100 to maintain the clinical benefits of FGF21, while extending half-life in vivo, protecting against proteolysis, reducing renal clearance, minimizing susceptibility to aggregate in solution and optimizing potency. In April 2020, we announced data from a preclinical study with BIO89-100 demonstrating low nanomolar potency against FGF receptors 1c, 2c and 3c similar to recombinant human FGF21 (rhFGF21).

BIO89-100 has been evaluated in seven animal studies of NASH, diabetes and obesity, including studies in mice and non-human primates. Each study was customized to assess endpoints relevant to liver and metabolic diseases and conducted according to standard practices at experienced contract research organizations. In these preclinical studies, consistent beneficial effects across a range of endpoints were observed, including improvements in hepatic steatosis, injury and fibrosis in a diet-induced NASH study of 50 mice (see “BIO89-100—Results of DIN Mouse Studies” in our Annual Report on Form 10-K for the year ended December 31, 2019 Figure 11 which illustrates that statistically significant mean changes with respect to hepatic steatosis and fibrosis were each observed and Figure 12 which illustrates that statistically significant mean changes with respect to injury were observed) and improved glycemic control and reductions in levels of triglycerides and other lipids in a study of 24 spontaneously diabetic obese cynomolgus monkeys with elevated triglycerides (see “BIO89-100—Results of Spontaneously Diabetic Obese Cynomolgus Monkey Studies” in our Annual Report on Form 10-K for the year ended December 31, 2019 Figures 20 and 21, respectively, which illustrate that statistically significant mean changes with respect to glycemic control and lipid handling were each observed). We believe this demonstrates BIO89-100’s potential to simultaneously address the multiple drivers of NASH pathogenesis and the key metabolic dysregulations observed in patients with SHTG. The histological endpoints assessed in these preclinical studies, NAFLD activity score (“NAS”) and fibrosis score, mirror the endpoints we expect to assess in our clinical development for NASH and the reduction in triglyceride levels is

the endpoint we will assess in our clinical development for SHTG. In addition, treatment with BIO89-100 in animal models demonstrated consistent reductions in body weight.

In May 2019, we announced positive topline data from our Phase 1a, first-in-human, SAD clinical trial of BIO89-100 in 58 healthy volunteers. In this SAD study, BIO89-100 demonstrated a favorable tolerability profile in the 43 volunteers who received BIO89-100 with a half-life of 55 to 100 hours. At single doses of 9.1 mg and higher, BIO89-100 demonstrated significant improvements in key lipid parameters measured at Day 8 and Day 15 after dosing on Day 1. The mean changes versus baseline include reductions in triglycerides (up to 51%) and LDL-C (up to 37%) and increase in HDL-C (up to 36%) despite the baseline values being in the normal range. As compared to placebo treatment, these mean changes were all statistically significant ($p < 0.001$). BIO89-100 demonstrated rapid (beginning from Day 2), sustained and durable improvements in lipid parameters for two weeks or more after single dose administration. Based on these findings and results from our animal studies, we believe such a lengthy duration of effect may confer longer dosing intervals to BIO89-100.

In the second quarter of 2020, we closed patient enrollment in our POC Phase 1b/2a trial with 81 total patients randomized to receive once weekly or once every two weeks subcutaneous dosing of either BIO89-100 or placebo, in each case, for up to 12 weeks. This trial is designed to assess the safety, tolerability and pharmacokinetic properties of BIO89-100, as well as changes in liver steatosis and key biomarker assessments.

We are also developing BIO89-100 for the treatment of SHTG, a condition identified by severely elevated levels of triglycerides (greater than or equal to 500 mg/dL) and which is associated with an increased risk of NASH, cardiovascular events and acute pancreatitis. SHTG accounts for up to 10% of all acute pancreatitis episodes. It is estimated that there are up to 4 million patients in the United States with TG \geq 500 mg/dL and up to 50% of SHTG patients treated with certain approved drugs are refractory to current standard of care. Further, many patients with SHTG have comorbidities, such as fatty liver disease, hypercholesterolemia, diabetes and obesity, all of which further contribute to a higher risk of cardiovascular disease, and these patients could benefit from treatment with BIO89-100. In fact, 56% of SHTG patients have hepatic fat increasing their cardiovascular risk. In a study of 24 diabetic obese cynomolgus monkeys with elevated triglycerides, BIO89-100 showed significant effects on triglycerides at doses as low as 0.1 mg/kg/week, with a 78% reduction from baseline (range of 52% reduction to 94% reduction) observed at the highest dose level of 1.0 mg/kg/week on Day 56. In our Phase 1a SAD study, BIO89-100 showed a significant reduction in triglycerides of up to 51% after a single dose in healthy volunteers. While currently approved SHTG therapies decrease TG levels, they generally do not have broader metabolic benefits or reduction of hepatic fat. To the extent that we are able to show in subsequent human clinical trials that BIO89-100 significantly decreases both triglyceride and LDL-C levels, improves other metabolic parameters and improves fatty liver disease, we believe that BIO89-100 could be a differentiated therapy in this indication. We expect to initiate our Phase 2 trial in SHTG patients in the third quarter of 2020 in order to evaluate the ability of BIO89-100 to reduce fasting plasma triglyceride levels compared to baseline levels and to report topline data in the second half of 2021.

Impact of COVID-19 Pandemic

The ongoing COVID-19 pandemic has resulted and may continue to result in significant disruptions to our clinical trials, including adverse effects on our development timelines, or other business operations. In April 2020, we closed enrollment of our POC Phase 1b/2a clinical trial in patients with NASH or patients with NAFLD and a high risk of NASH with 81 patients (or 98% of patients) enrolled. We expect to initiate our Phase 2 trial in SHTG patients, in the third quarter of 2020, subject to the external environment with respect to COVID-19 remaining conducive to executing the trial safely and effectively. We do not yet know the full extent of other potential delays, which could prevent or delay us from obtaining approval for BIO89-100. For more information regarding risks related to the ongoing COVID-19 pandemic, please see the risk factor entitled “The ongoing

COVID-19 pandemic may result in significant disruptions to our clinical trials or other business operations, which could have a material adverse effect on our business.” in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020. To the extent the ongoing COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks set forth under “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020.

BIO89-100 Patent Rights

We retain exclusive worldwide rights to BIO89-100. BIO89-100 is protected by a family of issued patents with claims directed to composition of matter and methods of use. The first of our patents for BIO89-100 are projected to expire in the United States in 2028, with the final composition-of-matter patent projected to expire in the United States in 2038, in each case, without patent term extensions. Because BIO89-100 is a biologic drug, marketing approval is also expected to provide 12 years of market exclusivity in the United States from the approval date of a biologics license application. We license the patents and know-how related to the glycoPEGylation technology for use in the research, development, manufacture and commercialization of BIO89-100 from Teva Pharmaceutical Industries Ltd. (“Teva”) and ratiopharm GmbH (“ratiopharm”), a Teva affiliate.

Strategy

Our goal is to become a leading biopharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of liver and cardio-metabolic diseases. The key components of our strategy are to:

- **Rapidly advance BIO89-100 through clinical development for the treatment of NASH.** We believe BIO89-100 may be a differentiated FGF21 therapy based on its robust and durable biological effects, a favorable tolerability profile and its potential for a longer dosing interval, and is well positioned to address the complex pathophysiology of NASH. In the second quarter of 2020, we closed patient enrollment in our POC Phase 1b/2a clinical trial to evaluate the safety and efficacy of BIO89-100. We believe that our trial design and the use of well-established surrogate clinical endpoints can contribute meaningfully to the rapid advancement of BIO89-100 through its clinical development. With potential for BIO89-100 to be established as a mainstay monotherapy for NASH, we continue to explore opportunities to combine BIO89-100 with products targeting other pathways within NASH for possible development as a combination therapy.
- **Expand the breadth of indications for BIO89-100 with an initial focus on SHTG.** While we are focused on becoming a leader in the treatment of NASH, the mechanism of action of our FGF21 analog supports the potential to become the treatment leader in other cardio-metabolic and liver diseases. We intend to develop BIO89-100 for the treatment of SHTG, a condition with a significant unmet need for improved therapies addressing the broader metabolic issues in these patients. In the third quarter of 2020, we expect to initiate our Phase 2 trial in SHTG, subject to the external environment with respect to COVID-19 remaining conducive to executing the trial safely and effectively. Based on FDA guidance for the development of SHTG treatments, as well as the regulatory path followed by other companies that have successfully developed SHTG therapies, we believe that a combination of smaller clinical trials and shorter development timelines could mean that SHTG potentially represents a quicker path to market for BIO89-100.
- **Scale-up and optimize the manufacturing of BIO89-100.** We currently use an external contract manufacturing organization (“CMO”) to manufacture BIO89-100 for our ongoing and planned

clinical trials. While these trials are ongoing, we plan to work with our CMO to optimize and scale-up the manufacturing process for BIO89-100 to support the increased production that will be needed for later-stage clinical trials and commercialization, if BIO89-100 is approved.

- **Establish a commercial infrastructure in key geographies.** We have worldwide rights to BIO89-100 and intend to develop the sales infrastructure required for commercialization in the United States. We also plan to evaluate options, including strategic collaborations, for commercializing BIO89-100, if approved, in other key markets, such as Europe and China.
- **Construct a diversified multi-asset pipeline of novel therapies.** We intend to employ a value-driven strategy to identify, acquire, develop and commercialize product candidates for liver and cardio-metabolic diseases. We intend to focus on product candidates that we believe have attractive profiles in early clinical testing, address a clear unmet medical need and can advance quickly and efficiently into late-stage development.

Risks Associated with our Business

Our business is subject to a number of risks that you should be aware of before making an investment decision. You should carefully consider all of the information set forth in this prospectus and, in particular, you should evaluate the specific factors set forth under “Risk Factors” included elsewhere in this prospectus and in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein, in deciding whether to invest in our common stock. Among these important risks are the following:

- We are a clinical-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred net losses since our inception, we expect to incur significant and increasing operating losses and we may never be profitable. Our stock is a highly speculative investment.
- We currently have no source of product revenue and may never become profitable.
- The ongoing COVID-19 pandemic has resulted and may continue to result in significant disruptions to our clinical trials or other business operations, which could have a material adverse effect on our business.
- We will require substantial additional capital to finance our operations, which may not be available to us on acceptable terms, or at all. As a result, we may not complete the development and commercialization of BIO89-100 or develop new product candidates.
- Raising additional capital may cause dilution to existing stockholders, restrict our operations or require us to relinquish rights to our technologies.
- Our Loan and Security Agreement with Silicon Valley Bank contains certain covenants that could adversely affect our operations and, if an event of default were to occur, we could be forced to repay the outstanding indebtedness sooner than planned and possibly at a time when we do not have sufficient capital to meet this obligation. The occurrence of any of these events could cause a significant adverse impact on our business, prospects and share price.
- Our business depends on the success of BIO89-100, our only product candidate under clinical development, which is in the early stages of clinical development and has not completed a pivotal

trial. If we are unable to obtain regulatory approval for and successfully commercialize BIO89-100 or other future product candidates, or we experience significant delays in doing so, our business will be materially harmed.

- Clinical drug development involves a lengthy and expensive process with uncertain timelines and uncertain outcomes, and the results of prior preclinical or clinical trials are not necessarily predictive of our future results. Our clinical trials may fail to adequately demonstrate the safety and efficacy of BIO89-100 or any future product candidates.
- If we experience delays in clinical testing, our commercial prospects will be adversely affected, our costs may increase and our business may be harmed.
- If we encounter difficulties in enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.
- An epidemic of the coronavirus disease is ongoing and may result in significant disruptions to our clinical trials, which could have a material adverse effect on our business.
- We are initially developing BIO89-100 for the treatment of NASH, an indication for which there are no approved products. This makes it difficult to predict the timing and costs of the clinical development of BIO89-100 for the treatment of NASH.
- BIO89-100 and any future product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or limit the commercial profile of an approved label.
- We face substantial competition, which may result in others discovering, developing or commercializing competing products before or more successfully than us.
- Lack of efficacy, adverse events or undesirable side effects may emerge in clinical trials conducted by third parties developing FGF product candidates, which could adversely affect our stock price, our ability to attract additional capital and our development program.
- We have relied on, and expect to continue to rely on, third-party manufacturers to produce BIO89-100 or any future product candidates. Any failure by a third-party manufacturer to produce acceptable product candidates for us pursuant to our specifications and regulatory standards may delay or impair our ability to initiate or complete our clinical trials, obtain and maintain regulatory approvals or commercialize approved products.
- We rely on third parties to conduct our clinical trials and some aspects of our research and preclinical testing, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research or testing.
- Our success depends upon our ability to obtain and maintain intellectual property protection for our products and technologies.
- We rely on a license from Teva and a sublicense from ratiopharm to patents and know-how related to glycoPEGylation technology that are used in the development, manufacture and commercialization of BIO89-100. Any termination or loss of significant rights, including the right to glycoPEGylation technology, or breach, under these agreements or any future license agreement related to our product candidates, would materially and adversely affect our ability to continue the development and commercialization of the related product candidates.

Recent Developments

Third Party Clinical Validation of FGF21

We believe FGF21 has the potential to be the mainstay of therapy for NASH because it addresses multiple facets of the disease. The potential benefits of FGF21 analogs in the treatment of NASH have been shown in third-party clinical studies conducted in patients with biopsy-proven NASH with two different FGF21 analogs. Please see “Business—Overview—Clinical Validation of FGF21 and FGF class of drugs” in our Annual Report on Form 10-K for the year ended December 31, 2019 for a discussion of third-party clinical trial data with pegbelfermin.

In addition, in a recent third-party Phase 2a study conducted in patients with biopsy-proven NASH, efruxifermin (AKR-001), a long-acting Fc-FGF21 fusion protein, showed a significant reduction in absolute hepatic fat fraction measured by MRI-PDFF at week 12 at all three doses tested. Relative reduction from baseline was 71% at the 50 mg dose (n=20), 63% at the 28 mg dose (n=19) and 0% for placebo (n=21). All doses showed a significant reduction in liver transaminases (ALT), a marker of liver injury. Efruxifermin demonstrated improvements on histological assessment, including NASH resolution and fibrosis, in patients who were MRI responders, after 16 weeks of treatment with histological assessment done around week 20. 62% of patients demonstrated an improvement in fibrosis of one stage or greater with no worsening of NAS at the 50 mg dose (n=13), 46% of patients demonstrated an improvement at the 28 mg dose (n=13) and 0% of patients demonstrated improvement for placebo (n=2). Each of the three doses tested were delivered as a weekly injection. The main drug-related treatment-emergent adverse events were gastrointestinal events with diarrhea occurring in greater than 50% of patients in the 50 mg dosing cohort. An adverse event of tremor was noted in one patient in the low dose group.

Results of Other Molecules in Development for NASH

In separate third-party studies that measured reduction in liver fat from baseline, a FGF19 analog demonstrated a 39% reduction after 24 weeks (1 mg (n=52); 13% for placebo (n=25)), a THR-β oral agent in late stage development demonstrated a 36% reduction after 12 weeks (all doses (n=78); 10% for placebo (n=38)), a GLP-1 analog demonstrated a 31% reduction after 24 weeks (1.2 mg (n=68)) and a FXR agonist in registration demonstrated a 17% reduction after 72 weeks (25 mg (n=78)).

In third-party studies with the same molecules referenced above, 38% of patients receiving the FGF19 analog after 24 weeks (1 mg (n=50); 18% for placebo (n=22)), 29% of patients receiving the THR-β oral agent after 36 weeks (all doses (n=73); 23% for placebo (n=34)) and 23% of patients receiving the FXR agonist after 18 months (25 mg (n=308); 12% for placebo (n=311)) demonstrated an improvement in fibrosis of one stage or greater with no worsening of NASH. In a separate third-party study with a different GLP-1 analog, 48% of patients saw improvement in fibrosis after 72 weeks (0.4 mg (n=82); 34% for placebo (n=80)).

Financial Update

While we have not finalized our full financial results for the fiscal quarter ended June 30, 2020, we expect to report that we had approximately \$73.9 million of cash, cash equivalents and short-term investments as of June 30, 2020. This amount is preliminary, has not been audited and is subject to change pending completion of our unaudited financial statements for the quarter ended June 30, 2020. Additional information and disclosures would be required for a more complete understanding of our financial position and results of operations as of June 30, 2020.

Corporate Information

We were incorporated in January 2018 in Israel under the name 89Bio Ltd. 89bio, Inc., the registrant whose name appears on the cover page of this prospectus, was incorporated in June 2019 for the purpose of an internal reorganization transaction. In September 2019, all of the equity holders of 89Bio Ltd. exchanged 100% of the equity of 89Bio Ltd. for 100% of the equity of 89bio, Inc. Following this exchange (the “Reorganization”), 89Bio Ltd. became a wholly owned subsidiary of 89bio, Inc. and 89bio, Inc. owns the business described and for which historical financial information is included elsewhere in this prospectus. Shares of the common stock of 89bio, Inc. are being offered by this prospectus.

Our principal executive offices are located at 142 Sansome Street, 2nd Floor, San Francisco, California 94104 and our telephone number is (415) 500-4614. Our website is www.89bio.com. The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We are an emerging growth company, as defined in Section 2(a) of the Securities Act of 1933, as amended (the “Securities Act”), as modified by the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including relief from the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, less extensive disclosure obligations regarding executive compensation in our registration statements, periodic reports and proxy statements, exemptions from the requirements to hold a nonbinding advisory vote on executive compensation, and exemptions from stockholder approval of any golden parachute payments not previously approved. We may also elect to take advantage of other reduced reporting requirements in future filings. As a result, our stockholders may not have access to certain information that they may deem important and the information that we provide to our stockholders may be different than, and not comparable to, information presented by other public reporting companies. We could remain an emerging growth company until the earlier of (1) December 31, 2024, (2) the last day of the year in which we have total annual gross revenue of at least \$1.07 billion, (3) the last day of the year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which would occur if the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period.

In addition, the JOBS Act also provides that an emerging growth company may take advantage of the extended transition period provided in the Securities Act for complying with new or revised accounting standards. An emerging growth company may therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption and, as a result, will not be subject to the same implementation timing for new or revised accounting standards as are required of other public companies that are not emerging growth companies, which may make comparison of our consolidated financial information to those of other public companies more difficult.

We are also a smaller reporting company as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as (i) our voting and non-voting common stock held by nonaffiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter or (ii) our annual revenue is less than \$100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

The Offering

| | |
|--|--|
| Common stock offered by us | 2,200,000 shares. |
| Option to purchase additional shares of common stock | The underwriters have a 30-day option to purchase up to 330,000 additional shares of our common stock. |
| Common stock to be outstanding immediately after this offering | 16,005,204 shares (or 16,335,204 shares if the underwriters exercise in full their option to purchase additional shares of our common stock). |
| Use of proceeds | We expect that our net proceeds from this offering will be approximately \$56.6 million (or approximately \$65.2 million if the underwriters exercise in full their option to purchase 330,000 additional shares), based on an assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and short-term investments, to accelerate and support our BIO89-100 programs in NASH and SHTG, for the manufacture and scale up of BIO89-100 and other general corporate purposes. We may also use a portion of the proceeds to license, acquire or invest in new programs or for drug development activities related to such programs, however we have no current commitments to do so. See “Use of Proceeds” for additional information. |
| Risk factors | You should carefully read and consider the information set forth in the section titled “Risk Factors” included elsewhere in this prospectus together with all of the other information included in or incorporated by reference in this prospectus, before deciding whether to invest in shares of our common stock. |
| Nasdaq Global Market trading symbol | “ETNB” |

The number of shares of common stock to be outstanding following this offering is based on 13,805,204 shares of our common stock outstanding as of June 30, 2020 and excludes the following:

- 1,781,966 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, under our 2019 Equity Incentive Plan (as amended and restated, the “2019 Plan”) at a weighted-average exercise price of \$11.19 per share;
- 25,000 shares of our common stock issuable upon exercise of an outstanding warrant at an exercise price of \$22.06 per share (which expires on June 30, 2025);
- 1,601,991 shares of our common stock reserved for future issuance under our 2019 Plan as of June 30, 2020, as well as any automatic increase in the number of shares of common stock reserved for future issuance thereunder; and

- 358,651 shares of our common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan, as well as any automatic increase in the number of shares of common stock reserved for future issuance thereunder.

