

PROSPECTUS

5,000,000 Shares



Common Stock

We are offering 5,000,000 shares of our common stock. Our common stock is listed on The Nasdaq Global Select Market under the symbol "PRAX." The last reported sale price of our common stock on The Nasdaq Global Select Market on May 13, 2021 was \$18.77 per share.

We are an "emerging growth company" under applicable Securities and Exchange Commission rules and are subject to reduced public company reporting requirements for this prospectus and future filings.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption "[Risk Factors](#)" beginning on page 12 of this prospectus.

	<u>Per Share</u>	<u>Total</u>
Public offering price	\$ 18.250	\$ 91,250,000
Underwriting discounts(1)	\$ 1.095	\$ 5,475,000
Proceeds, before expenses, to Praxis Precision Medicines, Inc.	\$ 17.155	\$ 85,775,000

(1) See "Underwriting" beginning on page 31 of this prospectus for additional information regarding underwriting compensation.

The underwriters may also purchase up to an additional 750,000 shares from us at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus.

The underwriters expect to deliver the shares against payment in New York, New York on May 18, 2021.

BofA Securities

Cowen

Piper Sandler

Wedbush PacGrow

May 13, 2021.

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You should rely only on the information contained in this prospectus or in any free writing prospectus we file with the Securities and Exchange Commission, or the SEC. Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We 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 is accurate only as of the date on the front cover page of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

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 common stock and the distribution of this prospectus outside of the United States.

The market data and certain other statistical information used throughout this prospectus are based on independent industry publications, governmental publications, reports by market research firms or other independent sources that we believe to be reliable sources. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the information contained in such publications. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties and are subject to change based on various factors, including those discussed under the section entitled “Risk Factors” and elsewhere in this prospectus. Some data are also based on our good faith estimates.

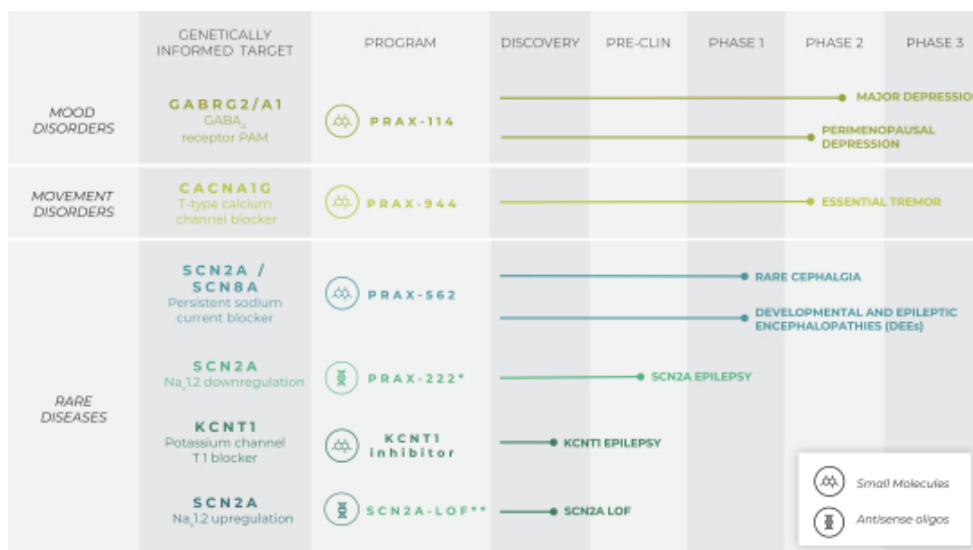
PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus and the information in our filings with the U.S. Securities and Exchange Commission, or the SEC, incorporated by reference in this prospectus. Unless the context otherwise requires, we use the terms “Praxis,” “Company,” “we,” “us” and “our” in this prospectus to refer to Praxis Precision Medicines, Inc.

Company Overview

We are a clinical-stage biopharmaceutical company translating genetic insights into the development of therapies for central nervous system, or CNS, disorders characterized by neuronal imbalance. Normal brain function requires a delicate balance of excitation and inhibition in neuronal circuits, which, when dysregulated, can lead to abnormal function and disease. We are applying insights from genetic epilepsies to broader neurological and psychiatric disorders, using our understanding of shared biological targets and circuits in the brain. We apply a deliberate and pragmatic precision approach, leveraging a suite of translational tools including novel transgenic and predictive translational animal models and electrophysiology markers, to enable an efficient path to proof-of-concept in patients. Through this approach, we have established a broad portfolio, including multiple disclosed programs across CNS disorders, including depression, epilepsy, movement disorders and pain syndromes, with three clinical-stage product candidates.

Our insights into genetic mutations resulting in neuronal imbalance have enabled us to develop a pipeline addressing prevalent psychiatric and neurologic conditions and rare diseases, with the ability to expand into additional indications. We have established a broad portfolio, including multiple disclosed programs across CNS disorders, including depression, epilepsy, movement disorders and pain syndromes. We expect multiple topline clinical trial readouts from all three programs in the next year and anticipate the launch of a new clinical development program in 2021. We intend to develop differentiated therapies that can deliver long-term benefits to human health by meaningfully impacting patients and society. Below is a summary of our portfolio of disclosed programs, addressing either broad psychiatric and neurologic conditions or rare diseases, followed by a summary of our upcoming milestones.



* PRAX-222 is a collaboration with Ionis Pharmaceuticals, or Ionis, and RogCon Inc. Ionis is eligible to receive royalties as a percentage of net product sales worldwide in the low-20s.

** SCN2A-LOF is a collaboration with The Florey Institute; collaboration includes 2 additional ASOs with undisclosed targets.

MULTIPLE POTENTIAL VALUE-CREATING MILESTONES
 EXPECTED WITHIN THE NEXT 12+ MONTHS

MID 2021	2H 2021	1H 2022	2H 2022
PRAX-114 Initiate Phase 2 Adjunctive MDD Trial	PRAX-114 Phase 2a PMD Topline	PRAX-114 Phase 2/3 Monotherapy MDD Aria Study Topline	PRAX-114 Phase 2 PTSD Topline
PRAX-944 Phase 2a ET Topline	PRAX-944 Initiate Phase 2 Randomized Control ET Trial	PRAX-114 Phase 2 Adjunctive MDD Topline	PRAX-114 Phase 2 ET Topline
PRAX-562 Phase 1 Safety, Tolerability & PK	PRAX-114 Initiate Phase 2 PTSD Trial	PRAX-944 Initiate Phase 2 PD Trial	PRAX-944 Phase 2 Randomized Control ET Topline
	PRAX-114 Initiate Phase 2 ET Trial	PRAX-562 Initiate Phase 2 DEE Trial	
	PRAX-562 Initiate Phase 2 Adult Cephalgia Trial	PRAX-222 Initiate Phase 1/2 SCN2A-DEE Trial	
	PRAX-222 Complete IND-enabling Toxicology Studies for PRAX-222		
	KCNT1 INHIBITOR Nominate Development Candidate for KCNT1		

PRAX-114

We are developing PRAX-114, an extrasynaptic GABAA receptor preferring positive allosteric modulator, or PAM, for the treatment of patients suffering from major depressive disorder, or MDD, and perimenopausal depression, or PMD. PRAX-114 is under development as a potentially differentiated treatment for a broad MDD population, as both a monotherapy and adjunctive therapy for both acute and maintenance treatment. We have a multi-cohort, three-part Phase 2a clinical trial ongoing in Australia. Parts A and C of the trial have been completed and were treating patients with MDD, and Part B is ongoing and has focused on patients with PMD. For all parts of the trial, PRAX-114 was generally well-tolerated. In Parts A and C, we observed marked improvements in depression scores in MDD patients within two weeks of treatment that were maintained throughout the treatment period. We expect complete topline data from Part B of the trial in the second half of 2021. We also have initiated the Phase 2/3 Aria Study for monotherapy therapy treatment of MDD and expect topline results in the first half of 2022. If positive, the Phase 2/3 trial is intended to serve as one of two registrational trials required by the FDA to support clinical efficacy to support registration of PRAX-114 for monotherapy treatment of MDD. In addition to the Phase 2/3 monotherapy trial, we intend to initiate a Phase 2 trial for adjunctive treatment of MDD in the third quarter of 2021. This trial will provide controlled data to support advancing a Phase 3 adjunctive MDD trial and will increase the understanding of the dose range for expected Phase 3 monotherapy and adjunctive treatment trials. We expect topline results from this Phase 2 trial in the first half of 2022.