Except as otherwise noted, we have presented the information in this prospectus based on the following assumptions:

- no exercise by the underwriters of their option to purchase additional shares of our common stock in this offering; and
- no exercise of the outstanding stock options or warrant described above.

Summary Consolidated Financial Data

The following summary consolidated statement of operations data for the period from January 18, 2018 (inception) to December 31, 2018 and for the year ended December 31, 2019 are derived from our audited consolidated financial statements incorporated by reference in this prospectus.

The historical consolidated statement of operations data for the three months ended March 31, 2019 and 2020 and the consolidated balance sheet data as of March 31, 2020 are derived from our unaudited interim condensed consolidated financial statements incorporated by reference in this prospectus. Our unaudited interim condensed consolidated financial statements were prepared on the same basis as our audited consolidated financial statements and, in our opinion, reflect all adjustments, consisting only of normal recurring adjustments, that are necessary for the fair statement of our unaudited interim condensed consolidated financial statements. Our historical results presented below are not necessarily indicative of the results to be expected for any future period. You should read this information in conjunction with the information in the section titled "Selected Consolidated Financial Data" included elsewhere in this prospectus and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein.

| | Year Ended December 31, <u>2019</u> | Period from January 18, 2018 (inception) to December 31, 2018 | Three Months Ended <u>March 31,</u> | |
|---|--|--|--|----------------|
| | | | <u>2020</u> | <u>2019</u> |
| | (in thousands, except share and per share amounts) | | | |
| Consolidated Statement of Operations Data: | | | | |
| Operating expenses: | | | | |
| Research and development | \$ 21,346 | \$ 13,681 | \$ 7,778 | \$ 4,309 |
| General and administrative | 5,294 | 1,481 | 2,924 | 523 |
| Total operating expenses | <u>26,640</u> | <u>15,162</u> | <u>10,702</u> | <u>4,832</u> |
| Loss from operations | 26,640 | 15,162 | 10,702 | 4,832 |
| Other expenses (income), net | 30,562 | 986 | (157) | (416) |
| Net loss before tax | 57,202 | 16,148 | 10,545 | 4,416 |
| Income tax (benefit) expense | 218 | 28 | (1) | 23 |
| Net loss and comprehensive loss | <u>\$ 57,420</u> | <u>\$ 16,176</u> | <u>10,544</u> | <u>4,439</u> |
| Net loss per share, basic and diluted | <u>\$ 24.49</u> | <u>\$ 36.45</u> | <u>\$ 0.76</u> | <u>\$ 7.26</u> |
| Weighted-average shares used to compute net loss per share, basic and diluted | <u>2,344,191</u> | <u>443,767</u> | <u>13,789,786</u> | <u>611,226</u> |

| | <u>As of March 31, 2020</u> | |
|---|-----------------------------|-----------------------|
| | <u>Actual</u> | <u>As Adjusted(1)</u> |
| | (in thousands) | |
| Consolidated Balance Sheet Data: | | |
| Cash and cash equivalents | \$ 85,532 | \$ 142,255 |
| Total assets | 87,689 | 144,412 |
| Total current liabilities | 7,787 | 7,787 |
| Additional paid-in capital | 164,028 | 220,749 |
| Accumulated deficit | (84,140) | (84,140) |
| Total stockholders' equity | 79,902 | 136,625 |

- (1) The as adjusted column reflects \$56.6 million in estimated net proceeds from the issuance and sale of shares of our common stock in this offering, based on an assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and \$0.1 in aggregate proceeds from the issuance of 11,346 shares of our common stock upon the exercise of options or under our 2019 Employee Stock Purchase Plan issued subsequent to March 31, 2020. Each \$1.00 increase (decrease) in the assumed public offering price would increase (decrease) the as adjusted amount of each of cash and cash equivalents, total assets, total current liabilities and total stockholders' equity by \$2.1 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) of 1,000,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, total assets, total current liabilities and total stockholders' equity by \$25.9 million, assuming no change in the assumed public offering price per share and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below as well as the risks and uncertainties set forth under the section titled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein, before deciding whether to purchase shares of our common stock. You should also refer to the other information contained in this prospectus and the documents incorporated by reference herein, including our audited consolidated financial statements and related notes and the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein. Our business, financial condition, results of operations and prospects could be materially and adversely affected by any of these risks or uncertainties. In any such case, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to this Offering

The price of our common stock may be volatile, and you may lose all or part of your investment.

The market price of our common stock could fluctuate significantly, and you may not be able to resell your shares at or above the offering price. Those fluctuations could be based on various factors in addition to those otherwise described in this prospectus, including those described in these “Risk Factors.” Any of these factors may result in large and sudden changes in the volume and trading price of our common stock. In the past, following periods of volatility in the market price of a company’s securities, stockholders have often instituted securities class action litigation against that company. If we were involved in a class action suit, it could divert the attention of management, result in negative press reports and, if adversely determined, have a material adverse effect on our results of operations and financial condition.

In addition, the stock market, in general, and the stocks of many small healthcare and biotechnology 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. Further, a decline in the broader financial markets and related factors beyond our control may cause the price of our common stock to decline rapidly and unexpectedly.

Future sales of our common stock, or the perception that such sales may occur, could depress the price of our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, following this offering could depress the market price of our common stock. Our principal stockholders, executive officers and directors and certain other equity holders have agreed with the underwriters not to offer, sell, dispose of or hedge any shares of our common stock or securities convertible into or exchangeable for shares of our common stock, subject to specified limited exceptions and extensions described elsewhere in this prospectus, during the period ending 90 days after the date of the final prospectus, except with the prior written consent of BofA Securities, Inc., SVB Leerink LLC and RBC Capital Markets, LLC.

Our Amended Certificate authorizes us to issue up to 100,000,000 shares of common stock, of which 16,005,204 shares will be outstanding after this offering (assuming no exercise of the underwriters’ option to purchase additional shares). All of the shares sold in this offering will be freely tradable after the expiration date of the lock-up agreements, excluding any acquired by persons who may be deemed to be our affiliates. Shares of our common stock held by our affiliates will continue to be subject to the volume and other restrictions of Rule 144 under the Securities Act. BofA Securities, Inc., SVB Leerink LLC and RBC Capital Markets, LLC

may, in their discretion and at any time without notice, release all or any portion of the shares subject to the lock-up. Sales of a substantial number of such shares upon expiration of the lock-up and market stand-off agreements, the perception that such sales may occur or early release of these agreements, could cause our market price to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate. See “Underwriting.”

Moreover, holders of an aggregate of 7,077,366 shares of our common stock have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders.

In addition, we have filed a registration statement registering under the Securities Act the shares of our common stock reserved for issuance under our 2019 Plan, including shares issuable upon exercise of outstanding options. These shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described above.

Further, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt or equity securities. If we issue common stock or securities convertible into our common stock, our common stockholders would experience additional dilution and, as a result, the price of our common stock may decline.

Our directors, executive officers and current holders of 5% or more of our capital stock will continue to have substantial control over our company after this offering, which could limit your ability to influence the outcome of matters subject to stockholder approval, including a change of control.

Our directors and executive officers, together with their affiliates, will beneficially own approximately 18.2% of our outstanding common stock after this offering. Holders of 5% or more of our common stock will beneficially own approximately 73.7% of our outstanding common stock after this offering. Our current directors, officers and stockholders who own greater than 5% of our outstanding common stock, together with their affiliates, will beneficially own, in the aggregate, approximately 74.8% of our outstanding common stock after this offering. As a result, after this offering, our executive officers, directors and other holders of 5% or more of our common stock, if they act, will continue to be able to influence or control matters requiring approval by our stockholders, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. In addition, our current directors, executive officers and other holders of 5% or more of our common stock, acting together, would continue to have the ability to control the management and affairs of our company. They may also have interests that differ from yours and may vote in a way with which you disagree and that may be adverse to your interests. This concentration of ownership may have the effect of delaying, preventing or deterring a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their shares of our common stock as part of a sale of our company and could affect the market price of our common stock.

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

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, demand for our common stock could decrease and the price of our common stock could decline. In addition, if our operating results fail to meet the forecast of analysts, the price of our common stock would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our stock could decrease, which might cause the price of our common stock and trading volume to decline.

We have broad discretion as to the use of proceeds from this offering and may not use the proceeds effectively.

Our management will retain broad discretion as to the application of the proceeds of this offering and may spend these proceeds in ways in which you may not agree. You will not have the opportunity, as part of your investment decision, to assess whether we are using the proceeds appropriately. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value. The failure of our management to apply these funds effectively could result in unfavorable returns and uncertainty about our prospects, each of which could cause the price of our common stock to decline.

If you purchase shares of our common stock sold in this offering, you will incur immediate and substantial dilution.

If you purchase shares of our common stock in this offering, you will incur immediate and substantial dilution in the amount of \$19.06 per share because the assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, is substantially higher than the as adjusted net tangible book value per share of our outstanding common stock. This dilution is due in large part to the fact that our earlier investors paid substantially less than the assumed public offering price when they purchased their shares. In addition, you may also experience additional dilution upon future equity issuances or the issuance of stock options to purchase our common stock granted to our employees, directors and consultants under our stock option plan after this offering. To the extent we raise additional capital by issuing equity securities, our stockholders may experience additional dilution. In addition, as of June 30, 2020, we had outstanding stock options to purchase 1,781,966 shares of our common stock at a weighted-average exercise price of \$11.19 per share and a warrant exercisable for 25,000 shares of our common stock at an exercise price of \$22.06 per share. To the extent these outstanding options or warrant are ultimately exercised, you will experience further dilution. See “Dilution.”

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains “forward-looking statements” within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “design,” “estimate,” “predict,” “potential,” “plan,” “anticipate,” “target,” “forecast” or the negative of these terms, and similar expressions intended to identify forward-looking statements.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause our actual results to differ materially from the forward-looking statements expressed or implied in this prospectus. Such risks, uncertainties and other factors include, among others, the factors disclosed in the section titled “Risk Factors” in this prospectus and the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein, and the following risks, uncertainties and factors:

- our plans to develop and commercialize BIO89-100 or any future product candidates;
- our ongoing and planned clinical trials;
- the timing of and our ability to obtain regulatory approvals for BIO89-100 or any future product candidates;
- the effect of the ongoing COVID-19 pandemic on our business;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our ability to identify additional products or product candidates with significant commercial potential that are consistent with our commercial objectives;
- the rate and degree of market acceptance and clinical utility of BIO89-100 or any future product candidates, if approved;
- our commercialization, marketing and manufacturing capabilities and strategy;
- significant competition in our industry;
- our intellectual property position;
- loss of key members of management;
- failure to successfully execute our growth strategy, including any delays in our planned future growth;
- our failure to maintain effective internal controls; and
- our expected use of net proceeds from this offering.

We caution you that the risks, uncertainties and other factors referred to above, elsewhere in this prospectus and in the documents incorporated by reference herein may not contain all of the risks, uncertainties and other factors that may affect our future results and operations. Moreover, new risks will emerge from time to time. It is not possible for our management to predict all risks. In addition, we cannot assure you that we will

realize the results, benefits or developments that we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our business in the way expected. Forward-looking statements are not historical facts, and reflect our current views with respect to future events. Given the significant uncertainties, you should evaluate all forward-looking statements made in this prospectus in the context of these risks and uncertainties and not place undue reliance on these forward-looking statements as predictions of future events.

All forward-looking statements in this prospectus apply only as of the date made and are expressly qualified in their entirety by the cautionary statements included in this prospectus. We disclaim any intent to publicly update or revise any forward-looking statements to reflect subsequent events or circumstances, except as required by law.

INDUSTRY AND MARKET DATA

We obtained the industry, market and competitive position data used throughout this prospectus and in the documents incorporated by reference herein from our own internal estimates and research, as well as from industry and general publications, and research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of the industry and market, which we believe to be reasonable. In addition, while we believe the industry, market and competitive position data included in this prospectus and in the documents incorporated by reference herein is reliable and based on reasonable assumptions, we have not independently verified any third-party information, and all such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in the section titled “Risk Factors” in this prospectus and in the section titled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$56.6 million (or approximately \$65.2 million if the underwriters' option to purchase additional shares is exercised in full), based on an assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, from the issuance and sale of the shares of common stock offered by us in this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, would increase (decrease) the net proceeds to us from this offering by \$2.1 million, assuming the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, would increase (decrease) our net proceeds from this offering by \$25.9 million, assuming the assumed public offering price remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds of this offering, together with our existing cash, cash equivalents and short-term investments, primarily as follows:

- approximately \$40 to \$45 million to accelerate and support our BIO89-100 programs in NASH and SHTG;
- approximately \$5 to \$10 million for BIO89-100 manufacturing and scale up; and
- the remainder for working capital and other general corporate purposes.

Our expected use of proceeds from this offering represents our current intentions based on our present plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above. We may also use a portion of the proceeds to license, acquire or invest in new programs or for drug development activities related to such programs, however we have no current commitments to do so. We have and plan to continue to evaluate such opportunities and engage in related discussions with other business entities from time to time. As a result, our management will have broad discretion over the use of the proceeds from this offering. If we receive any additional proceeds from this offering, we expect to use such proceeds on a proportional basis to the categories described above.

Based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash, cash equivalents and short-term investments will be sufficient to fund our planned operations through the second quarter of 2022. The expected net proceeds from this offering will not be sufficient for us to fund BIO89-100 or any future product candidate through regulatory approval, and we will need to raise substantial additional capital to complete the development and commercialization of BIO89-100 and any future product candidates. The amount and timing of our actual expenditures will depend on numerous factors, including the pace and results of our research and development efforts, the timing and success of clinical trials, the timing and costs associated with the manufacture and supply of product candidates, the timing of regulatory submissions and any unforeseen cash needs. For additional information regarding our potential capital requirements, including factors that could cause actual costs to vary from the estimates set forth above, see "Risk Factors."

Pending the use of the proceeds from this offering, we may invest the proceeds in interest-bearing, investment-grade securities, certificates of deposit or government securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock and have no present intention to pay cash dividends on our common stock for the foreseeable future. Any determination to pay dividends to holders of our common stock will be at the discretion of our board of directors and will depend on many factors, including our financial condition, results of operations, liquidity, earnings, projected capital and other cash requirements, legal requirements, restrictions in the agreements governing any indebtedness we may enter into, business prospects and other factors that our board of directors deems relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of March 31, 2020:

- on an actual basis; and
- on an as adjusted basis giving effect to (i) the issuance of 11,346 shares of our common stock upon the exercise of options or under our 2019 Employee Stock Purchase Plan issued subsequent to March 31, 2020 for aggregate proceeds of \$0.1 million and (ii) the issuance and sale of 2,200,000 shares of our common stock in this offering at the assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The as adjusted information set forth in the table below is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing. You should read the following table in conjunction with “Use of Proceeds” and “Selected Consolidated Financial Data” elsewhere in this prospectus and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2019, and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, which are incorporated by reference herein.

| | <u>As of March 31, 2020</u> | |
|--|---|--------------------|
| | <u>Actual</u> | <u>As Adjusted</u> |
| | <u>(in thousands, except share and per share amounts)</u> | |
| Cash and cash equivalents | <u>\$ 85,532</u> | <u>\$ 142,255</u> |
| Stockholders’ (deficit) equity: | | |
| Common stock, \$0.001 par value, 100,000,000 shares authorized, 13,793,858 shares issued and outstanding, actual; 100,000,000 shares authorized, 16,005,204 shares issued and outstanding, as adjusted | 14 | 16 |
| Additional paid-in capital | 164,028 | 220,749 |
| Accumulated deficit | <u>(84,140)</u> | <u>(84,140)</u> |
| Total stockholders’ equity | <u>79,902</u> | <u>136,625</u> |
| Total capitalization | <u>\$ 79,902</u> | <u>\$ 136,625</u> |

The number of shares of common stock to be outstanding following this offering is based on 13,805,204 shares of our common stock outstanding as of June 30, 2020 and excludes the following:

- 1,781,966 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, under our 2019 Plan at a weighted-average exercise price of \$11.19 per share;
- 25,000 shares of our common stock issuable upon exercise of an outstanding Warrant to Purchase Common Stock at an exercise price of \$22.06 per share (which expires on June 30, 2025);
- 1,601,991 shares of our common stock reserved for future issuance under our 2019 Plan as of June 30, 2020, as well as any automatic increase in the number of shares of common stock reserved for future issuance thereunder; and
- 358,651 shares of our common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan, as well as any automatic increase in the number of shares of common stock reserved for future issuance thereunder.

DILUTION

If you invest in the shares of our common stock in this offering, your ownership interest will be immediately diluted. Dilution represents the difference between the amount per share paid by investors in this offering and the as adjusted net tangible book value per share of our common stock immediately after the completion of this offering. The data in this section are derived from our consolidated balance sheet as of March 31, 2020. Our historical net tangible book value per share is equal to our total tangible assets less the amount of our total liabilities, divided by the sum of the number of shares of our common stock outstanding on March 31, 2020. Our historical net tangible book value as of March 31, 2020 was \$79.9 million, or \$5.79 per share of common stock.

After giving effect to our receipt of the estimated net proceeds from the issuance and sale of our common stock in this offering based on an assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, and the issuance of 11,346 shares of our common stock upon the exercise of options or under our 2019 Employee Stock Purchase Plan issued subsequent to March 31, 2020 for aggregate proceeds of \$0.1 million, our as adjusted net tangible book value as of March 31, 2020 would have been \$136.6 million, or \$8.54 per share of our common stock. This represents an immediate increase in net tangible book value to our existing stockholders of \$2.75 per share and an immediate dilution to new investors in this offering of \$19.06 per share. The following table illustrates this per share dilution:

| | | |
|--|-------------|----------------|
| Assumed public offering price per share | | \$27.60 |
| Historical net tangible book value per share as of March 31, 2020 | \$5.79 | |
| Increase in net tangible book value per share attributable to investors participating in this offering | <u>2.75</u> | |
| As adjusted net tangible book value per share after this offering | | <u>8.54</u> |
| Dilution in net tangible book value per share to new investors participating in this offering | | <u>\$19.06</u> |

The dilution information above is illustrative only and will change based on the actual public offering price and other terms of this offering determined at pricing. Each \$1.00 increase (decrease) in the assumed public offering price of \$27.60 per share, which is the last reported sale price of our common stock on The Nasdaq Global Market on July 2, 2020, would increase (decrease) the as adjusted net tangible book value per share after this offering by approximately \$0.13 per share, and increase (decrease) the dilution to new investors by approximately \$0.87 per share, in each case assuming that the assumed public offering price remains the same and after deducting underwriting discounts and commissions and estimated offering expenses. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) our as adjusted net tangible book value per share after this offering by approximately \$1.02 per share (\$1.16 per share) and decrease (increase) the dilution in as adjusted net tangible book value per share to new investors by approximately \$1.02 per share (\$1.16 per share), in each case assuming that the assumed public offering price remains the same, and after deducting underwriting discounts, commissions and estimated offering expenses.

If the underwriters exercise their option to purchase 330,000 additional shares of our common stock in full, our as adjusted net tangible book value after this offering would be \$8.89 per share, and there would be an immediate dilution of approximately \$18.71 per share to new investors.