There is significant unmet medical need in MDD and PMD with over 22 million individuals suffering from depressive symptoms in the United States. Current pharmacological interventions suffer from multiple shortcomings including slow onset of efficacy, low remission rates and side effects that limit patient compliance. PRAX-114 targets an increasingly well-understood neuronal circuit in the brain that we believe, when properly modulated, can result in a robust and rapid antidepressant effect with an advantageous safety and tolerability profile.

We believe that our PRAX-114 program has several advantages as compared to currently available therapies and product candidates in the GABAA PAM therapeutic class:

- **Planned Path to a Potential Broad MDD Label.** We have been diligently pursuing our strategy to advance PRAX-114 towards regulatory approval and commercialization to support a broad label in MDD that can be easily integrated into standard clinical practice. We intend to develop

PRAX-114 in the United States and in other countries as both a monotherapy and adjunctive therapy for MDD for both acute and maintenance treatment.

- **Wider Therapeutic Window.** We have determined that PRAX-114 is approximately 10-fold more selective PAM of the extrasynaptic form of GABAA receptors compared to the synaptic form. By preferentially modulating extrasynaptic GABAA receptors, we believe PRAX-114 is able to uniquely activate the GABAergic target and has the potential to mediate antidepressant and anxiolytic activity without the significant sedation observed with less selective neuroactive steroids.
- **Simple Nightly Dosing.** We believe the ability to administer PRAX-114 and achieve targeted exposures, with or without food, is key for clinical and commercial success in MDD. This is also critical for a patient-centric therapy because many patients with depression suffer from appetite disturbances. We have observed fast absorption of PRAX-114 within one to three hours of dosing and a predictable PK profile across multiple trials. Based on clinical findings to date, PRAX-114 achieves reproducible overall exposure (i.e., area under the concentration curve, or AUC) across a wide range of administration conditions, demonstrating consistent exposure when administered with or without food and at different times of day, whereas other GABAA PAM neuroactive steroids may require food to achieve therapeutic levels.
- **Sustained Administration.** After consultation with the FDA and other stakeholders in MDD and PMD therapy, we designed our Phase 2/3 trial of PRAX-114 to include 28-day nightly dosing to evaluate patients at 14 days to assess the rapidity and robustness of response and 28 days to measure durability of effect. We believe that having a dosing paradigm consistent with the duration of depressive episodes and easily integrated into standard clinical practice will provide the most substantial benefit to patients in controlling their disease, further differentiating PRAX-114 from other GABAA PAMs.
- **Indication Expansion.** Based on the novel pharmacology of PRAX-114 and its generally well-tolerated profile in clinical trials to date and our knowledge of disorders related to MDD that may be treatable through the GABAA PAM mechanism, we believe PRAX-114 is suitable for potential development across a wide-range of indications in psychiatry and neurology, providing for potentially sizable expansion opportunities to explore in addition to MDD. We plan to initiate a Phase 2 trial for treatment of post-traumatic stress disorder in the second half of 2021 and expect topline results in the second half of 2022. We also plan to initiate a Phase 2 trial for treatment of Essential Tremor, or ET, in the second half of 2021 and expect topline results in the second half of 2022.