The number of shares of common stock to be outstanding following this offering is based on 13,805,204 shares of our common stock outstanding as of June 30, 2020 and excludes the following:

- 1,781,966 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, under our 2019 Plan at a weighted-average exercise price of \$11.19 per share;

- 25,000 shares of our common stock issuable upon exercise of an outstanding warrant at an exercise price of \$22.06 per share (which expires on June 30, 2025);
- 1,601,991 shares of our common stock reserved for future issuance under our 2019 Plan as of June 30, 2020, as well as any automatic increase in the number of shares of common stock reserved for future issuance thereunder; and
- 358,651 shares of our common stock reserved for future issuance under our 2019 Employee Stock Purchase Plan, as well as any automatic increase in the number of shares of common stock reserved for future issuance thereunder.

To the extent that outstanding options or the warrant are exercised, new options or other securities are issued under our equity incentive plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

PRINCIPAL STOCKHOLDERS

The following table presents information regarding beneficial ownership of our equity interests as of June 30, 2020 by:

- each stockholder or group of stockholders known by us to be the beneficial owner of more than 5% of our outstanding equity interests (our “5% and Greater Stockholders”);
- each of our directors;
- our NEOs; and
- all of our directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC, and thus represents voting or investment power with respect to our securities. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days after June 30, 2020 to our knowledge and subject to applicable community property rules, the persons and entities named in the table have sole voting and sole investment power with respect to all equity interests beneficially owned. Unless otherwise indicated, the address of each individual listed in this table is 142 Sansome Street, 2nd Floor, San Francisco, California 94104.

The percentage ownership information shown in the column titled “Shares Beneficially Owned Prior to the Offering” in the table below is based on 13,805,204 shares of our common stock outstanding as of June 30, 2020. The percentage ownership information shown in the column titled “Shares Beneficially Owned After the Offering” in the table below is based on 16,005,204 shares of our common stock outstanding after this offering, assuming 2,200,000 shares of common stock being sold in this offering. Shares of our common stock that a person has the right to acquire within 60 days after June 30, 2020 are deemed outstanding for purposes of computing the percentage ownership of the person holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group.

| <u>Name and Address of Beneficial Owner</u> | <u>Number of Shares Beneficially Owned</u> | <u>Percentage of Shares Beneficially Owned</u> | |
|---|--|--|-------------------------------|
| | | <u>Before the Offering</u> | <u>After the Offering</u> |
| 5% and Greater Stockholders | | | |
| Entities affiliated with OrbiMed ⁽¹⁾ | 4,004,422 | 29.0% | 25.0% |
| Longitude Venture Partners III, L.P. ⁽²⁾ | 2,491,787 | 18.0% | 15.6% |
| Entities affiliated with RA Capital ⁽³⁾ | 3,161,214 | 22.9% | 19.8% |
| Entities affiliated with Pontifax ⁽⁴⁾ | 1,134,671 | 8.2% | 7.1% |
| Entities affiliated with Venrock ⁽⁵⁾ | 1,000,000 | 7.2% | 6.2% |
| Named Executive Officers and Directors | | | |
| Rohan Palekar ⁽⁶⁾ | 195,675 | 1.4% | 1.2% |
| Hank Mansbach ⁽⁷⁾ | 46,584 | * | * |
| Quoc Le-Nguyen ⁽⁸⁾ | 26,936 | * | * |
| Derek DiRocco | — | * | * |
| Gregory Grunberg ⁽²⁾ | 2,491,787 | 18.0% | 15.6% |
| Michael Hayden ⁽⁹⁾ | 141,856 | 1.0% | * |
| Anat Naschitz | — | * | * |
| Steven Altschuler | — | * | * |
| Lota Zoth | — | * | * |
| All Executive Officers and Directors as a group (11 persons) | 2,991,447 | 21.1% | 18.2% |

* Represents beneficial ownership of less than one percent.

- (1) Based on a Schedule 13D filed on November 25, 2019. Consists of (a) 2,002,221 shares of common stock owned by OrbiMed Israel Partners II, L.P. and (b) 2,002,221 shares of common stock owned by OrbiMed Private Investments VI, L.P. The business address of OrbiMed Israel Partners II, L.P. (“OIP II”) is 89 Medinat Hayehudim St., building E, Herzliya 4614001 Israel. OrbiMed Israel GP II, L.P. (“Israel GP II”) is the general partner of OIP II, and OrbiMed Advisors Israel II Limited (“Advisors Israel II”) is the general partner of Israel GP II. Advisors Israel II and Israel GP II may be deemed to have shared voting and investment power over all of the shares of common and convertible preferred stock held by OIP II, and both Advisors Israel II and Israel GP II may be deemed to directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the shares held by OIP II. Advisors Israel II exercises this investment power through an investment committee comprised of Carl L. Gordon, Jonathan T. Silverstein, Nissim Darvish, Anat Naschitz, and Erez Chimovits, each of whom disclaims beneficial ownership of the shares held by OIP II.
- (2) Based on a Schedule 13D filed on November 11, 2019. Longitude Capital Partners III, LLC (“LCP III”) is the general partner of Longitude Venture Partners III, L.P. (“LVP III”) and may be deemed to have shared voting, investment and dispositive power over the shares held by LVP III. Patrick G. Enright and Juliet Tammenoms Bakker are managing members of LCP III and in their capacity as such, may be deemed to exercise shared voting and investment power over the shares held by LCP III and LVP III. Gregory Grunberg is a member of LCP III. Each of these individuals disclaims beneficial ownership of such shares except to the extent of his or her pecuniary interest therein. Gregory Grunberg shares in the control of the Company securities held directly or indirectly by LVP III/LCP III due to (a) his beneficial ownership in the Company’s shares and (b) his position as a director of the Company. The mailing address of Longitude Venture Partners III, L.P. is 2740 Sand Hill Road, 2nd Floor, Menlo Park, CA 94025.
- (3) Based on a Schedule 13D filed on November 13, 2019. Consists of (a) 2,342,954 shares of common stock owned by RA Capital Healthcare Fund, L.P. (“RA Capital Fund”), (b) 482,896 shares of common stock owned by a separately managed account (the “Account”), and (c) 335,364 shares of common stock owned by RA Capital Nexus Fund, L.P. (the “RA Capital Nexus Fund”). Dr. Peter Kolchinsky is the managing member of RA Capital Management, LLC (“RA Capital”), the general partner and investment advisor of RA Capital Fund and the investment advisor of the Account and RA Capital Nexus Fund. Dr. Kolchinsky and RA Capital may be deemed to beneficially own the shares held by RA Capital Fund, the Account and RA Capital Nexus Fund. Dr. Kolchinsky and RA Capital disclaim beneficial ownership of all applicable shares except to the extent of their actual pecuniary interest therein. The mailing address for the entities listed above is 200 Berkeley Street, 18th Floor, Boston, MA 02116.
- (4) Based on a Schedule 13G filed on February 14, 2020. Consists of (a) 668,732 shares of common stock owned by Pontifax (Israel) V, L.P., (b) 178,623 shares of common stock owned by Pontifax (Cayman) V, L.P., (c) 259,816 shares of common stock owned by Pontifax (China) V, L.P. (together, the “Pontifax Entities”), and (d) 27,500 shares of common stock owned by Pontifax Late Stage Fund L.P. (“Late Stage L.P.”). Pontifax 5 G.P. L.P. (“Pontifax 5 G.P.”) is the general partner of each of the Pontifax Entities and Pontifax Management 4 G.P. (2015) Ltd. (“Pontifax Management”) is the general partner of Pontifax 5 G.P. Mr. Tomer Kariv and Mr. Ran Nussbaum, are the Managing Partners of Pontifax Management and, as a result, may be deemed to share voting and investment power with respect to the shares held by each of the Pontifax Entities. Late Stage L.P. invests side by side with Pontifax 5 GP pursuant to a Strategic Alliance Agreement with Pontifax 5 GP. Pontifax Late Stage GP Ltd. is the general partner of Late Stage L.P. The address of each of the Pontifax Entities and Late Stage L.P. is c/o The Pontifax Group, 14 Shenkar Street, Herzelia, Israel.
- (5) Based on a Schedule 13G filed on November 25, 2019. Consists of (a) 29,339 shares of common stock owned by Venrock Healthcare Capital Partners II, L.P. (“VHCP II LP”), (b) 11,896 shares of common stock owned by VHCP Co-Investment Holdings II, LLC (“VHCP Co-Investment II”), (c) 871,613 shares of common stock owned by Venrock Healthcare Capital Partners III, L.P. (“VHCP III LP”), and (d) 87,152 shares of common stock owned by VHCP Co-Investment Holdings III, LLC (“VHCP Co-Investment III”). VHCP Management II, LLC (“VHCP Management II”) is the general partner of VHCP II LP and the manager of VHCP Co-Investment II. VHCP Management III, LLC (“VHCP Management III”) and collectively with VHCP II LP, VHCP Co-Investment II, VHCP III LP, VHCP Co-Investment III and VHCP

Management II, the “Venrock Entities”) is the general partner of VHCP III LP and the manager of VHCP Co-Investment III. Nimish Shah and Bong Koh are the voting members of VHCP Management II and VHCP Management III. The address of each of the Venrock Entities and Messrs. Shah and Koh is 7 Bryant Park, 23rd Floor, New York, NY 10018.

- (6) Consists of 195,675 shares of common stock underlying options that are exercisable as of June 30, 2020 or will become exercisable within 60 days after such date.
- (7) Consists of 46,584 shares of common stock underlying options that are exercisable as of June 30, 2020 or will become exercisable within 60 days after such date.
- (8) Consists of 26,936 shares of common stock underlying options that are exercisable as of June 30, 2020 or will become exercisable within 60 days after such date.
- (9) Consists of (a) 77,728 shares of common stock owned by Genworks 2 Consulting Inc., over which Dr. Hayden’s wife has sole voting and investment power, and (b) 64,128 shares of common stock underlying options that are exercisable as of June 30, 2020 or will become exercisable within 60 days after such date. The address of Genworks 2 Consulting Inc. is 4484 West 7th Avenue, Vancouver, BC, Canada V6R1W9.

DESCRIPTION OF CAPITAL STOCK

General

The following is a summary of the material terms of our capital stock, as well as other material terms of our Amended Certificate and Amended Bylaws and certain provisions of Delaware law. This summary does not purport to be complete and is qualified in its entirety by the provisions of our Amended Certificate and Amended Bylaws, copies of which are filed with the SEC as exhibits to the registration statement, of which this prospectus forms a part.

Our authorized capital stock consists 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.

As of June 30, 2020, 13,805,204 shares of our common stock were outstanding and held by approximately 11 stockholders of record.

Common Stock

Our Amended Certificate authorizes the issuance of up to 100,000,000 shares of our common stock. All outstanding shares of our common stock are validly issued, fully paid and nonassessable, and the shares of our common stock to be issued in connection with this offering will be validly issued, fully paid and nonassessable.

The holders of our common stock are entitled to one vote per share on all matters submitted to a vote of stockholders, and our Amended Certificate does not provide for cumulative voting in the election of directors. The holders of our common stock will receive ratably any dividends declared by our board of directors out of funds legally available therefor. In the event of our liquidation, dissolution or winding-up, the holders of our common stock are entitled to share ratably in all assets remaining after payment of or provision for any liabilities.

Preferred Stock

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. As of June 30, 2020, there were no shares of preferred stock issued and outstanding, and we have no current plans to issue any shares of preferred stock.

Registration Rights

The holders of 7,077,366 shares of our common stock are entitled to rights with respect to the registration of these securities under the Securities Act. These rights are provided under the terms of the Investor Rights Agreement (the "IRA"). The IRA includes demand registration rights, short-form registration rights and piggyback registration rights. All fees, costs and expenses of underwritten registrations under this agreement will be borne by us and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

Demand Registration Rights

The holders of 7,077,366 shares of our common stock are entitled to demand registration rights. Under the terms of the IRA, we will be required, upon the written request of at least 50% of the holders of the registrable securities, including either OrbiMed Israel Partners II, L.P. or OrbiMed Private Investments VI, LP,

provided that the anticipated aggregate offering price is at least \$10 million, to file a registration statement on Form S-1 and use commercially reasonable efforts to effect the registration of these shares for public resale. The right to have such shares registered on Form S-1 is further subject to other specified conditions and limitations.

Piggyback Registration Rights

Pursuant to the IRA, if we register any of our common stock either for our own account or for the account of other security holders, the holders of Registrable Shares party to the IRA are entitled to include their shares in the registration, subject to certain marketing and other limitations. We may terminate or withdraw any registration initiated before the effective date of such registration in our sole discretion.

Form S-3 Registration Rights

Pursuant to the IRA, if we are eligible to file a registration statement on Form S-3, upon the written request of at least 10% of the holders of registrable securities to sell registrable securities at an aggregate price of at least \$5 million, we will be required to use commercially reasonable efforts to effect a registration of such shares. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Anti-Takeover Effects of Our Amended Certificate, Amended Bylaws and Delaware Law

Our Amended Certificate and our Amended Bylaws include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts.

- ***Issuance of undesignated preferred stock:*** Under our Amended Certificate, our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock enables our board of directors to make it more difficult to attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.
- ***Classified board:*** Our Amended Certificate establishes a classified board of directors consisting of three classes of directors, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. This provision may have the effect of delaying a change in control of our board of directors.
- ***Election and removal of directors and board vacancies:*** Our Amended Bylaws provide that directors will be elected by a plurality vote. Our Amended Certificate and Amended Bylaws also provide that our board of directors has the right to increase or decrease the size of the board and to fill vacancies on the board. Directors may be removed only for cause by the affirmative vote of the holders of at least $66\frac{2}{3}\%$ of the votes that all our stockholders would be entitled to cast in an annual election of directors. Only our board of directors is authorized to fill vacant directorships. In addition the number of directors constituting our board of directors may be set only by resolution adopted by a majority vote of the directors then in office. These provisions prevent stockholders from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.
- ***Requirements for advance notification of stockholder nominations and proposals:*** Our Amended Bylaws establish advance notice procedures with respect to stockholder proposals and the

nomination of candidates for election as directors that specify certain requirements as to the timing, form and content of a stockholder's notice. Business that may be conducted at an annual meeting of stockholders will be limited to those matters properly brought before the meeting. These provisions may make it more difficult for our stockholders to bring matters before our annual meeting of stockholders or to nominate directors at annual meetings of stockholders.

- **No written consent of stockholders:** Our Amended Certificate provides that all stockholder actions be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our Amended Bylaws or removal of directors by our stockholders without holding a meeting of stockholders.
- **No stockholder ability to call special meetings:** Our Amended Certificate and Amended Bylaws provide that only a majority of the members of our board of directors then in office may be able to call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders.
- **Amendments to certificate of incorporation and bylaws:** Any amendment to our Amended Certificate will be required to be approved by a majority of our board of directors as well as, if required by law or the Amended Certificate, a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of provisions to board classification, stockholder action, certificate amendments, and liability of directors must be approved by not less than 66 $\frac{2}{3}$ % of the outstanding shares entitled to vote on the amendment, voting together as a single class. Any amendment to our Amended Bylaws must be approved by either a majority of our board of directors or not less than 66 $\frac{2}{3}$ % of the outstanding shares entitled to vote on the amendment, voting together as a single class.

These provisions are designed to enhance the likelihood of continued stability in the composition of our board of directors and its policies, to discourage certain types of transactions that may involve an actual or threatened acquisition of us and to reduce our vulnerability to an unsolicited acquisition proposal. We also designed these provisions to discourage certain tactics that may be used in proxy fights. However, these provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they may also reduce fluctuations in the market price of our shares that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner.

Choice of Forum

Our Amended Certificate requires that the Court of Chancery of the State of Delaware be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a breach of fiduciary duty owed by any director, officer or other employee to us or our stockholders; (3) any action asserting a claim against us or any director or officer or other employee arising pursuant to the Delaware General Corporation Law, our Amended Certificate or Amended Bylaws; or (4) any action asserting a claim against us or any director or officer or other employee that is governed by the internal affairs doctrine. This provision would not apply to claims

brought to enforce a duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Our Amended Certificate provides further that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors or officers.

Transfer Agent and Registrar

American Stock Transfer and Trust Company, LLC serves as the transfer agent and registrar for our common stock. The transfer agent and registrar's address is 6201 15th Avenue, Brooklyn, New York 11219.

Listing

Our common stock is listed on The Nasdaq Global Market under the symbol "ETNB."

SHARES ELIGIBLE FOR FUTURE SALE

Future sales of our common stock, including shares issued upon the vesting of restricted stock units or the exercise of options or warrants, in the public market after this offering, or the perception that those sales may occur, could cause the prevailing market price for our common stock to fall or impair our ability to raise equity capital in the future. As described below, only a limited number of shares of our common stock will be available for sale in the public market for a period of several months after the completion of this offering due to the contractual and legal restrictions on resale described below. Future sales of our common stock in the public market either before (to the extent permitted) or after restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price of our common stock at such time and our ability to raise equity capital at a time and price we deem appropriate.

Sale of Restricted Shares

Immediately following the completion of this offering, we will have an aggregate of 16,005,204 shares of common stock outstanding. Of the outstanding shares of our common stock, the 2,200,000 shares sold in this offering (or 2,530,000 shares if the underwriters exercise in full their option to purchase 330,000 additional shares) and the 6,100,390 shares sold in our initial public offering will be freely tradable without restriction or further registration under the Securities Act, except that any shares held by our affiliates, as that term is defined in Rule 144 of the Securities Act, may generally be sold only in compliance with the limitations described below. All remaining shares of our common stock held by existing stockholders immediately prior to the closing of this offering will be “restricted securities” as such term is defined in Rule 144. These restricted securities were issued and sold by us, or will be issued and sold by us, in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701, which rules are summarized below.

Lock-Up Agreements

We and all of our directors and officers, as well as the other holders of substantially all shares of our common stock outstanding immediately prior to the completion of this offering, have agreed with the underwriters that, for a period of 90 days following the date of this prospectus, subject to certain exceptions, we and they will not, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of any of shares of our common stock, or any options or warrants to purchase any shares of our common stock, or any securities convertible into, or exchangeable for or that represent the right to receive shares of our common stock. BofA Securities, Inc., SVB Leerink LLC and RBC Capital Markets, LLC may, in their discretion, release all or any portion of the shares from these restrictions.

Rule 144

In general, under Rule 144, as currently in effect, a person (or persons whose shares are required to be aggregated) who is not deemed to have been one of our “affiliates” for purposes of Rule 144 at any time during the three months preceding a sale, and who has beneficially owned restricted securities within the meaning of Rule 144 for at least 6 months, including the holding period of any prior owner other than one of our “affiliates,” is entitled to sell those shares in the public market (subject to the lock-up agreement referred to above, if applicable) without complying with the manner of sale, volume limitations or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than affiliates, then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144 (subject to the lock-up agreement referred to above, if applicable). In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our affiliates, as defined in Rule 144, who have beneficially owned the shares proposed to be sold for at least 6 months are entitled to sell in the public market, upon expiration of any

applicable lock-up agreements and within any three-month period, a number of those shares of our common stock that does not exceed the greater of:

- one percent of the number of shares of our common stock then outstanding, which will equal approximately 160,052 shares of our common stock immediately after this offering (calculated on the basis of the assumptions described above and assuming no exercise of the underwriter’s option to purchase additional shares of our common stock); or
- the average weekly trading volume of our common stock on The Nasdaq Global Market during the 4 calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales under Rule 144 by our “affiliates” or persons selling shares on behalf of our “affiliates” are also subject to certain manner of sale provisions, notice requirements and to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Upon expiration of the 90-day lock-up period described above, all shares of our common stock will be eligible for sale under Rule 144 (including shares issued pursuant to Rule 701 described below). We cannot estimate the timing or the number of shares that our existing stockholders and other equity holders may elect to sell under Rule 144 or pursuant to Form S-8 registration statements. See “Description of Capital Stock—Registration Rights.”

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common stock from us in connection with a written compensatory stock or option plan or other written agreement in compliance with Rule 701 under the Securities Act (to the extent such common stock is not subject to a lock-up agreement) is entitled to rely on Rule 701 to resell such shares beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act in reliance on Rule 144, but without compliance with the holding period requirements contained in Rule 144. Accordingly, subject to any applicable lock-up agreements, persons who are not our affiliates, as defined in Rule 144, may resell those shares without complying with the minimum holding period or public information requirements of Rule 144, and persons who are our affiliates may resell those shares without compliance with Rule 144’s minimum holding period requirements (subject to the terms of the lock-up agreements referred to above, if applicable). In addition, we have registered on a Form S-8 registration statement all shares of our common stock that we may issue under our equity compensation plans. As a result, these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

Upon expiration of the 90-day lock-up period described above, all shares of our common stock will be eligible for sale under Rule 144 (including shares issued pursuant to Rule 701). We cannot estimate the timing or the number of shares that our existing stockholders and other equity holders may elect to sell under Rule 144 or pursuant to registration statements. For a description of certain registration rights granted, see “Description of Capital Stock—Registration Rights.”

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering. The discussion does not purport to be a complete analysis of all potential tax consequences. The consequences of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws, are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the “Code”), Treasury Regulations promulgated under the Code, judicial decisions and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the “IRS”), in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that purchase our common stock pursuant to this offering and hold our common stock as a “capital asset” within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder’s particular circumstances, including without limitation the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons subject to the alternative minimum tax;
- persons holding our common stock as part of a hedge, straddle or other risk-reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, investment funds, insurance companies and other financial institutions;
- brokers, dealers or traders in securities;
- “controlled foreign corporations,” “passive foreign investment companies” and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons required to accelerate the recognition of any item of gross income with respect to our common stock as a result of such income being recognized on an applicable financial statement;
- persons that own, or have owned, actually or constructively, more than 5% of our common stock;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; and
- tax-qualified retirement plans.

This discussion is for informational purposes only and is not tax advice. Investors should consult their tax advisors with respect to the application of the U.S. federal income tax laws to their particular situations as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal estate or gift tax laws or under the laws of any state, local or non-U.S. taxing jurisdiction or under any applicable income tax treaty.

Definition of a Non-U.S. Holder

For purposes of this discussion, a “Non-U.S. Holder” is any beneficial owner of our common stock that is not a “U.S. person.” A “U.S. person” is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that: (i) is subject to the primary supervision of a U.S. court and the control of one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code); or (ii) has a valid election in effect to be treated as a U.S. person for U.S. federal income tax purposes.

Distributions

If we make distributions of cash or other property on our common stock, those distributions will generally constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If the amount of such distributions exceed our current and accumulated earnings and profits, such excess will generally constitute a tax-free return of capital and will first be applied against and reduce a Non-U.S. Holder’s adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under “Sale or Other Taxable Disposition.”

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes the applicable withholding agent with documentation required to claim benefits under such tax treaty (generally, a valid IRS Form W-8BEN or W-8BEN-E or a suitable successor or substitute form)). This certification must be provided before the payment of dividends and must be updated periodically. A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding U.S. federal withholding tax on distributions, including their eligibility for benefits under any applicable income tax treaties and the availability of a refund on any excess U.S. federal tax withheld.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States (or, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will generally be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI (or a suitable successor or substitute form) certifying that the dividends are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States.

However, any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates applicable to U.S. persons. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

The foregoing discussion is subject to the discussion below under “Additional Withholding Tax on Payments Made to Foreign Accounts” and “Information Reporting and Backup Withholding.”

Sale or Other Taxable Disposition

Subject to the discussion below regarding backup withholding and the Foreign Account Tax Compliance Act (“FATCA”), a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States (or, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest (“USRPI”) by reason of our status as a U.S. real property holding corporation (“USRPHC”) for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates applicable to U.S. persons. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty), which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and we do not anticipate becoming, a USRPHC. However, because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, we cannot assure you that we will not become a USRPHC in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our common stock is “regularly traded” on an “established securities market” (as such terms are defined by applicable Treasury Regulations), and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the 5-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder’s holding period. If we are determined to be a USRPHC and the foregoing exception does not apply, the Non-U.S. Holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to U.S. persons and, in addition, a purchaser of our common stock may be required to withhold tax with respect to that obligation. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock generally will not be subject to backup withholding provided the applicable withholding agent does not have actual knowledge or reason to know the Non-U.S. Holder is a U.S. person and the Non-U.S. Holder certifies its non-U.S. status by furnishing a valid IRS Form W-8BEN, W-8BEN-E, W-8ECI, W-8EXP, or other applicable IRS form, or otherwise establishes an exemption. Information returns are required to be filed with the IRS in connection with any dividends on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Information reporting and, depending on the circumstances, backup withholding generally will apply to the proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers, unless the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that the Non-U.S. Holder is a U.S. person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker that does not have certain enumerated relationships with the United States generally will not be subject to backup withholding or information reporting.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, and subject to the discussion of certain proposed U.S. Treasury regulations below, the gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless: (i) the foreign financial institution undertakes certain diligence, reporting and withholding obligations; (ii) the non-financial foreign entity either certifies it does not have any "substantial U.S. owners" (as defined in the Code) or furnishes identifying information regarding each substantial U.S. owner; or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence, reporting and withholding requirements in (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified U.S. persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to noncompliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

The U.S. Treasury recently released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a sale or other disposition of our common stock. In its preamble to such proposed regulations, the U.S. Treasury stated that taxpayers may generally rely on the proposed regulations until final regulations are issued. There can be no assurance that final regulations would provide an exemption from the FATCA withholding tax for gross proceeds. The FATCA withholding tax generally applies to all withholdable payments without regard to whether the beneficial owner of the payment would otherwise be entitled to an exemption from imposition of withholding tax pursuant to an applicable tax treaty with the United States or U.S. domestic law.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

BofA Securities, Inc., SVB Leerink LLC and RBC Capital Markets, LLC are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

| <u>Underwriter</u> | <u>Number of Shares</u> |
|--------------------------|-------------------------|
| BofA Securities, Inc. | |
| SVB Leerink LLC | |
| RBC Capital Markets, LLC | |
| Total | <u>2,200,000</u> |

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of \$ _____ per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

| | <u>Per Share</u> | <u>Without Option</u> | <u>With Option</u> |
|----------------------------------|------------------|-----------------------|--------------------|
| Public offering price | \$ | \$ | \$ |
| Underwriting discount | \$ | \$ | \$ |
| Proceeds, before expenses, to us | \$ | \$ | \$ |

The expenses of the offering, not including the underwriting discount, are estimated at \$0.4 million and are payable by us. We have also agreed to reimburse the underwriters for certain of their expenses incurred in connection with, among others, the review and clearance by the Financial Industry Regulatory Authority, Inc. in an amount of up to \$40,000.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to 330,000 additional shares at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

We, our executive officers and directors and their respective affiliates have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for 90 days after the date of this prospectus without first obtaining the written consent of BofA Securities, Inc., SVB Leerink LLC and RBC Capital Markets, LLC. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock,
- sell any option or contract to purchase any common stock,
- purchase any option or contract to sell any common stock,
- grant any option, right or warrant for the sale of any common stock,
- lend or otherwise dispose of or transfer any common stock,
- request or demand that we file or make a confidential submission of a registration statement related to the common stock, or
- enter into any swap or other agreement that transfers or is designed to, intended to, or which could reasonably be expected to lead to or result in the transfer, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

The Nasdaq Global Market Listing

Our common stock is listed on The Nasdaq Global Market under the symbol "ETNB."

Price Stabilization and Short Positions

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by

short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on The Nasdaq Global Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Passive Market Making

In connection with this offering, underwriters and selling group members may engage in passive market making transactions in the common stock on The Nasdaq Global Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of those transactions. The underwriters and dealers are not required to engage in passive market making and may end passive market making activities at any time.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions. In addition, the underwriters in this offering also served as underwriters in our initial public offering in November 2019. Silicon Valley Bank, an affiliate of SVB Leerink LLC, is the collateral agent and a lender under our Loan and Security Agreement entered into on April 7, 2020 and was issued a warrant to purchase 25,000 shares of our common stock and has a right to receive additional warrants to purchase 8,333 shares of our common stock in connection with a Term B loan facility, if funded. These warrants have been deemed to be underwriting compensation in connection with this offering pursuant to FINRA Rule 5110(c) and are subject to a lock-up

under FINRA Rule 5110(g)(1) pursuant to which the warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the effectiveness or the commencement of sales of this offering, except as provided in FINRA Rule 5110(g)(2).

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each a “Relevant State”), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of representatives for any such offer; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any representative to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person in a Relevant State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with us and the representatives that it is a qualified investor within the meaning of the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

We, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares in any Member State means the communication in any form and by any means of sufficient information on the terms of

the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

References to the Prospectus Regulation includes, in relation to the United Kingdom, the Prospectus Regulation as it forms part of U.K. domestic law by virtue of the European Union (Withdrawal) Act 2018.

The above selling restriction is in addition to any other selling restrictions set out below.

In connection with the offering, the underwriters are not acting for anyone other than us and will not be responsible to anyone other than us for providing the protections afforded to their clients nor for providing advice in relation to the offering.

Notice to Prospective Investors in the United Kingdom

This document is for distribution only to persons who (i) have professional experience in matters relating to investments falling within and who qualify as investment professionals within the meaning of Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the “Order”), (ii) are persons falling within Article 49(2)(a) to (d) (“high net worth companies, unincorporated associations etc.”) of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended (“FSMA”)) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as “relevant persons”). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons, and will be engaged in only with relevant persons.

Notice to Prospective Investors in Switzerland

This document is not intended to constitute an offer or solicitation to purchase or invest in the shares. The shares may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act (“FinSA”) and will not be listed on the SIX Swiss Exchange (“SIX”) or on any other stock exchange or regulated trading venue (exchange or multilateral trading facility) in Switzerland. Neither this document nor any other offering or marketing material relating to the shares of our common stock constitutes a prospectus within the meaning of, and has been prepared without regard to, the FinSA, the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading venue (exchange or multilateral trading facility in Switzerland). Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, our company or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (“CISA”). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (“DFSA”). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other

person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the “Corporations Act”), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the “Exempt Investors”) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in

Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, “Japanese Person” shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, the shares were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, has not been circulated or distributed, nor will it be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the “SFA”)) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- (a) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (b) where no consideration is or will be given for the transfer;
- (c) where the transfer is by operation of law; or
- (d) as specified in Section 276(7) of the SFA.

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

LEGAL MATTERS

The validity of the shares of our common stock offered by this prospectus will be passed upon for us by Gibson, Dunn & Crutcher LLP. Certain legal matters in connection with this offering will be passed upon for the underwriters by Cooley LLP.

EXPERTS

The 2019 consolidated financial statements, incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference (which report expresses an unqualified opinion on the 2019 consolidated financial statements) . Such consolidated financial statements have been so incorporated in reliance upon the reports of such firm given their authority as experts in accounting and auditing.

The consolidated financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2019, for the period from January 18, 2018 (inception) to December 31, 2018 have been audited by Brightman Almagor Zohar & Co., a Firm in the Deloitte Global Network, an independent registered public accounting firm, as stated in their report which is incorporated herein by reference (which report expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph referring to going concern). Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits filed therewith. For further information about us and the common stock offered hereby, reference is made to the registration statement and the exhibits filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and in each instance we refer you to the copy of such contract or other document filed as an exhibit to the registration statement. A copy of the registration statement and the exhibits filed therewith is available through the SEC's website, <http://www.sec.gov>.

We are subject to the information and reporting requirements of the Exchange Act, and, in accordance with this law, file periodic reports and other information with the SEC. The SEC's website referenced above contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. You may also access these materials free of charge on our website at www.89bio.com as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

INCORPORATION BY REFERENCE

The SEC allows us to “incorporate by reference” information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus.

We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2019, filed with the SEC on March 18, 2020;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2020, filed with the SEC on May 13, 2020;
- our Current Reports on Form 8-K filed with the SEC on [March 26, 2020](#), [April 13, 2020](#), [April 23, 2020](#), [May 4, 2020](#), [June 4, 2020](#) and [June 26, 2020](#);
- Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on May 8, 2020; and
- the description of our common stock contained in our registration statement on [Form 8-A](#) filed with the SEC on November 1, 2019, including any amendments or reports filed for the purposes of updating this description.

In addition, all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement and all documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of the offering (excluding any information furnished rather than filed) shall be deemed to be incorporated by reference into this prospectus.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have “furnished” to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to 89bio, Inc., 142 Sansome Street, 2nd Floor, San Francisco, California 94104, telephone: (415) 500-4614. You also may access these filings on our website at [www.89bio.com](#). We do not incorporate the information on our website into this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus).

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

2,200,000 Shares



Common Stock

PROSPECTUS

BofA Securities
SVB Leerink
RBC Capital Markets

, 2020

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the sale of common stock being registered. All of the amounts shown are estimated except the Securities and Exchange Commission (the "SEC") registration fee and the Financial Industry Regulatory Authority, Inc. ("FINRA") filing fee.

| | Amount To Be Paid |
|---|------------------------------|
| SEC registration fee | \$ 9,064 |
| FINRA filing fee | 10,324 |
| Printing and engraving expenses | 65,000 |
| Legal fees and expenses | 100,000 |
| Accounting fees and expenses | 240,000 |
| Blue Sky, qualification fees and expenses | 10,000 |
| Transfer agent and registrar fees | 5,000 |
| Miscellaneous fees and expenses | 10,612 |
| Total | <u>\$450,000</u> |

Item 14. Indemnification of Directors and Officers.

The company is a Delaware corporation. Section 145(a) of the Delaware General Corporation Law (the "DGCL") provides that a Delaware corporation may indemnify 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, other than an action by or in the right of the corporation, by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the DGCL provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine, upon application, that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper.

Further subsections of DGCL Section 145 provide that:

- (1) to the extent a present or former director or officer of a corporation has been successful on the merits or otherwise in the defense of any action, suit or proceeding referred to in subsections (i) and (ii) of Section 145 or in the defense of any claim, issue or matter therein, such person shall be indemnified against expenses, including attorneys' fees, actually and reasonably incurred by such person in connection therewith;
- (2) the indemnification and advancement of expenses provided for pursuant to Section 145 shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of shareholders or disinterested directors or otherwise; and
- (3) the corporation shall have the power to purchase and maintain insurance of behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under Section 145.

As used in this Item 14, the term "proceeding" means any threatened, pending or completed action, suit or proceeding, whether or not by or in the right of the company, and whether civil, criminal, administrative, investigative or otherwise.

Section 145 of the DGCL makes provision for the indemnification of officers and directors in terms sufficiently broad to indemnify officers and directors of the company under certain circumstances from liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933. The company's Second Amended and Restated Certificate of Incorporation and Second Amended and Restated Bylaws provide, in effect, that, to the fullest extent and under the circumstances permitted by Section 145 of the DGCL, the company will indemnify any and all of its officers and directors. The company has entered into indemnification agreements with its officers and directors. The company may, in its discretion, similarly indemnify its employees and agents. The company's Second Amended and Restated Certificate of Incorporation also relieves the company's directors from monetary damages to the company or its shareholders for breach of such director's fiduciary duty as a director to the fullest extent permitted by the DGCL. Under Section 102(b)(7) of the DGCL, a corporation may relieve its directors from personal liability to such corporation or its shareholders for monetary damages for any breach of their fiduciary duty as directors except (i) for a breach of the duty of loyalty, (ii) for failure to act in good faith, (iii) for intentional misconduct or knowing violation of law, (iv) for willful or negligent violations of certain provisions in the DGCL imposing certain requirements with respect to stock repurchases, redemptions and dividends or (v) for any transactions from which the director derived an improper personal benefit.

The company has purchased insurance policies that, within the limits and subject to the terms and conditions thereof, cover certain expenses and liabilities that may be incurred by directors and officers in connection with proceedings that may be brought against them as a result of an act or omission committed or suffered while acting as a director or officer of the company.

The form of Underwriting Agreement, to be entered into in connection with this offering and to be attached as Exhibit 1.1 hereto, provides for the indemnification by the underwriters of us and our officers and directors for certain liabilities, including liabilities arising under the Securities Act, and affords certain rights of contribution with respect thereto.

Item 15. Recent Sales of Unregistered Securities.

Since our inception in January 2018, we have made the following sales of unregistered securities:

Issuances of Capital Stock

In January 2018, we issued 361 shares of our common stock for gross aggregate consideration of \$6 to two investors.

In March 2018, we issued to an investor a convertible promissory note (the "Convertible Note") in the aggregate principal amount of \$100,000.

In April 2018, we issued 610,865 shares of our common stock for gross aggregate consideration of \$10,996 to two investors.

Also in April 2018, we issued 15,000,000 shares of our Series A convertible preferred stock for gross aggregate consideration of \$14,900,000 to nine investors, including the conversion of the Convertible Note.

In December 2018, we issued 9,000,000 shares of our Series A convertible preferred stock for gross aggregate consideration of \$9,000,000 to nine investors.

In June and July 2019, we issued an aggregate of 20,000,000 shares of our Series A convertible preferred stock for gross aggregate consideration of \$20,000,000 to ten investors.

In September 2019, pursuant to an internal reorganization, we issued 611,226 shares of our common stock and 44,000,000 shares of our convertible preferred stock to our existing stockholders in exchange for their shares of 89Bio, Ltd.

In April 2020, we issued to a lender a warrant to purchase 25,000 shares of our common stock at an exercise price of \$22.06 per shares in connection with our entry into a loan and security agreement.