PRAX-944

We are developing PRAX-944, a potentially differentiated selective small molecule inhibitor of T-type calcium channels for the treatment of ET. We have evaluated the safety and tolerability of PRAX-944 in over 150 healthy volunteers in five separate clinical trials. We have studied the safety of PRAX-944 modified release formulation with titration up to 120mg/day and no maximum tolerated dose, or MTD, has been identified. We are currently conducting a Phase 2a proof-of-concept, open-label trial, in ET patients. Preliminary site data from six participants in the first dose cohort showed tremor reduction, which compares favorably to the standard of care agents and historical placebo response. Based on the observed safety profile in the healthy volunteer titration study and the safety and preliminary efficacy data in ET participants administered up to 40mg daily, we have added a second cohort to the ongoing ET Phase 2a trial where up to twelve patients will be titrated to a dose of up to 120mg/day of PRAX-944. We have also included a randomized, double-blind, placebo-controlled withdrawal phase to this later cohort in the trial, where participants will either be maintained on their final open-label dose or switched to placebo. We plan to announce topline open-label safety, tolerability and efficacy data for this second of the two cohorts in mid-2021. In addition, we plan to start a Phase 1 trial to explore faster titration schemes by

mid-2021 and to initiate a Phase 2 randomized, double-blind, placebo-controlled trial for treatment of ET in the fourth quarter of 2021.

There is a large body of clinical, preclinical and genetic evidence that points to the involvement of T-type calcium channels in the cerebello-thalamo-cortical, or CTC, circuit, as a main driver of ET. ET is the most common movement disorder, affecting up to seven million patients in the United States, which is seven times more individuals compared to Parkinson's tremor. ET is a progressive and debilitating movement disorder with action tremors that significantly disrupt daily living. There is a high unmet need for ET patients given the limited treatment options, with only one approved pharmacotherapy that is poorly tolerated, resulting in high discontinuation rates and a small group of patients opting for invasive brain surgeries.

Successful development of T-type calcium channel modulators in ET likely requires a PK profile with a blunted C_{max} and thoughtful clinical trial design and endpoint selection. We have designed our development program to include careful selection of clinical endpoints, a modified release formulation and dose titration strategy. We believe the profile of PRAX-944 coupled with its modified release formulation positions it for development as a differentiated therapy in ET.

Because of the gatekeeper role of T-type calcium channels in regulating neuronal firing patterns in multiple neuronal circuits, we believe PRAX-944 is suitable for potential development across a wide-range of indications in psychiatry and neurology, providing sizable expansion opportunities in addition to ET. We expect to initiate a Phase 2 trial for treatment of Parkinson's Disease, or PD, in the first half of 2022.

PRAX-562

Our most advanced rare disease product candidate and third clinical program, PRAX-562, is the first selective persistent sodium current blocker in development for the treatment of a broad range of rare, devastating CNS disorders, such as severe pediatric epilepsies and rare adult cephalgias. To date, PRAX-562 has demonstrated pharmacological activity in preclinical in-vivo models at generally well-tolerated doses.

We initiated a Phase 1 trial of PRAX-562 in Australia to evaluate the safety, tolerability, PK and effects on an exploratory electroencephalography, or EEG, biomarker in up to 129 adult healthy volunteers. We have completed the single ascending dose, or SAD, portion and the multiple ascending dose, or MAD, cohort in the Phase 1 trial of PRAX-562 in healthy volunteers up to the highest preplanned dose. We anticipate initiating an exploratory Phase 2 trial in patients with rare adult cephalgias, including Short-lasting Unilateral Neuralgiform headache attacks with Conjunctival injection and Tearing, or SUNCT, Short-lasting Unilateral Neuralgiform headache with Autonomic symptoms, or SUNA, and Trigeminal Neuralgia, or TN, in the second half of 2021. In January 2021, the FDA granted rare pediatric disease designation for PRAX-562 for the treatment of SCN2A and SCN8A developmental epileptic encephalopathies, or SCN2A-DEE and SCN8A-DEE, respectively, and in April 2021, the FDA granted orphan drug designation for PRAX-562 for the treatment of SCN2A-DEE and SCN8A-DEE. We plan to initiate a Phase 2 trial of PRAX-562 for treatment of developmental epileptic encephalopathies, including SCN2A-DEE and SCN8A-DEE, in the first half of 2022.