Grants of Stock Options

Since January 2018, we have granted stock options to purchase an aggregate of 1,847,733 shares of our common stock at a weighted-average exercise price of \$10.88 to employees, directors and non-employee service providers and have issued an aggregate of 11,795 shares of our common stock to employees, directors and non-employee service providers upon the exercise of options at exercise prices ranging from \$1.93 to \$3.11.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. The offers, sales and issuances of the securities listed in this Item 15 were deemed to be exempt from registration under the Securities Act under either (1) Rule 701 promulgated under the Securities Act as offers and sales of securities pursuant to certain compensatory benefit plans and contracts relating to compensation in compliance with Rule 701 or (2) Section 4(a)(2) of the Securities Act, including Regulation D promulgated thereunder, as offers and sales made to a limited number of accredited investors and qualified institutional buyers.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

| <u>Exhibit Number</u> | <u>Description of Exhibit</u> |
|-----------------------|---|
| 1.1* | Form of Underwriting Agreement. |
| 2.1 | Contribution and Exchange Agreement, dated as of September 17, 2019, by and among 89Bio, Ltd., the registrant and its shareholders (filed with the SEC as Exhibit 2.1 to the Company's Form S-1 filed on October 11, 2019). |

| <u>Exhibit Number</u> | <u>Description of Exhibit</u> |
|-----------------------|--|
| 3.1 | <u>Second Amended and Restated Certificate of Incorporation of the Company (filed with the SEC as Exhibit 3.1 to the Company's Form 8-K filed on November 15, 2019).</u> |
| 3.2 | <u>Second Amended and Restated Bylaws of the Company (filed with the SEC as Exhibit 3.2 to the Company's Form 8-K filed on November 15, 2019).</u> |
| 4.1 | <u>Specimen common stock certificate of the Company (filed with the SEC as Exhibit 4.1 to the Company's Form S-1/A filed on October 28, 2019).</u> |
| 4.2 | <u>Investors' Rights Agreement, dated as of September 17, 2019, by and among the Company and certain of its shareholders (filed with the SEC as Exhibit 4.2 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 4.3 | <u>Form of Warrant to Purchase Common Stock for Silicon Valley Bank (filed with SEC as Exhibit 4.1 to the Company's Form 8-K filed on April 13, 2020).</u> |
| 5.1* | <u>Opinion of Gibson, Dunn & Crutcher LLP.</u> |
| 10.1+ | <u>Form of Indemnification Agreement for directors and executive officers (filed with the SEC as Exhibit 10.1 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.2+ | <u>Amended and Restated 2019 Equity Incentive Plan and forms of agreements thereunder (filed with the SEC as Exhibit 10.2 to the Company's Form S-1/A filed on October 28, 2019).</u> |
| 10.3+ | <u>2019 Employee Stock Purchase Plan (filed with the SEC as Exhibit 10.3 to the Company's Form S-1/A filed on October 28, 2019).</u> |
| 10.4+ | <u>Executive Employment Offer Letter, dated June 25, 2018, by and between 89Bio Ltd. and Rohan Palekar (filed with the SEC as Exhibit 10.4 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.5+ | <u>Executive Employment Agreement, dated April 23, 2018, by and between 89Bio Ltd. and Ram Waisbourd (filed with the SEC as Exhibit 10.5 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.6+ | <u>Executive Employment Offer Letter, dated November 20, 2018, by and between 89Bio Ltd. and Hank Mansbach (filed with the SEC as Exhibit 10.6 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.7+ | <u>Executive Employment Offer Letter, dated February 28, 2019, by and between 89Bio Ltd. and Quoc Le-Nguyen (filed with the SEC as Exhibit 10.7 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.8+ | <u>Executive Employment Offer Letter, dated July 21, 2019, by and between 89Bio Ltd. and Ryan Martins (filed with the SEC as Exhibit 10.8 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.9+ | <u>Director Offer Letter, dated July 1, 2018, by and between 89Bio Ltd. and Michael Hayden (filed with the SEC as Exhibit 10.9 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.10+ | <u>Non-Employee Director Compensation Policy (filed with the SEC as Exhibit 10.10 to the Company's Form S-1/A filed on October 28, 2019).</u> |
| 10.11# | <u>Asset Transfer and License Agreement—FGF21 by and among 89Bio Ltd., ratiopharm GmbH, Teva Branded Pharmaceutical Products R&D, Inc. and Teva Pharmaceutical Industries Ltd, dated as of April 16, 2018 (filed with the SEC as Exhibit 10.11 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.12# | <u>Reagent Supply and Technology Transfer Agreement by and between 89Bio Ltd. and Teva Biotech GmbH, dated as of April 16, 2018, as amended (filed with the SEC as Exhibit 10.12 to the Company's Form S-1 filed on October 11, 2019).</u> |

| <u>Exhibit Number</u> | <u>Description of Exhibit</u> |
|-----------------------|---|
| 10.13# | <u>Sublicense Agreement by and between 89Bio Ltd. and ratiopharm GmbH, dated as of April 16, 2018 (filed with the SEC as Exhibit 10.13 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.14# | <u>Master Services Agreement by and between 89Bio Ltd. and Biotechpharma UAB, dated as of May 7, 2018, as amended (filed with the SEC as Exhibit 10.14 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 10.15 | <u>Office Lease by and between 89bio, Inc. and King Family Irrevocable Trust, dated as of December 5, 2019 (filed with the SEC as Exhibit 10.15 to the Company's Annual Report on Form 10-K filed on March 18, 2020).</u> |
| 10.16 | <u>Loan and Security Agreement, dated as of April 7, 2020, among Silicon Valley Bank, the Lenders party thereto, 89bio, Inc., 89bio Management, Inc. and 89Bio Ltd. (filed with the SEC as Exhibit 10.1 to the Company's Form 8-K filed on April 13, 2020).</u> |
| 21.1 | <u>List of subsidiaries (filed with the SEC as Exhibit 21.1 to the Company's Form S-1 filed on October 11, 2019).</u> |
| 23.1* | <u>Consent of Independent Registered Public Accounting Firm.</u> |
| 23.2* | <u>Consent of Independent Registered Public Accounting Firm.</u> |
| 23.3* | <u>Consent of Gibson, Dunn & Crutcher LLP (see Exhibit 5.1).</u> |
| 24.1* | <u>Power of Attorney.</u> |

* Filed herewith.

+ Indicates management contract or compensatory plan.

Portions of the exhibit have been omitted for confidentiality purposes.

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

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be a part of this registration statement as of the time it was declared effective.

(2) For purposes of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Francisco, State of California, on July 6, 2020.

89bio, Inc.

By: /s/ Rohan Palekar

Rohan Palekar

Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Rohan Palekar, Ram Waisbourd and Ryan Martins, and each of them, the true and lawful attorneys-in-fact and agents of the undersigned, with full power of substitution and resubstitution, for and in the name, place and stead of the undersigned, to sign in any and all capacities (including, without limitation, the capacities listed below), the registration statement, any and all amendments (including post-effective amendments) to the registration statement and any and all successor registration statements of the registrant, including any filings pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, and hereby grants to such attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and anything necessary to be done to enable the registrant to comply with the provisions of the Securities Act and all the requirements of the Securities and Exchange Commission, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitute, or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities set forth opposite their names and on the date indicated above.

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|---|--|--------------|
| <u>/s/ Rohan Palekar</u> Rohan Palekar | Chief Executive Officer (<i>principal executive officer</i>) | July 6, 2020 |
| <u>/s/ Ryan Martins</u> Ryan Martins | Chief Financial Officer (<i>principal financial and accounting officer</i>) | July 6, 2020 |
| <u>/s/ Steven M. Altschuler</u> Steven M. Altschuler, M.D. | Chairman | July 6, 2020 |
| <u>/s/ Derek DiRocco</u> Derek DiRocco, Ph.D. | Director | July 6, 2020 |
| <u>/s/ Gregory Grunberg</u> Gregory Grunberg, M.D. | Director | July 6, 2020 |
| <u>/s/ Michael Hayden</u> Michael Hayden, M.B., Ch.B., Ph.D. | Director | July 6, 2020 |
| <u>/s/ Anat Naschitz</u> Anat Naschitz | Director | July 6, 2020 |
| <u>/s/ Lota Zoth</u> Lota Zoth | Director | July 6, 2020 |

89BIO, INC.

(a Delaware corporation)

[●] Shares of Common Stock

UNDERWRITING AGREEMENT

Dated: [●], 2020

89BIO, INC.

(a Delaware corporation)

[●] Shares of Common Stock

UNDERWRITING AGREEMENT

[●], 2020

BofA Securities, Inc.
SVB Leerink LLC
RBC Capital Markets, LLC

as Representatives of the several Underwriters

c/o BofA Securities, Inc.
One Bryant Park
New York, New York 10036

c/o SVB Leerink LLC
255 California Street, 12th Floor
San Francisco, California 94111

c/o RBC Capital Markets, LLC
200 Vesey Street
New York, New York 10281

Ladies and Gentlemen:

89bio, Inc., a Delaware corporation (the “Company”), confirms its agreement with BofA Securities, Inc. (“BofAS”), SVB Leerink LLC (“SVB Leerink”), RBC Capital Markets, LLC (“RBC”) and each of the other Underwriters named in Schedule A hereto (collectively, the “Underwriters,” which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for whom BofAS, SVB Leerink and RBC are acting as representatives (in such capacity, the “Representatives”), with respect to (i) the sale by the Company and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of shares of Common Stock, par value \$0.001 per share, of the Company (the “Common Stock”) set forth in Schedule A hereto and (ii) the grant by the Company to the Underwriters, acting severally and not jointly, of the option described in Section 2(b) hereof to purchase all or any part of [●] additional shares of Common Stock. The aforesaid [●] shares of Common Stock (the “Initial Securities”) to be purchased by the Underwriters and all or any part of the [●] shares of Common Stock subject to the option described in Section 2(b) hereof (the “Option Securities”) are herein called, collectively, the “Securities.”

The Company understands that the Underwriters propose to make a public offering of the Securities as soon as the Representatives deem(s) advisable after this Agreement has been executed and delivered.

The Company has filed with the Securities and Exchange Commission (the “Commission”) a registration statement on Form S-1 (No. 333-[●]), including the related preliminary prospectus or prospectuses, covering the registration of the sale of the Securities under the Securities Act of 1933, as amended (the “1933 Act”). Promptly after execution and delivery of this Agreement, the Company will

prepare and file a prospectus in accordance with the provisions of Rule 430A (“Rule 430A”) of the rules and regulations of the Commission under the 1933 Act (the “1933 Act Regulations”) and Rule 424(b) (“Rule 424(b)”) of the 1933 Act Regulations. The information included in such prospectus that was omitted from such registration statement at the time it became effective but that is deemed to be part of such registration statement at the time it became effective pursuant to Rule 430A(b) is herein called the “Rule 430A Information.” Such registration statement, including the amendments thereto, the exhibits thereto and any schedules thereto, and the documents incorporated by reference therein pursuant to Item 12 of Form S-1 under the 1933 Act, at the time it became effective, and including the Rule 430A Information, is herein called the “Registration Statement.” Any registration statement filed pursuant to Rule 462(b) of the 1933 Act Regulations is herein called the “Rule 462(b) Registration Statement” and, after any such filing, the term “Registration Statement” shall include the Rule 462(b) Registration Statement. Each prospectus used prior to the effectiveness of the Registration Statement, and each prospectus that omitted the Rule 430A Information and was used after such effectiveness and prior to the execution and delivery of this Agreement, including the documents incorporated by reference therein pursuant to Item 12 of Form S-1 under the 1933 Act, is herein called a “preliminary prospectus.” The final prospectus, in the form first furnished to the Underwriters for use in connection with the offering of the Securities, including the documents incorporated by reference therein pursuant to Item 12 of Form S-1 under the 1933 Act, is herein called the “Prospectus.” For purposes of this Agreement, all references to the Registration Statement, any preliminary prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval system or any successor system (“EDGAR”).

As used in this Agreement:

“1934 Act” means the Securities Exchange Act of 1934, as amended.

“1934 Act Regulations” means the rules and regulations of the Commission under the 1934 Act.

“Applicable Time” means [●] [a.m.][p.m.], New York City time, on [●], 2020 or such other time as agreed by the Company and BofAS.

“General Disclosure Package” means any Issuer General Use Free Writing Prospectuses issued at or prior to the Applicable Time, the most recent preliminary prospectus (including any documents incorporated therein by reference) that is distributed to investors prior to the Applicable Time and the information included on Schedule B-1 hereto, all considered together.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the 1933 Act Regulations (“Rule 433”), including without limitation any “free writing prospectus” (as defined in Rule 405 of the 1933 Act Regulations (“Rule 405”)) relating to the Securities that is (i) required to be filed with the Commission by the Company, (ii) a “road show that is a written communication” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) exempt from filing with the Commission pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, in each case, in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a “*bona fide* electronic road show,” as defined in Rule 433 (the “Bona Fide Electronic Road Show”)), as evidenced by its being specified in Schedule B-2 hereto.

“Issuer Limited Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

“Testing-the-Waters Communication” means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the 1933 Act.

“Written Testing-the-Waters Communication” means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the 1933 Act.

All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” in the Registration Statement, any preliminary prospectus or the Prospectus (or other references of like import) shall include all such financial statements and schedules and other information which is incorporated by reference in or otherwise deemed by 1933 Act Regulations to be a part of or included in the Registration Statement, any preliminary prospectus or the Prospectus, as the case may be, prior to the execution and delivery of this Agreement; and all references in this Agreement to amendments or supplements to the Registration Statement, any preliminary prospectus or the Prospectus shall include the filing of any document under the 1934 Act, which is incorporated by reference in or otherwise deemed by 1933 Act Regulations to be a part of or included in the Registration Statement, such preliminary prospectus or the Prospectus, as the case may be, at or after the execution and delivery of this Agreement.

SECTION 1. Representations and Warranties.

(a) *Representations and Warranties by the Company.* The Company represents and warrants to each Underwriter as of the date hereof, the Applicable Time, the Closing Time (as defined below) and any Date of Delivery (as defined below), and agrees with each Underwriter, as follows:

(i) Registration Statement and Prospectuses. Each of the Registration Statement and any amendment thereto has become effective under the 1933 Act. No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued by the Commission and no proceedings for any of those purposes have been instituted or are pending or, to the Company’s knowledge, contemplated by the Commission. The Company has complied with each request (if any) from the Commission for additional information.

Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, the Applicable Time, the Closing Time and any Date of Delivery complied and will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Each preliminary prospectus, the Prospectus and any amendment or supplement thereto, at the time each was filed with the Commission, and, in each case, at the Applicable Time, the Closing Time and any Date of Delivery complied and will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Each preliminary prospectus delivered to the Underwriters for use in connection with this offering and the Prospectus was or will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

The documents incorporated or deemed to be incorporated by reference in the Registration Statement, any preliminary prospectus and the Prospectus at the time they were or hereafter are filed with the Commission, complied and will comply in all material respects with the requirements of the 1934 Act and the rules and regulations of the Commission under the 1934 Act Regulations.

(ii) Accurate Disclosure. Neither the Registration Statement nor any amendment thereto, at its effective time, on the date hereof, at the Closing Time or at any Date of Delivery, contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. At the Applicable Time and any Date of Delivery, none of (A) the General Disclosure Package, (B) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package and (C) any individual Written Testing-the-Waters Communication, when considered together with the General Disclosure Package, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. Neither the Prospectus nor any amendment or supplement thereto, as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b), at the Closing Time or at any Date of Delivery, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The documents incorporated or deemed to be incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, at the time the Registration Statement became effective or when such documents incorporated by reference were filed with the Commission, as the case may be, when read together with the other information in the Registration Statement, the General Disclosure Package or the Prospectus, as the case may be, did not and will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

The representations and warranties in this subsection shall not apply to statements in or omissions from the Registration Statement (or any amendment thereto), the General Disclosure Package or the Prospectus (or any amendment or supplement thereto) made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through BofAS expressly for use therein. For purposes of this Agreement, the only information so furnished shall be the information in the first paragraph under the heading “Underwriting—Commissions and Discounts,” the information in the second, third and fourth paragraphs under the heading “Underwriting—Price Stabilization, Short Positions and Penalty Bids” and the information under the heading “Underwriting—Electronic Offer, Sale and Distribution of Shares” in each case contained in the Prospectus (collectively, the “Underwriter Information”).

(iii) Incorporation of Documents by Reference. The Company meets the requirements to incorporate documents by reference in the Registration Statement pursuant to General Instruction VII to Form S-1 under the 1933 Act and the 1933 Act Regulations.

(iv) Issuer Free Writing Prospectuses. No Issuer Free Writing Prospectus conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein, and any preliminary or other prospectus deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus made in reliance upon and in conformity with the Underwriter Information. The Company has made available a Bona Fide Electronic Road Show in compliance with Rule 433(d)(8)(ii) such that no filing of any “road show” (as defined in Rule 433(h)) is required in connection with the offering of the Securities.

(v) Testing-the-Waters Materials. The Company (A) has not engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the 1933 Act or institutions that are accredited investors within the meaning of Rule 501 under the 1933 Act and (B) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications specifically authorized by the Company. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule B-3 hereto.

(vi) Company Not Ineligible Issuer. At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) of the 1933 Act Regulations) of the Securities and at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405, without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an ineligible issuer.

(vii) Emerging Growth Company Status. From the time of the initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any Person authorized to act on its behalf in any Testing-the-Waters Communication) through the date hereof, the Company has been and is an “emerging growth company,” as defined in Section 2(a) of the 1933 Act (an “Emerging Growth Company”).

(viii) Independent Accountants. The accountants who certified the financial statements included in the Registration Statement, the General Disclosure Package and the Prospectus are independent public accountants with respect to the Company as required by the 1933 Act, the 1933 Act Regulations and the Public Company Accounting Oversight Board.

(ix) Financial Statements. The financial statements included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, together with the related notes, present fairly in all material respects the financial position of the Company and its consolidated subsidiaries at the dates indicated and the statements of operations and comprehensive loss, convertible preferred shares and shareholders’ deficit and cash flows of the Company and its consolidated subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”) applied on a consistent basis throughout the periods involved except, in the case of unaudited interim financial statements, subject to normal year-end audit adjustments and the exclusion of certain footnotes as permitted by the applicable rules of the Commission. The selected financial data and the summary financial information included in the Registration Statement, the General Disclosure Package and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the General Disclosure Package or the Prospectus under the 1933 Act or the 1933 Act Regulations. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission’s rules and guidelines applicable thereto.

(x) No Material Adverse Change in Business. Except as otherwise stated therein, since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, (A) there has been no material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business (a “Material Adverse Effect”), (B) there have been no transactions entered into by the Company or any of its subsidiaries, other than those in the ordinary course of business, which are material with respect to the Company and its subsidiaries considered as one enterprise, and (C) there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock.

(xi) Good Standing of the Company. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware and has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and to enter into and perform its obligations under this Agreement; and the Company is duly qualified as a foreign corporation to transact business and is in good standing in each other jurisdiction (or such equivalent concept to the extent it exists under the laws of such jurisdiction) in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure so to qualify or to be in good standing would not result in a Material Adverse Effect.

(xii) Good Standing of Subsidiaries. Each “significant subsidiary” of the Company (as such term is defined in Rule 1-02 of Regulation S-X) (each, a “Subsidiary” and, collectively, the “Subsidiaries”) has been duly organized and is validly existing in good standing under the laws of the jurisdiction of its incorporation or organization (or such equivalent concept to the extent it exists under the laws of such jurisdiction), has corporate or similar power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which such qualification is required (or such equivalent concept to the extent it exists under the laws of such jurisdiction), whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or to be in good standing would not result in a Material Adverse Effect. Except as otherwise disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, all of the issued and outstanding capital stock of each Subsidiary has been duly authorized and validly issued, is fully paid and non-assessable (or such equivalent concept to the extent it exists under the laws of such jurisdiction) and is owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance, claim or equity. None of the outstanding shares of capital stock of any Subsidiary were issued in violation of the preemptive or similar rights of any securityholder of such Subsidiary. The only subsidiaries of the Company are (A) the subsidiaries listed on Exhibit 21 to the Registration Statement.

(xiii) Capitalization. The authorized, issued and outstanding shares of capital stock of the Company are as set forth in the Registration Statement, the General Disclosure Package and the Prospectus in the column entitled “Actual” under the caption “Capitalization” (except for subsequent issuances, if any, pursuant to this Agreement, pursuant to reservations, agreements or employee benefit or equity incentive plans referred to in the Registration Statement, the General Disclosure Package and the Prospectus, pursuant to the exercise of convertible securities or options referred to in the Registration Statement, the General Disclosure Package and the Prospectus). The outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable. None of the outstanding shares of capital stock of the Company were issued in violation of the preemptive or other similar rights of any securityholder of the Company.

(xiv) Authorization of Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(xv) Authorization and Description of Securities. The Securities to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued and fully paid and non-assessable; and the issuance of the Securities is not subject to the preemptive or other similar rights of any securityholder of the Company except as have been duly and validly waived in writing as of the date of this Agreement. The Common Stock conforms in all material respects to all statements relating thereto contained in the Registration Statement, the General Disclosure Package and the Prospectus and such description conforms in all material respects to the rights set forth in the instruments defining the same. No holder of Securities will be subject to personal liability by reason of being such a holder.

(xvi) Registration Rights. There are no persons with registration rights or other similar rights to have any securities registered for sale pursuant to the Registration Statement or otherwise registered for sale or sold by the Company under the 1933 Act pursuant to this Agreement, other than those rights that have been disclosed in the Registration Statement, the General Disclosure Package and the Prospectus and have been waived.

(xvii) Absence of Violations, Defaults and Conflicts. Neither the Company nor any of its subsidiaries is (A) in violation of its charter, by-laws or similar organizational document, (B) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound or to which any of the properties or assets of the Company or any subsidiary is subject (collectively, "Agreements and Instruments"), except for such defaults that would not reasonably be expected to, singly or in the aggregate, result in a Material Adverse Effect, or (C) in violation of any law, statute, rule, regulation, judgment, order, writ or decree of any arbitrator, court, governmental body, regulatory body, administrative agency or other authority, body or agency having jurisdiction over the Company or any of its subsidiaries or any of their respective properties, assets or operations (each, a "Governmental Entity"), except for such violations that would not reasonably be expected to, singly or in the aggregate, result in a Material Adverse Effect. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein and in the Registration Statement, the General Disclosure Package and the Prospectus (including the issuance and sale of the Securities and the use of the proceeds from the sale of the Securities as described therein under the caption "Use of Proceeds") and compliance by the Company with its obligations hereunder have been duly authorized by all necessary corporate action and do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any properties or assets of the Company or any subsidiary pursuant to, the Agreements and Instruments (except for such conflicts, breaches, defaults or Repayment Events or liens, charges or encumbrances that would not, singly or in the aggregate, result in a Material Adverse Effect), nor will such action result in any violation of (x) the provisions of the charter, by-laws or similar organizational document of the Company or any of its subsidiaries or (y) any law, statute, rule, regulation, judgment, order, writ or decree of any Governmental Entity, except with respect to

clause (y), such violations as would not reasonably be expected to, singly or in the aggregate, result in a Material Adverse Effect. As used herein, a “Repayment Event” means any event or condition which gives the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(xviii) Absence of Labor Dispute. No labor dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or any subsidiary’s principal suppliers, manufacturers, partners, collaborators, customers or contractors, which, in either case, would result in a Material Adverse Effect.

(xix) Absence of Proceedings. There is no action, suit, proceeding, inquiry or investigation before or brought by any Governmental Entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which would reasonably be expected to result in a Material Adverse Effect, or which would reasonably be expected to materially and adversely affect their respective properties or assets or the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company or any such subsidiary is a party or of which any of their respective properties or assets is the subject which are not described in the Registration Statement, the General Disclosure Package and the Prospectus, including ordinary routine litigation incidental to the business, would not reasonably be expected to result in a Material Adverse Effect.

(xx) Accuracy of Exhibits. There are no contracts or documents which are required under the 1933 Act or the 1933 Act Regulations to be described in the Registration Statement, the General Disclosure Package or the Prospectus or to be filed as exhibits to the Registration Statement which have not been so described and filed as required.

(xxi) Absence of Further Requirements. No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any Governmental Entity is necessary or required for the performance by the Company of its obligations hereunder, in connection with the offering, issuance or sale of the Securities hereunder or the consummation of the transactions contemplated by this Agreement, except (A) such as have been already obtained or as may be required under the 1933 Act, the 1933 Act Regulations, the rules of The Nasdaq Global Market, state securities laws or the rules of the Financial Industry Regulatory Authority, Inc. (“FINRA”); or (B) such as which the failure to obtain would not, singly or in the aggregate, impair the power or ability of the Company to perform its obligations under this Agreement or consummate the transactions contemplated hereby.

(xxii) Possession of Licenses and Permits. The Company and its subsidiaries possess such permits, licenses, approvals, consents, exemptions and other authorizations (collectively, “Governmental Licenses”) issued by the appropriate Governmental Entities necessary to conduct the business now operated by them, except where the failure so to possess would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect. The Company and its subsidiaries are in compliance with the terms and conditions of all Governmental Licenses, except where the failure so to comply would not reasonably be expected to, singly or in the aggregate, result in a Material Adverse Effect. The Company has fulfilled and performed all of its material obligations with respect to the Governmental Licenses and no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other material impairment of the rights of the Company as a holder of any permit, except where the failure

to so fulfill or perform, or the occurrence of such event, would not, singly or in the aggregate, result in a Material Adverse Effect. All of the Governmental Licenses are valid and in full force and effect, except when the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, singly or in the aggregate, reasonably be expected to, result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any Governmental Licenses which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to result in a Material Adverse Effect.

(xxiii) Title to Property. The Company and its subsidiaries have good and marketable title to all real property owned by them and good title to all other properties owned by them, in each case, free and clear of all mortgages, pledges, liens, security interests, claims, restrictions or encumbrances of any kind except such as (A) are described in the Registration Statement, the General Disclosure Package and the Prospectus or (B) do not, singly or in the aggregate, materially and adversely affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company or any of its subsidiaries; and all of the leases and subleases material to the business of the Company and its subsidiaries, considered as one enterprise, and under which the Company or any of its subsidiaries holds properties described in the Registration Statement, the General Disclosure Package or the Prospectus, are in full force and effect, except to the extent that any such failure to be in full force and effect would not, singly or in the aggregate, result in a Material Adverse Effect, and neither the Company nor any such subsidiary has any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or any subsidiary under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company or such subsidiary to the continued possession of the leased or subleased premises under any such lease or sublease.

(xxiv) Possession of Intellectual Property. The Company and its subsidiaries own, or have obtained adequate rights and licenses under, or can acquire rights on reasonable terms to, all patents, patent rights, patent applications, inventions, copyrights, other works of authorship, know how (including trade secrets and other proprietary or confidential information, systems or procedures), trademarks, service marks, trade names, trade and service mark registrations, trade names, designs, processes, licenses, computer programs, technical data and information, and other intellectual property (collectively, "Intellectual Property") that are necessary to carry on the business of the Company as currently conducted and to commercialize the products or services as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus as under development (all such Intellectual Property is collectively referred to as the "Company Intellectual Property"). Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus: (A) to the Company's knowledge there are no third parties who have rights to any Intellectual Property, including no liens, security interest, or other encumbrances, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement, the General Disclosure Package and the Prospectus as licensed to the Company or one or more of its subsidiaries; (B) the Company has taken reasonable steps to secure its interests in the Intellectual Property owned by the Company from its employees and contractors; (C) to the Company's knowledge, there is no infringement, misappropriation or violation by third parties of any Company Intellectual Property owned by, or exclusively licensed to, the Company or its subsidiaries; (D) to the Company's knowledge, the Company is not infringing the intellectual property rights of third parties and (E) none of the Company Intellectual Property owned by the Company or, to the Company's knowledge, exclusively licensed to the Company has been adjudged invalid or unenforceable in whole or in part, in the case of clause (C) and clause (D), which infringement, misappropriation or violation, singly or in the aggregate, would

reasonably be expected to result in a Material Adverse Effect. There is no pending or threatened action, suit, proceeding or claim by others of which the Company has received written notice: (A) challenging the Company's rights in or to any Company Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Company Intellectual Property owned by, or exclusively licensed to, the Company or its subsidiaries, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company or any of its subsidiaries infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement, the General Disclosure Package or the Prospectus as under development, infringe or violate, any Intellectual Property rights of others, and the Company and its subsidiaries are unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. To the Company's knowledge, no employee of the Company who has developed Company Intellectual Property is in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company. The Company and its subsidiaries are in compliance in all material respects with the terms of each agreement pursuant to which Company Intellectual Property is licensed to the Company or any subsidiary, and all such agreements are in full force and effect in accordance with their terms. The patents included in the Company Intellectual Property owned by the Company or, to the Company's knowledge, exclusively licensed to the Company are subsisting and have not lapsed and the patent applications in the Intellectual Property owned by the Company or exclusively licensed to the Company are pending and have not been abandoned. To the Company's knowledge, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, the Company and its subsidiary are not obligated or under any liability whatsoever to make any material payment by way of royalties, fees or otherwise to any owner or licensee of, or other claimant to, any Intellectual Property, with respect to the use thereof or in connection with the conduct of their respective businesses or otherwise. No technology employed by the Company or its subsidiaries has been obtained or is being used by the Company or its subsidiaries in violation of any contractual or legal obligation binding on the Company, its subsidiaries, or any of their officers, directors, employees, or contractors, or in violation of any contractual rights of any persons. All patents and patent applications included in the Company Intellectual Property that are owned by or exclusively licensed to the Company have been duly and properly filed and maintained and the parties prosecuting such applications have complied in all material respects with their duty of candor and disclosure to the U.S. Patent and Trademark Office (the "USPTO") in connection with such applications. To the Company's knowledge, there is no patent or published patent application, in the U.S. or other jurisdiction, that is not included in the Company Intellectual Property and that, in the case of a patent, contains claims, or in the case of a published patent application contains patentable claims, that dominates any of the Company Intellectual Property described in the Preliminary Prospectus and Prospectus as being owned by or licensed to the Company or that interferes with the issued or pending claims of any of the Company Intellectual Property owned by or, to the Company's knowledge, exclusively licensed to the Company.

(xxv) Clinical Data and Regulatory Compliance. The preclinical tests and clinical trials, and other studies conducted by or on behalf of the Company (collectively, "studies") that are described in, or the results of which are referred to in, the Registration Statement, the General Disclosure Package or the Prospectus were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies and with Good Clinical Practices and all applicable laws, including, without limitation, the Federal Food, Drug, and Cosmetic Act and its implementing regulations at 21 C.F.R. Parts 50, 54,

56, 58, and 312; each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company and its subsidiaries have no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement, the General Disclosure Package or the Prospectus; neither the Company nor any of its subsidiaries has received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the Registration Statement, the General Disclosure Package or the Prospectus.

(xxvi) Compliance with Healthcare Laws. The Company: (i) has operated and currently operates its business in compliance in all material respects with applicable provisions of the health care laws, including Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395lll (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396w-5 (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act 42 U.S.C. 1320a-7b(a); the criminal laws relating to health care fraud and abuse, including 18 U.S.C. §§ 286 and 287 and the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996, 42 U.S.C. §§ 1320d et seq., (“HIPAA”); the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a; the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the exclusion law, 42 U.S.C. § 1320a-7; HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, 42 U.S.C. §§ 17921 et seq.; the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state, local and foreign laws and regulations of any governmental authority including the United States Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the “Regulatory Agencies”) applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company’s product candidates, (collectively the “Health Care Laws”); (ii) has not received any United States Food and Drug Administration Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any court or arbitrator or governmental or regulatory authority alleging or asserting non-compliance with (A) any Health Care Laws or (B) any licenses, approvals, clearances, exemptions, permits, registrations, authorizations, and supplements or amendments thereto required by any such Health Care Laws (“Regulatory Authorizations”); (iii) possesses all Regulatory Authorizations required to conduct its business as currently conducted and such Regulatory Authorizations are valid and in full force and effect and the Company is not in violation, in any material respect, of any term of any such Regulatory Authorizations; (iv) has fulfilled and performed all of its material obligations with respect to the Regulatory Authorizations and, to the Company’s knowledge, no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other material impairment of the rights of the holder of any such Regulatory Authorization; (v) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action (“Proceeding”) from any governmental authority including any Regulatory Agency or any other third party alleging a material violation of any Health Care Laws or Regulatory Authorizations or limiting, suspending, modifying, or revoking any material Regulatory Authorizations, and has no knowledge that any governmental authority including any Regulatory Agencies or any other third party is considering any Proceeding; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Regulatory Authorizations (“Reports”) and that all such Reports were materially complete and correct on the date filed (or were materially corrected or supplemented by

a subsequent submission); (vii) along with its employees, officers and directors, and to the Company's knowledge, independent contractors and agents, is not a party to or has any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any governmental authority including any Regulatory Agencies; and (viii) along with its employees, officers and directors, and, to the Company's knowledge, independent contractors and agents, has not been excluded, suspended or debarred from, or otherwise ineligible for participation in any government health care program or human clinical research.

(xxvii) Environmental Laws. Except as would not, singly or in the aggregate, result in a Material Adverse Effect, (A) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or mold (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"), (B) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (C) there are no pending or, to the Company's knowledge, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigations or proceedings relating to any Environmental Law against the Company or any of its subsidiaries and (D) to the Company's knowledge, there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or Governmental Entity, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(xxviii) Accounting Controls and Disclosure Controls. The Company and its subsidiaries, on a consolidated basis, maintain a system of effective internal control over financial reporting (as defined under Rules 13-a15 and 15d-15 under the 1934 Act Regulations) and a system of internal accounting controls sufficient to provide reasonable assurances that (A) transactions are executed in accordance with management's general or specific authorization; (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (C) access to assets is permitted only in accordance with management's general or specific authorization; (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (E) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (1) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (2) no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting.

The Company and each of its subsidiaries maintain an effective system of disclosure controls and procedures (as defined in Rule 13a-15 and Rule 15d-15 under the 1934 Act Regulations) that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and is accumulated and communicated to the Company's management, including its principal executive officer or officers and principal financial officer or officers, as appropriate, to allow timely decisions regarding disclosure

(xxix) Compliance with the Sarbanes-Oxley Act. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 related to loans and Sections 302 and 906 related to certifications.

(xxx) Payment of Taxes. All United States federal income tax returns of the Company and its subsidiaries required by law to be filed by them have been filed or a timely extension has been requested thereof and all taxes shown by such returns, which are due and payable, have been paid, except taxes against which appeals have been or will be promptly taken and as to which adequate reserves have been provided in accordance with GAAP or to the extent any failure to file or pay such taxes or assessments would not result in a Material Adverse Effect. The United States federal income tax returns of the Company through the fiscal year ended December 31, 2018 have been settled and no assessment in connection therewith has been made against the Company. The Company and its subsidiaries have filed all other tax returns that are required to have been filed by them pursuant to applicable foreign, state, local or other law except insofar as the failure to do so would not reasonably be expected to result in a Material Adverse Effect, and has paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company and its subsidiaries, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves have been established by the Company in accordance with GAAP or where the failure to do so would not result in a Material Adverse Effect. No tax deficiency has been determined adversely to the Company (nor does the Company have any notice or knowledge of any tax deficiency which could reasonably be expected to be determined adversely to the Company). The charges, accruals and reserves on the books of the Company in respect of any income or corporation tax liability for any years not finally determined are adequate to meet any assessments or re-assessments for additional income tax for any years not finally determined, except to the extent of any inadequacy that would not reasonably be expected to result in a Material Adverse Effect.

(xxxii) Insurance. The Company and its subsidiaries carry or are entitled to the benefits of insurance, with financially sound and reputable insurers, in such amounts and covering such risks as the Company reasonably believes is generally maintained by companies of established repute and comparable size engaged in the same or similar business, and all such insurance is in full force and effect. The Company has no reason to believe that it or any of its subsidiaries will not be able (A) to renew its existing insurance coverage as and when such policies expire or (B) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not reasonably be expected to result in a Material Adverse Effect. Neither of the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(xxxiii) Investment Company Act. The Company is not required, and upon the issuance and sale of the Securities as herein contemplated and the application of the net proceeds therefrom

as described in the Registration Statement, the General Disclosure Package and the Prospectus will not be required, to register as an “investment company” under the Investment Company Act of 1940, as amended.

(xxxiii) Absence of Manipulation. Neither the Company nor any affiliate of the Company has taken, nor will the Company or any affiliate take, directly or indirectly, any action which is designed, or would reasonably be expected, to cause or result in, or which constitutes, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities or to result in a violation of Regulation M under the 1934 Act.

(xxxiv) Foreign Corrupt Practices Act. None of the Company, any of its subsidiaries or, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or any of its subsidiaries is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the “FCPA”), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and, to the knowledge of the Company, its affiliates have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(xxxv) Money Laundering Laws. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the “Money Laundering Laws”); and no action, suit or proceeding by or before any Governmental Entity involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(xxxvi) OFAC. None of the Company, any of its subsidiaries or, to the knowledge of the Company, any director, officer, agent, employee, affiliate or representative of the Company or any of its subsidiaries is an individual or entity (“Person”), currently the subject or target of any sanctions administered or enforced by the United States Government, including, without limitation, the U.S. Department of the Treasury’s Office of Foreign Assets Control (“OFAC”), the United Nations Security Council, the European Union, Her Majesty’s Treasury, or other relevant sanctions authority (collectively, “Sanctions”), nor is the Company located, organized or resident in a country or territory that is the subject of Sanctions; and the Company will not directly or indirectly use the proceeds of the sale of the Securities, or lend, contribute or otherwise make available such proceeds to any subsidiaries, joint venture partners or other Person, to fund any activities of or business with any Person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions or in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions.

(xxxvii) Lending Relationship. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other relationship with any banking or lending affiliate of any Underwriter and (ii) does not intend to use any of the proceeds from the sale of the Securities to repay any outstanding debt owed to any affiliate of any Underwriter.

(xxxviii) Statistical and Market-Related Data. Any statistical and market-related data included in the Registration Statement, the General Disclosure Package or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(xxxix) No Rated Debt. No securities issued or guaranteed by, or loans to, the Company are rated by any “nationally recognized statistical rating organization” (as defined by the Commission in Section 3(a)(62) of the 1934 Act).

(xl) Data Privacy and Security Laws. The Company and its subsidiaries are, and at all prior times since inception were, in material compliance with all applicable data privacy and data security laws and regulations, including without limitation HIPAA, the HITECH Act, and the European Union General Data Protection Regulation (“GDPR”) (EU 2016/679) (and all other applicable laws and regulations with respect to Personal Data (defined below) that have been announced as of the date hereof as becoming effective within 12 months after the date hereof, and for which any non-compliance with same would be reasonably likely to create a material liability) (collectively, the “Privacy Laws”). To support compliance with the Privacy Laws, the Company and its subsidiaries have in place, and take appropriate steps reasonably designed to ensure compliance in all material respects with, policies and procedures relating to data privacy and data security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the “Policies”). At all times since inception, the Company has provided accurate notice of its Policies then in effect to its customers, employees, third party vendors and representatives. Each of the Company Policies provides accurate and sufficient notice of the Company’s then-current privacy practices relating to its subject matter and such Company Policies do not contain any material omissions of the Company’s then-current privacy practices. “Personal Data” means (i) a natural person’s name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver’s license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as “personally identifying information” under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; (iv) “personal data” as defined by GDPR, and (v) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person’s health or sexual orientation that is not aggregated with the data of other individuals or otherwise irreversibly anonymized such that a natural person cannot be identified. The Company and its subsidiaries since inception have at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and have provided accurate notice of its Policies then in effect to its customers, employees, third party vendors and representatives. None of such disclosures made or contained in any of the Policies have been inaccurate, misleading, deceptive or in violation of any Privacy Laws or Policies in any material respect. The execution, delivery and performance of this Agreement or any other agreement referred to in this Agreement will not result in a breach of violation of any Privacy Laws or Policies. The Company further certifies that neither it nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying

for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

(xli) Cybersecurity; Data Protection. (A) To the Company's knowledge, there has been no security breach or incident, attack, or other compromise of or relating to any of the Company or its subsidiaries information technology and computer systems, networks, hardware, software, data and databases (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained, processed or stored by the Company and its subsidiaries, and any such data processed or stored by third parties on behalf of the Company and its subsidiaries), equipment or technology (collectively, "IT Systems and Data"); (B) neither the Company nor its subsidiaries have been notified of, and each of them have no knowledge of any event or condition that would reasonably be expected to result in, any material security breach or incident, attack or other compromise to their IT Systems and Data and (C) the Company and its subsidiaries have implemented appropriate controls, policies, procedures, and technological safeguards reasonably likely to maintain and protect the integrity, continuous operation, redundancy and security of their IT Systems and Data reasonably consistent with industry standards and practices, or as required by applicable regulatory standards. The Company and its subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not be reasonably expected to result in a Material Adverse Effect.

(b) *Officer's Certificates.* Any certificate signed by any officer of the Company or any of its subsidiaries delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

SECTION 2. Sale and Delivery to Underwriters; Closing.