Preclinical Programs

In addition to our clinical programs, our most advanced preclinical stage program is PRAX-222, an antisense oligonucleotide, or ASO, designed to decrease the expression levels of the protein encoded by the gene SCN2A in patients with gain-of-function, or GOF, mutations in epilepsy. The FDA has granted both rare pediatric disease designation and orphan drug designation for PRAX-222 for the treatment of SCN2A-DEE. We have one disclosed discovery program in development for KCNT1-related epilepsy, and in March 2021 we entered into an innovative research collaboration with The Florey Institute of Neuroscience and Mental Health to develop three additional novel ASOs for the treatment of patients with severe genetic epilepsies, including a novel approach targeting SCN2A loss-of-function, or LOF, mutations in epilepsy.

Our Approach

Each of our programs is based on four key principles that we believe will both increase the probability of success and allow us to efficiently translate insights into high-impact therapies for patients and society:

1. *Focus on therapeutic targets identified through human genetics.*
2. *Utilize translational tools to validate the potential of our targets and product candidates.*
3. *Pursue efficient, rigorous clinical development paths to proof-of-concept in humans.*
4. *Apply patient-centric development strategies.*

Our Team

Our company was founded by scientific innovators Kiran Reddy, M.D., David Goldstein, Ph.D. and Steven Petrou, Ph.D., who have pioneered work to identify and characterize de novo mutations in several dozen genes believed to cause a number of forms of severe pediatric epilepsies. These genes regulate key neuronal circuits in the brain which, when dysregulated, can result in severe seizure phenotypes as well as comorbid developmental delays, cognitive deficits, sensory-motor issues and often early death. Further, based on our understanding of a body of preclinical and clinical evidence, we now believe that these genes also play critical roles in the predisposition to other more prevalent neurologic and psychiatric disorders, such as mood disorders, movement disorders, pain syndromes, autism, migraine and schizophrenia, making them attractive targets for therapeutic intervention for a wide range of CNS disorders.

We have attracted a talented team of scientists and researchers in genetics and biology, chemistry and translational medicine as well as business leaders with established track records of successfully executing innovative drug discovery and development programs. Our Chief Executive Officer, Marcio Souza, previously served as Chief Operating Officer at PTC Therapeutics, Inc. and was instrumental in the development and commercialization of multiple approved products while at NPS Pharmaceuticals, Inc., Shire Human Genetic Therapies Inc. and Sanofi Genzyme Corporation. Our Chief Medical Officer, Bernard Ravina, M.D., previously Chief Medical Officer at Voyager Therapeutics, Inc., is a neurologist and movement disorder specialist who brings decades of neurologic drug development experience from roles at Biogen, the University of Rochester and the NIH's Institute of Neurological Disorders and Stroke.

Our Strategy

Our goal is to translate genetic insights into high-impact therapies for millions of people suffering from rare or prevalent CNS disorders characterized by neuronal imbalance. Key components of our strategy include:

- *Advance PRAX-114 toward regulatory approval and commercialization as a potentially differentiated monotherapy and adjunctive therapy for MDD and PMD in both acute and maintenance settings.*
- *Advance PRAX-944 toward regulatory approval and commercialization as a potentially differentiated therapy for ET.*
- *Advance our rare disease programs and build our franchise of candidates addressing rare diseases such as DEEs based on precision medicine principles.*
- *Maximize the value of our product candidates through select indication expansion.*
- *Advance our understanding of genetics and neuronal imbalance to maintain our leadership and continue to build our pipeline.*
- *Build a sales and marketing infrastructure to reach prescribers in the United States and maximize the reach of our products globally, alone or in collaboration with others.*