(a) *Initial Securities.* On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company agrees to sell to each Underwriter, severally and not jointly, and each Underwriter, severally and not jointly, agrees to purchase from the Company, at the price per share set forth in Schedule A, that number of Initial Securities set forth in Schedule A opposite the name of such Underwriter, plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, subject, in each case, to such adjustments among the Underwriters as the Representatives in their sole discretion shall make to eliminate any sales or purchases of fractional shares.

(b) *Option Securities.* In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company hereby grant(s) an option to the Underwriters, severally and not jointly, to purchase up to an additional [●] shares of Common Stock, at the price per share set forth in Schedule A, less an amount per share equal to any dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities. The option hereby granted may be exercised for 30 days after the date hereof and may be exercised in whole or in part at any time from time to time upon notice by the Representatives to the Company setting forth the number of Option Securities as to which the several Underwriters are then exercising the option and the time and date of payment and delivery for such Option Securities. Any such time and date of delivery (a "Date of Delivery") shall be determined by the Representatives, but shall not be later than seven full business days after the exercise of said option, nor in any event prior to the Closing Time. If the option is exercised as to all or any portion of the Option Securities, each of the Underwriters, acting severally and

not jointly, will purchase that proportion of the total number of Option Securities then being purchased which the number of Initial Securities set forth in Schedule A opposite the name of such Underwriter bears to the total number of Initial Securities, subject, in each case, to such adjustments as the Representatives in their sole discretion shall make to eliminate any sales or purchases of fractional shares.

(c) *Payment.* Payment of the purchase price for, and delivery of certificates or security entitlements for, the Initial Securities shall be made at the offices of Cooley LLP, 101 California Street, San Francisco, California 94111, or at such other place as shall be agreed upon by the Representatives and the Company, at 9:00 a.m. (New York City time) on the second (third, if the pricing occurs after 4:30 p.m. (New York City time) on any given day) business day after the date hereof (unless postponed in accordance with the provisions of Section 10), or such other time not later than ten business days after such date as shall be agreed upon by the Representatives and the Company (such time and date of payment and delivery being herein called "Closing Time").

In addition, in the event that any or all of the Option Securities are purchased by the Underwriters, payment of the purchase price for, and delivery of certificates or security entitlements for, such Option Securities shall be made at the above-mentioned offices, or at such other place as shall be agreed upon by the Representatives and the Company, on each Date of Delivery as specified in the notice from the Representatives to the Company.

Payment shall be made to the Company by wire transfer of immediately available funds to a bank account designated by the Company against delivery to the Representatives for the respective accounts of the Underwriters of certificates or security entitlements for the Securities to be purchased by them. It is understood that each Underwriter has authorized the Representatives, for its account, to accept delivery of, receipt for, and make payment of the purchase price for, the Initial Securities and the Option Securities, if any, which it has agreed to purchase. Each of the Representatives, individually and not as representative of the Underwriters, may (but shall not be obligated to) make payment of the purchase price for the Initial Securities or the Option Securities, if any, to be purchased by any Underwriter whose funds have not been received by the Closing Time or the relevant Date of Delivery, as the case may be, but such payment shall not relieve such Underwriter from its obligations hereunder.

SECTION 3. Covenants of the Company. The Company covenants with each Underwriter as follows:

(a) *Compliance with Securities Regulations and Commission Requests.* The Company, subject to Section 3(b), will comply with the requirements of Rule 430A, and will notify the Representatives promptly, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective or any amendment or supplement to the Prospectus shall have been filed, (ii) of the receipt of any comments from the Commission, (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus, including any document incorporated by reference therein, or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment or of any order preventing or suspending the use of any preliminary prospectus or the Prospectus, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(d) or 8(e) of the 1933 Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the 1933 Act in connection with the offering of the Securities. The Company will effect all filings required under Rule 424(b), in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and will take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will

promptly file such prospectus. The Company will make every reasonable effort to prevent the issuance of any stop order, prevention or suspension and, if any such order is issued, to obtain the lifting thereof as soon as reasonably practicable.

(b) *Continued Compliance with Securities Laws.* The Company will comply with the 1933 Act and the 1933 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Registration Statement, the General Disclosure Package and the Prospectus. If at any time when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172 of the 1933 Act Regulations (“Rule 172”), would be) required by the 1933 Act to be delivered in connection with sales of the Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the opinion of counsel for the Underwriters or for the Company, to (i) amend the Registration Statement in order that the Registration Statement will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) amend or supplement the General Disclosure Package or the Prospectus in order that the General Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser or (iii) amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus, as the case may be, in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly (A) give the Representatives notice of such event, (B) prepare any amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement, the General Disclosure Package or the Prospectus comply with such requirements and, a reasonable amount of time prior to any proposed filing or use, furnish the Representatives with copies of any such amendment or supplement and (C) file with the Commission any such amendment or supplement; provided, that the Company shall not file or use any such amendment or supplement to which the Representatives or counsel for the Underwriters shall reasonably object. The Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. The Company has given the Representatives notice of any filings made pursuant to the 1934 Act or 1934 Act Regulations as soon as practicable prior to the Applicable Time; the Company will give the Representatives notice of its intention to make any such filing from the Applicable Time to the Closing Time and will furnish the Representatives with copies of any such documents a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall reasonably object.

(c) *Delivery of Registration Statements.* The Company has furnished or will deliver to the Representatives and counsel for the Underwriters, without charge, conformed copies of the Registration Statement as originally filed and each amendment thereto (including exhibits filed therewith or incorporated by reference therein and documents incorporated or deemed to be incorporated by reference therein) and conformed copies of all consents and certificates of experts. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) *Delivery of Prospectuses.* The Company has delivered to each Underwriter, without charge, as many copies of each preliminary prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to each Underwriter, without charge, during the period when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) *Blue Sky Qualifications.* The Company will use its reasonable best efforts, in cooperation with the Underwriters, to qualify the Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representatives may designate and to maintain such qualifications in effect so long as required to complete the distribution of the Securities; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(f) *Rule 158.* The Company will timely file such reports pursuant to the 1934 Act as are necessary in order to make generally available (which may be satisfied by filing with the Commission pursuant to EDGAR) to its securityholders as soon as practicable an earnings statement for the purposes of, and to provide to the Underwriters the benefits contemplated by, the last paragraph of Section 11(a) of the 1933 Act.

(g) *Use of Proceeds.* The Company will use the net proceeds received by it from the sale of the Securities in the manner specified in the Registration Statement, the General Disclosure Package and the Prospectus under "Use of Proceeds."

(h) *Listing.* The Company will use its reasonable best efforts to effect and maintain the listing of the Common Stock (including the Securities) on The Nasdaq Global Market.

(i) *Restriction on Sale of Securities.* During a period of 90 days from the date of the Prospectus, the Company will not, without the prior written consent of the Representatives, (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or file or confidentially submit any registration statement under the 1933 Act with respect to any of the foregoing or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Common Stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash or otherwise. The foregoing sentence shall not apply to (A) the Securities to be sold hereunder, (B) any shares of Common Stock issued by the Company upon the exercise (including any net exercise or exercise by delivery of already-owned shares of Common Stock) of an option or warrant or the conversion of a security outstanding on the date hereof and referred to in the Registration Statement, the General Disclosure Package and the Prospectus, (C) any shares of Common Stock issued or options to purchase Common Stock or restricted stock units covering shares of Common Stock granted pursuant to existing employee benefit plans of the Company referred to in the Registration Statement, the General Disclosure Package and the Prospectus, (D) any shares of Common Stock issued or options to purchase shares of Common Stock granted pursuant to any non-employee director compensation plan or dividend reinvestment plan referred to in the Registration Statement, the General Disclosure Package and the Prospectus, (E) the filing by the Company of a registration statement with the Commission on Form S-8 or a successor form thereto with respect to the registration of securities to be offered under any plans or programs referred to in clauses (C) and (D) above and (F) the sale or issuance of or entry into an agreement to sell or issue shares of Common Stock or other securities issued in connection with any (1) merger, (2) acquisition of securities, businesses, properties or other assets, (3) joint venture or (4) strategic alliance or relationship; provided, that the aggregate number of shares issued pursuant to this clause (F) shall not exceed 10.0% of the total number of outstanding shares of Common Stock immediately following the

issuance and sale of the Securities; provided further that the recipient of any such shares of Common Stock or securities issued pursuant to clauses (B), (C), (D) and (F) during the 90-day restricted period shall enter into an agreement substantially in the form of Exhibit A hereto with respect to (and not in excess of) the 90-day restricted period and only if such recipient did not previously enter into such an agreement with the Representatives.

(j) *Reporting Requirements.* The Company, during the period when a Prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, will file all documents required to be filed with the Commission pursuant to the 1934 Act within the time periods required by the 1934 Act and 1934 Act Regulations. Additionally, the Company shall report the use of proceeds from the issuance of the Securities as may be required under Rule 463 under the 1933 Act.

(k) *Issuer Free Writing Prospectuses.* The Company agrees that, unless it obtains the prior written consent of the Representatives, it will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a “free writing prospectus,” or a portion thereof, required to be filed by the Company with the Commission or retained by the Company under Rule 433; provided that the Representatives will be deemed to have consented to the Issuer Free Writing Prospectuses listed on Schedule B-2 hereto and any “road show that is a written communication” within the meaning of Rule 433(d)(8)(i) that has been reviewed by the Representatives. The Company represents that it has treated or agrees that it will treat each such free writing prospectus consented to, or deemed consented to, by the Representatives as an “issuer free writing prospectus,” as defined in Rule 433, and that it has complied and will comply with the applicable requirements of Rule 433 with respect thereto, including timely filing with the Commission where required, legending and record keeping. If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement, any preliminary prospectus or the Prospectus or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(l) *Certification Regarding Beneficial Owners.* The Company will deliver to the Representatives, on the date of execution of this Agreement, a properly completed and executed Certification Regarding Beneficial Owners of Legal Entity Customers, together with copies of identifying documentation, and the Company undertakes to provide such additional supporting documentation as the Representatives may reasonably request in connection with the verification of the foregoing certification.

(m) *Testing-the-Waters Materials.* If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

(n) *Emerging Growth Company Status.* The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Securities within the meaning of the Securities Act and (ii) completion of the 90-day restricted period referred to in Section 3(i).

SECTION 4. Payment of Expenses.

(a) *Expenses.* The Company will pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement including (i) the preparation, printing and filing of the Registration Statement (including financial statements and exhibits) as originally filed and each amendment thereto, (ii) the preparation, printing and delivery to the Underwriters of copies of each preliminary prospectus, each Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto and any costs associated with electronic delivery of any of the foregoing by the Underwriters to investors, (iii) the preparation, issuance and delivery of the certificates or security entitlements for the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the Company's counsel, accountants and other advisors, (v) the qualification of the Securities under securities laws in accordance with the provisions of Section 3(e) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of the Blue Sky Survey and any supplement thereto, (vi) the fees and expenses of any transfer agent or registrar for the Securities, (vii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the Securities, including without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged by the Company or with the Company's prior written consent (which may be by email) in connection with the road show presentations, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and the cost of aircraft and other transportation (provided that the travel and lodging expenses of the Representatives shall be paid for by the Underwriters), and fifty percent (50%) of the cost of any aircraft chartered in connection with the road show (with the Underwriters agreeing to pay for the other fifty percent (50%) of the cost of such chartered aircraft), (viii) the filing fees incident to, and the reasonable fees and disbursements of counsel to the Underwriters in connection with, the review by FINRA of the terms of the sale of the Securities, with such legal fees, taken together with the legal fees described in clause (v) above, not to exceed \$40,000; (ix) the fees and expenses incurred in connection with the listing of the Securities on The Nasdaq Global Market and (x) the costs and expenses (including, without limitation, any damages or other amounts payable in connection with legal or contractual liability) associated with the reforming of any contracts for sale of the Securities made by the Underwriters caused by a breach of the representation contained in the third sentence of Section 1(a)(ii). Except as provided in this Section 4, the Underwriters will pay all of their own costs and expenses, including the fees and disbursements of their counsel, stock transfer taxes payable on the resale of any of the Securities by them and any advertising expenses connected with any offers they may make.

(b) *Termination of Agreement.* If this Agreement is terminated by the Representatives in accordance with the provisions of Section 5, Section 9(a) (i) or (iii) or Section 10 hereof, the Company shall reimburse the non-defaulting Underwriters for all of their reasonable out-of-pocket expenses actually incurred, including the reasonable fees and disbursements of counsel for the Underwriters.

SECTION 5. Conditions of Underwriters' Obligations. The obligations of the several Underwriters hereunder are subject to the accuracy of the representations and warranties of the Company contained herein or in certificates of any officer of the Company or any of its subsidiaries delivered pursuant to the provisions hereof, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) *Effectiveness of Registration Statement; Rule 430A Information.* The Registration Statement, including any Rule 462(b) Registration Statement, has become effective and, at the Closing Time, no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated; and the Company has complied with each request (if any) from the Commission for additional information. A prospectus containing the Rule 430A Information shall have been filed with the Commission in the manner and within the time frame required by Rule 424(b) without reliance on Rule 424(b)(8) or a post-effective amendment providing such information shall have been filed with, and declared effective by, the Commission in accordance with the requirements of Rule 430A.

(b) *Opinion and Negative Assurance Letter of Counsel for Company.* At the Closing Time, the Representatives shall have received an opinion and negative assurance letter, dated the Closing Time, of Gibson, Dunn & Crutcher LLP, counsel for the Company, in form and substance satisfactory to counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters.

(c) *Opinion of Intellectual Property Counsel for Company.* At the Closing Time, the Representatives shall have received the favorable opinion, dated the Closing Time, of Greenberg Traurig, LLP, intellectual property counsel for the Company, in form and substance satisfactory to counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters.

(d) *Opinion and Negative Assurance Letter of Counsel for Underwriters.* At the Closing Time, the Representatives shall have received the favorable opinion and negative assurance letter, dated the Closing Time, of Cooley LLP, counsel for the Underwriters, in the form and substance reasonably satisfactory to the Representatives, together with signed or reproduced copies of such letter for each of the other Underwriters.

(e) *Officers' Certificate.* At the Closing Time, there shall not have been, since the date hereof or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any Material Adverse Effect change, and the Representatives shall have received a certificate of the Chief Executive Officer or the President of the Company and of the chief financial or chief accounting officer of the Company, dated the Closing Time, to the effect that (i) there has been no such material adverse change, (ii) the representations and warranties of the Company in this Agreement are true and correct with the same force and effect as though expressly made at and as of the Closing Time, (iii) the Company has complied in all material respects with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to the Closing Time, and (iv) no stop order suspending the effectiveness of the Registration Statement under the 1933 Act has been issued, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to their knowledge, contemplated by the Commission.

(f) *Accountant's Comfort Letter.* At the time of the execution of this Agreement, the Representatives shall have received from each of Brightman Almagor Zohar & Co., a firm in the Deloitte Global Network, and Deloitte and Touche LLP, a letter, dated such date, in form and substance satisfactory to the Representatives, together with reproduced copies of such letter for each of the other Underwriters containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement, the General Disclosure Package and the Prospectus.

(g) *Bring-down Comfort Letter.* At the Closing Time, the Representatives shall have received from each of Brightman Almagor Zohar & Co., a firm in the Deloitte Global Network, and Deloitte and Touche LLP, a letter, dated as of the Closing Time, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (e) of this Section, except that the specified date referred to shall be a date not more than three business days prior to the Closing Time.

(h) *Approval of Listing.* At the Closing Time, the Securities shall have been approved for listing on The Nasdaq Global Market, subject only to official notice of issuance.

(i) *No Objection.* FINRA has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Securities.

(j) *Lock-up Agreements.* At the date of this Agreement, the Representatives shall have received an agreement substantially in the form of Exhibit A hereto signed by each of the Company's directors and officers and their respective affiliates.

(k) *Maintenance of Rating.* Neither the Company nor its subsidiaries have any debt securities or preferred stock that are rated by any "nationally recognized statistical rating agency" (as defined in Section 3(a)(62) of the 1934 Act).

(l) *Chief Financial Officer Certificate.* On the date of this Agreement and at the Closing Time, as the case may be, the Company shall have furnished to the Representatives a certificate, dated the respective dates of delivery thereof and addressed to the Underwriters, of its chief financial officer with respect to certain financial data contained in the General Disclosure Package and the Prospectus, providing "management comfort" with respect to such information, in form and substance reasonably satisfactory to the Representatives.

(m) *Conditions to Purchase of Option Securities.* In the event that the Underwriters exercise their option provided in Section 2(b) hereof to purchase all or any portion of the Option Securities, the representations and warranties of the Company contained herein and the statements in any certificates furnished by the Company and any of its subsidiaries hereunder shall be true and correct as of each Date of Delivery and, at the relevant Date of Delivery, the Representatives shall have received:

(i) Officers' Certificate. A certificate, dated such Date of Delivery, of the President or a Vice President of the Company and of the chief financial or chief accounting officer of the Company confirming that the certificate delivered at the Closing Time pursuant to Section 5(d) hereof remains true and correct as of such Date of Delivery.

(ii) Opinion and Negative Assurance Letter of Counsel for Company. If requested by the Representatives, the favorable opinion and negative assurance letter of Gibson, Dunn & Crutcher LLP, counsel for the Company, in form and substance satisfactory to counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(b) hereof.

(iii) Opinion of Intellectual Property Counsel for Company. If requested by the Representatives, the favorable opinion of Greenberg Traurig, LLP, intellectual property counsel for the Company, in form and substance satisfactory to counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(c) hereof.

(iv) Opinion and Negative Assurance Letter of Counsel for Underwriters. If requested by the Representatives, the favorable opinion and negative assurance letter of Cooley LLP, counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(e) hereof.

(v) Bring-down Comfort Letter. If requested by the Representatives, a letter from each of Brightman Almagor Zohar & Co., a firm in the Deloitte Global Network, and Deloitte and Touche LLP, in form and substance satisfactory to the Representatives and dated such Date of Delivery, substantially in the same form and substance as the letter furnished to the Representatives pursuant to Section 5(e) hereof, except that the “specified date” in the letter furnished pursuant to this paragraph shall be a date not more than three business days prior to such Date of Delivery.

(n) Additional Documents. At the Closing Time and at each Date of Delivery (if any) counsel for the Underwriters shall have been furnished with such documents and opinions as they may reasonably require for the purpose of enabling them to pass upon the issuance and sale of the Securities as herein contemplated, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated shall be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters.

(o) Termination of Agreement. If any condition specified in this Section shall not have been fulfilled when and as required to be fulfilled, this Agreement, or, in the case of any condition to the purchase of Option Securities on a Date of Delivery which is after the Closing Time, the obligations of the several Underwriters to purchase the relevant Option Securities, may be terminated by the Representatives by notice to the Company at any time at or prior to Closing Time or such Date of Delivery, as the case may be, and such termination shall be without liability of any party to any other party except as provided in Section 4 and except that Sections 1, 6, 7, 8, 14, 15, 16 and 17 shall survive any such termination and remain in full force and effect.

SECTION 6. Indemnification.

(a) Indemnification of Underwriters. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates (as such term is defined in Rule 501(b) under the 1933 Act (each, an “Affiliate”)), its selling agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included (A) in any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto), or (B) in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities (“Marketing Materials”), including any road show (as defined in Rule 433(h) under the 1933 Act) or investor presentations made to investors by the Company (whether in person or electronically), or the omission or alleged omission in any preliminary prospectus, Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, Prospectus or in any Marketing Materials of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of

any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 6(d) below) any such settlement is effected with the written consent of the Company;

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel chosen by the Representatives), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above;

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, the General Disclosure Package, any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, any Marketing Materials or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Underwriter Information.

(b) *Indemnification of Company, Directors and Officers.* Each Underwriter severally agrees to indemnify and hold harmless the Company, its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act, against any and all loss, liability, claim, damage and expense described in the indemnity contained in subsection (a) of this Section, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, the General Disclosure Package, any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, any Marketing Materials or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Underwriter Information.

(c) *Actions against Parties; Notification.* Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. In the case of parties indemnified pursuant to Section 6(a) above, counsel to the indemnified parties shall be selected by the Representatives, and, in the case of parties indemnified pursuant to Section 6(b) above, counsel to the indemnified parties shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action; provided, however, that counsel to the indemnifying party shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying parties be liable for fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) *Settlement without Consent if Failure to Reimburse.* If at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) or settlement of any claim in connection with any violation referred to in Section 6(e) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

SECTION 7. Contribution. If the indemnification provided for in Section 6 hereof is for any reason unavailable to or insufficient to hold harmless an indemnified party in respect of any losses, liabilities, claims, damages or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount of such losses, liabilities, claims, damages and expenses incurred by such indemnified party, as incurred, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, from the offering of the Securities pursuant to this Agreement or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and of the Underwriters, on the other hand, in connection with the statements or omissions which resulted in such losses, liabilities, claims, damages or expenses, as well as any other relevant equitable considerations.

The relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, in connection with the offering of the Securities pursuant to this Agreement shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities pursuant to this Agreement (after deducting underwriting discounts and commissions but before deducting expenses) received by the Company, on the one hand, and the total underwriting discount received by the Underwriters, on the other hand, in each case as set forth on the cover of the Prospectus, bear to the aggregate initial public offering price of the Securities as set forth on the cover of the Prospectus.

The relative fault of the Company, on the one hand, and the Underwriters, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities, claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

Notwithstanding the provisions of this Section 7, no Underwriter shall be required to contribute any amount in excess of the underwriting commissions received by such Underwriter in connection with the Securities underwritten by it and distributed to the public.

No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

For purposes of this Section 7, each person, if any, who controls an Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act and each Underwriter's Affiliates and selling agents shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act shall have the same rights to contribution as the Company. The Underwriters' respective obligations to contribute pursuant to this Section 7 are several in proportion to the number of Initial Securities set forth opposite their respective names in Schedule A hereto and not joint.

SECTION 8. Representations, Warranties and Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company or any of its subsidiaries submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors or any person controlling the Company and (ii) delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination.* The Representatives may terminate this Agreement, by notice to the Company, at any time at or prior to the Closing Time (i) if there has been, in the judgment of the Representatives, since the time of execution of this Agreement or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, or (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Representatives, impracticable or inadvisable to proceed with the completion of the offering or to enforce contracts for the sale of the Securities, or (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or The Nasdaq Global Market, or (iv) if trading generally on the NYSE MKT or the New York Stock Exchange or in The Nasdaq Global Market has been suspended or materially limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by order of the Commission, FINRA or any other governmental authority, or (v) a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States or with respect to Clearstream or Euroclear systems in Europe, or (vi) if a banking moratorium has been declared by either Federal or New York authorities.

(b) *Liabilities.* If this Agreement is terminated pursuant to this Section, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 1, 6, 7, 8, 14, 15, 16 and 17 shall survive such termination and remain in full force and effect.

SECTION 10. Default by One or More of the Underwriters. If one or more of the Underwriters shall fail at the Closing Time or a Date of Delivery to purchase the Securities which it or they are obligated to purchase under this Agreement (the "Defaulted Securities"), the Representatives shall have the right,

within 24 hours thereafter, to make arrangements for one or more of the non-defaulting Underwriters, or any other underwriters, to purchase all, but not less than all, of the Defaulted Securities in such amounts as may be agreed upon and upon the terms herein set forth; if, however, the Representatives shall not have completed such arrangements within such 24-hour period, then:

(i) if the number of Defaulted Securities does not exceed 10% of the number of Securities to be purchased on such date, each of the non-defaulting Underwriters shall be obligated, severally and not jointly, to purchase the full amount thereof in the proportions that their respective underwriting obligations hereunder bear to the underwriting obligations of all non-defaulting Underwriters, or

(ii) if the number of Defaulted Securities exceeds 10% of the number of Securities to be purchased on such date, this Agreement or, with respect to any Date of Delivery which occurs after the Closing Time, the obligation of the Underwriters to purchase, and the Company to sell, the Option Securities to be purchased and sold on such Date of Delivery shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section shall relieve any defaulting Underwriter from liability in respect of its default.

In the event of any such default which does not result in a termination of this Agreement or, in the case of a Date of Delivery which is after the Closing Time, which does not result in a termination of the obligation of the Underwriters to purchase and the Company to sell the relevant Option Securities, as the case may be, either the (i) Representatives or (ii) the Company shall have the right to postpone Closing Time or the relevant Date of Delivery, as the case may be, for a period not exceeding seven days in order to effect any required changes in the Registration Statement, the General Disclosure Package or the Prospectus or in any other documents or arrangements. As used herein, the term "Underwriter" includes any person substituted for an Underwriter under this Section 10.

SECTION 11. Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted by any standard form of telecommunication. Notices to the Underwriters shall be directed to (i) BofAS at One Bryant Park, New York, New York 10036, attention of Syndicate Department (facsimile: (646) 855-3073), with a copy to ECM Legal (facsimile: (212) 230-8730), (ii) SVB Leerink at One Federal Street, 37th Floor, Boston, Massachusetts, attention of Jack I. Fitzgerald, Esq. (facsimile (617) 918-4664), and (iii) RBC at 200 Vesey Street, 8th Floor, New York, New York 10281, attention of Equity Syndicate Department (facsimile (212) 428-6260); notices to the Company shall be directed to it at 89bio, Inc., 142 Sansome Street, 2nd Floor, San Francisco, California 94104, attention of Rohan Palekar, Chief Executive Officer.

SECTION 12. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the initial public offering price of the Securities and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering of the Securities and the process leading thereto, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, any of its subsidiaries or their respective stockholders, creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the offering of the Securities or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company or any of its subsidiaries on other matters) and no Underwriter has any obligation to the Company with respect to the offering of the Securities except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates

may be engaged in a broad range of transactions that involve interests that differ from those of the Company and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering of the Securities and the Company has consulted its own respective legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

SECTION 13. Recognition of the U.S. Special Resolution Regimes.

(a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

For purposes of this Section 13, a “BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k). “Covered Entity” means any of the following: (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b). “Default Right” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable. “U.S. Special Resolution Regime” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

SECTION 14. Parties. This Agreement shall each inure to the benefit of and be binding upon the Underwriters and the Company and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Underwriters and the Company and their respective successors and the controlling persons and officers and directors referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Underwriters and the Company and their respective successors, and said controlling persons and officers and directors and their heirs and legal representatives, and for the benefit of no other person, firm or corporation. No purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 15. Trial by Jury. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

SECTION 16. GOVERNING LAW. THIS AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF, THE STATE OF NEW YORK WITHOUT REGARD TO ITS CHOICE OF LAW PROVISIONS.

SECTION 17. Consent to Jurisdiction. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby shall be instituted in (i) the federal courts of the United States of America located in the City and County of New York, Borough of Manhattan or (ii) the courts of the State of New York located in the City and County of New York, Borough of Manhattan (collectively, the “Specified Courts”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

SECTION 18. TIME. TIME SHALL BE OF THE ESSENCE OF THIS AGREEMENT. EXCEPT AS OTHERWISE SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 19. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same Agreement.

SECTION 20. Effect of Headings. The section headings herein are for convenience only and shall not affect the construction hereof.

[signature pages follow]

If the foregoing is in accordance with your understanding of our agreement, please sign and return to the Company a counterpart hereof, whereupon this instrument, along with all counterparts, will become a binding agreement among the Underwriters and the Company in accordance with its terms.

Very truly yours,

89BIO, INC.

By: _____
Name: _____
Title: _____

CONFIRMED AND ACCEPTED,
as of the date first above written:

BOFA SECURITIES, INC.
SVB LEERINK LLC
RBC CAPITAL MARKETS, LLC

By: **BOFA SECURITIES, INC.**

By: _____
Authorized Signatory

By: **SVB LEERINK LLC**

By: _____
Authorized Signatory

By: **RBC CAPITAL MARKETS, LLC**

By: _____
Authorized Signatory

For themselves and as Representatives of the other Underwriters named in Schedule A hereto.

[Signature Page to Underwriting Agreement]

SCHEDULE A

The initial public offering price per share for the Securities shall be \$[·].

The purchase price per share for the Securities to be paid by the several Underwriters shall be \$[·], being an amount equal to the initial public offering price set forth above less \$[·] per share, subject to adjustment in accordance with Section 2(b) for dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities.

| <u>Name of Underwriter</u> | <u>Number of Initial Securities</u> |
|----------------------------|---|
| BofA Securities, Inc. | [·] |
| SVB Leerink LLC | [·] |
| RBC Capital Markets, LLC | [·] |
| Total | [·] |

Sch A-1

SCHEDULE B-1

Pricing Terms

1. The Company is selling [●] shares of Common Stock.
2. The Company has granted an option to the Underwriters, severally and not jointly, to purchase up to an additional [●] shares of Common Stock.
3. The initial public offering price per share for the Securities shall be \$[●].

Sch B-1

SCHEDULE B-2

Free Writing Prospectuses

None.

Sch B-2

SCHEDULE B-3

Written Testing-the-Waters Communications

None.

Sch B-3

EXHIBIT A

**Form of Lock-Up from Directors, Officers or other Stockholders
Pursuant to Section 5(j)**

_____, 2020

BofA Securities, Inc.
SVB Leerink LLC
RBC Capital Markets, LLC

as Representatives of the several
Underwriters to be named in the
within-mentioned Underwriting Agreement

c/o BofA Securities, Inc.
One Bryant Park
New York, New York 10036

c/o SVB Leerink LLC
255 California Street, 12th Floor
San Francisco, California 94111

c/o RBC Capital Markets, LLC
200 Vesey Street
New York, New York 10281

Re: Proposed Public Offering by 89bio, Inc.

Ladies and Gentlemen:

The undersigned, a securityholder, an officer and/or a director, as applicable, of 89bio, Inc., a Delaware corporation (the "Company"), understands that BofA Securities, Inc. ("BofAS"), SVB Leerink LLC ("SVB Leerink") and RBC Capital Markets, LLC ("RBC," and, collectively with BofAS and SVB Leerink, the "Representatives") propose to enter into an Underwriting Agreement (the "Underwriting Agreement") with the Company, providing for the public offering (the "Public Offering") of shares of the Company's common stock, par value \$0.001 per share ("Common Stock"). In recognition of the benefit that the Public Offering will confer upon the undersigned as a securityholder, an officer and/or a director, as applicable, of the Company, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agrees with each underwriter to be named in the Underwriting Agreement that, during the period beginning on the date hereof and ending on the date that is 90 days from the date of the Underwriting Agreement (the "Lock-Up Period"), the undersigned will not, without the prior written consent of the Representatives, (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "Lock-Up Securities"), or exercise any right with respect to the registration of any of the Lock-Up Securities, or file, cause to be filed or cause to be confidentially submitted any registration statement in connection therewith, under the Securities Act of 1933, as amended, or (ii) enter into any swap or any other agreement or any transaction that transfers, in

whole or in part, directly or indirectly, the economic consequence of ownership of the Lock-Up Securities, whether any such swap or transaction is to be settled by delivery of shares of Common Stock or other securities, in cash or otherwise. If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any issuer-directed Common Stock the undersigned may purchase in the Public Offering.

Notwithstanding the foregoing, and subject to the conditions below, the undersigned may transfer the Lock-Up Securities without the prior written consent of the Representatives:

- (1) as a *bona fide* gift or gifts, *provided* that (i) the Representatives receive a signed lock-up agreement for the balance of the Lock-Up Period from each transferee prior to such transfer, (ii) any such transfer shall not involve a disposition for value, (iii) any such transfer is not required to be publicly filed or reported during the Lock-Up Period, and (iv) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Lock-Up Period;
- (2) by will or intestate succession upon the death of the undersigned, including to the transferee's nominee or custodian, *provided* that (i) the Representatives receive a signed lock-up agreement for the balance of the Lock-Up Period from each transferee prior to such transfer, (ii) any such transfer shall not involve a disposition for value, (iii) if required, any public filing or report under Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") during the Lock-Up Period shall clearly indicate in the footnotes thereto that the such transfer is being made pursuant to the circumstances described in this clause, and (iv) no public filings or reports regarding such transfers shall be otherwise voluntarily effected during the Lock-Up Period;
- (3) to the immediate family of the undersigned or any trust, partnership or similar entity for the direct or indirect benefit of the undersigned or the immediate family of the undersigned (for purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin) or if the undersigned is a trust, to any beneficiary of the undersigned (including such beneficiary's estate), *provided* that (i) the Representatives receive a signed lock-up agreement for the balance of the Lock-Up Period from each transferee prior to such transfer, (ii) any such transfer shall not involve a disposition for value, (iii) any such transfer is not required to be publicly filed or reported during the Lock-Up Period, and (iv) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Lock-Up Period;
- (4) if the undersigned is a non-natural person, as a distribution to limited partners, general partners, limited liability company members, stockholders or other equity holders of the undersigned, *provided* that (i) the Representatives receive a signed lock-up agreement for the balance of the Lock-Up Period from each transferee prior to such transfer, (ii) any such transfer shall not involve a disposition for value, (iii) any such transfer is not required to be publicly filed or reported during the Lock-Up Period, and (iv) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Lock-Up Period;
- (5) to the undersigned's affiliates or to any investment fund or other entity controlled or managed by the undersigned, *provided* that (i) the Representatives receive a signed lock-up agreement for the balance of the Lock-Up Period from each

transferee prior to such transfer, (ii) any such transfer shall not involve a disposition for value, (iii) any such transfer is not required to be publicly filed or reported during the Lock-Up Period, and (iv) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Lock-Up Period;

- (6) to the Company upon exercise of any right in respect of any option granted under any incentive plan of the Company described in the final prospectus relating to the Public Offering or any document incorporated by reference therein, including the surrender of shares of Common Stock to the Company in “net” or “cashless” exercise of any option, *provided*, that (i) the shares of Common Stock received by the undersigned upon exercise continue to be subject to the restrictions on transfer set forth in this Lock-Up Agreement, (ii) if required, any public filing or report under Section 16 of the Exchange Act during the Lock-Up Period shall clearly indicate in the footnotes thereto that the filing relates to the exercise of a stock option, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option are subject to this Lock-Up Agreement, and (iii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Lock-Up Period;
- (7) pursuant to an order of a court of competent jurisdiction or in connection with a qualified domestic order or divorce settlement, *provided*, that (i) the Representatives receive a signed lock-up agreement for the balance of the Lock-Up Period from each transferee prior to such transfer, (ii) if required, any public filing or report under Section 16 of the Exchange Act during the Lock-Up Period shall clearly indicate in the footnotes thereto that the such transfer is being made pursuant to the circumstances described in this clause, and (iii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers during the Lock-Up Period; or
- (8) to a *bona fide* third party pursuant to a merger, consolidation, tender offer or other similar transaction made to all holders of Common Stock and involving a Change of Control of the Company and approved by the Company’s board of directors, *provided*, that (i) in the event that such Change of Control is not completed, the undersigned’s Lock-Up Securities shall remain subject to the restrictions contained herein, and (ii) any shares of Common Stock not transferred in such merger, consolidation, tender offer or similar transaction shall remain subject to the restrictions contained herein. “Change of Control” shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an underwriter pursuant to the Public Offering), of the Company’s voting securities if, after such transfer, such person or group of affiliated persons would hold more than 50% of the outstanding voting securities of the Company (or the surviving entity).

Furthermore, during the Lock-Up Period, the undersigned may sell shares of Common Stock purchased by the undersigned in the Public Offering or in the open market transactions following the Public Offering if and only if (i) such sales are not required to be publicly filed or reported during the Lock-Up Period and (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such sales during the Lock-Up Period.

Nothing herein shall prevent the undersigned from establishing a 10b5-1 trading plan that complies with Rule 10b5-1 under the Exchange Act (a “10b5-1 trading plan”) so long as any such plan does not permit sales of Lock-Up Securities during the Lock-Up Period; and *provided* that the establishment of a 10b5-1 trading plan shall only be permitted if (i) the establishment of such plan is not required to be reported in any public filing or report with the Securities and Exchange Commission, or otherwise and (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding the establishment of such plan during the Lock-Up Period.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company’s transfer agent and registrar against the transfer of the Lock-Up Securities, except in compliance with the foregoing restrictions.

Notwithstanding anything to the contrary contained herein, this Lock-Up Agreement will automatically terminate and the undersigned will be released from all of his, her or its obligations hereunder upon the earliest to occur, if any, of (i) if the Representatives, on the one hand, or the Company, on the other hand, informs the other, prior to the execution of the Underwriting Agreement, that it has determined not to proceed with the Public Offering, (ii) the date the Company files an application with the Securities and Exchange Commission to withdraw the registration statement related to the Public Offering, (iii) the date the Underwriting Agreement is terminated prior to payment for and delivery of the shares of Common Stock to be sold thereunder or (iv) July 31, 2020, in the event that the Underwriting Agreement has not been executed by such date.

[signature page follows]

Very truly yours,

Name of Security Holder *(Print exact name)*

By: _____
(Signature)

If not signing in an individual capacity:

Name of Authorized Signatory *(Print)*

Title of Authorized Signatory *(Print)*

*(Indicate capacity of person signing if signing as custodian,
trustee, or on behalf of an entity)*

[Signature Page to Lock-Up Agreement]

July 6, 2020

89bio, Inc.
142 Sansome Street, Second Floor
San Francisco, California 94104

Re: *89bio, Inc.*
Registration Statement on Form S 1

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-1 (the "Registration Statement") of 89bio, Inc., a Delaware corporation (the "Company"), filed with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), in connection with the offering by the Company of up to 2,530,000 shares of the Company's common stock, par value \$0.001 per share, (the "Shares").

In arriving at the opinion expressed below, we have examined originals, or copies certified or otherwise identified to our satisfaction as being true and complete copies of the originals, of specimen Common Stock certificates and such other documents, corporate records, certificates of officers of the Company and of public officials and other instruments as we have deemed necessary or advisable to enable us to render the opinions set forth below. In our examination, we have assumed without independent investigation the genuineness of all signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies.

Based upon the foregoing, and subject to the assumptions, exceptions, qualifications and limitations set forth herein, we are of the opinion that the Shares, when issued against payment therefor as set forth in the Registration Statement, will be validly issued, fully paid and non-assessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement, and we further consent to the use of our name under the caption "Legal Matters" in the Registration Statement and the prospectus that forms a part thereof. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations of the Commission.

Very truly yours,

Sincerely,

/s/ Gibson, Dunn & Crutcher LLP

Beijing • Brussels • Century City • Dallas • Denver • Dubai • Frankfurt • Hong Kong • Houston • London • Los Angeles • Munich
New York • Orange County • Palo Alto • Paris • San Francisco • São Paulo • Singapore • Washington, D.C.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated March 18, 2020 relating to the financial statements of 89bio, Inc., appearing in the Annual Report on Form 10-K of 89bio, Inc. for the year ended December 31, 2019. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Deloitte & Touche LLP
San Francisco, California
July 6, 2020

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement on Form S-1 of our report dated August 15, 2019, except for the retroactive effect of both the 1-for-6.217 reverse stock split and the reorganization, as described in Note 1, as to which the date is October 28, 2019 relating to the financial statements of 89bio, Inc. (operating as 89Bio, Ltd. prior to the reorganization described in Note 1) appearing in the Annual Report on Form 10-K of 89bio, Inc. for the year ended December 31, 2019. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Brightman Almagor Zohar & Co.
A Firm in the Deloitte Global Network

Tel Aviv, Israel
July 6, 2020