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks, as more fully described in the section entitled “Risk Factors” immediately following this prospectus summary. These risks include, among others:

- We are a clinical-stage biopharmaceutical company and we have incurred significant losses since our inception. We anticipate that we will continue to incur significant losses for the foreseeable future.
- We will need substantial additional funding, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product discovery and development programs or commercialization efforts.
- Our business substantially depends upon the successful development of PRAX-114, PRAX-944 and PRAX-562. If we are unable to obtain regulatory approval for, and successfully commercialize, PRAX-114, PRAX-944 or PRAX-562, our business may be materially harmed.
- Clinical development involves a lengthy, complex and expensive process, with an uncertain outcome. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials, which to date have primarily been conducted in Australia and New Zealand, may not satisfy the requirements of the FDA or comparable foreign regulatory authorities.
- Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit their commercial potential or result in significant negative consequences following regulatory approval, if obtained.
- The markets for PRAX-114 for major depressive disorder and perimenopausal disorder, PRAX-944 for essential tremor, PRAX-562 for multiple rare neurological conditions and any other product candidates we may develop may be smaller than we expect.
- We face significant competition in an environment of rapid technological and scientific change, and there is a possibility that our competitors may achieve regulatory approval before us or develop therapies that are safer, more advanced or more effective than ours, which may negatively impact our ability to successfully market or commercialize any product candidates we may develop and ultimately harm our financial condition.
- Our success depends in part on our ability to protect our intellectual property. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.
- We have entered into, and may enter into, license or other collaboration agreements that impose certain obligations on us. If we fail to comply with our obligations under such agreements with third parties, we could lose license rights that may be important to our business.
- Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.
- We expect to depend on collaborations with third parties for the research, development and commercialization of certain of the product candidates we may develop. If any such collaborations are not successful, we may not be able to realize the market potential of those product candidates.
- Business interruptions resulting from COVID-19 or a similar pandemic, epidemic or outbreak of an infectious disease in the United States or worldwide may adversely affect our business.
- The price of our stock may be volatile, and you could lose all or part of your investment.

Corporate Information

We were incorporated under the laws of the State of Delaware on September 22, 2015. Our principal executive office is located at One Broadway, 16th Floor, Cambridge, MA 02142, and our telephone number is (617) 300-8460. Our website address is www.praxismedicines.com. We do not incorporate the information on or accessible through 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.

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

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, as amended, or the JOBS Act, enacted in April 2012. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- reduced disclosure about our executive compensation arrangements;
- no non-binding advisory votes on executive compensation or golden parachute arrangements; and
- exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1.07 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the U.S. Securities and Exchange Commission. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in the registration statement of which this prospectus is a part. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. Additionally, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to 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, therefore, while we are an emerging growth company we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies.

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 until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than \$250 million measured on the last business day of our second fiscal quarter, or our annual revenues are less than \$100 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than \$700 million measured on the last business day of our second fiscal quarter.

THE OFFERING

Common stock offered by us	5,000,000 shares.
Common stock to be outstanding immediately after this offering	43,621,049 shares (44,371,049 shares if the underwriters exercise their option to purchase additional shares in full).
Underwriters' option to purchase additional shares	We have granted a 30-day option to the underwriters to purchase up to an aggregate of 750,000 additional shares of common stock from us at the public offering price, less underwriting discounts and commissions, on the same terms as set forth in this prospectus.
Use of proceeds	We estimate that we will receive net proceeds from the sale of shares of our common stock in this offering of approximately \$85.2 million, or \$98.1 million if the underwriters exercise their option to purchase additional shares in full, based on the public offering price of \$18.25 per share, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering along with our cash, cash equivalents and marketable securities to (i) advance PRAX-114 into and through the completion of our Phase 2/3 Aria Study in monotherapy MDD, which is intended to satisfy one of two registrational trials required by the FDA to support clinical efficacy for monotherapy MDD, advance PRAX-114 into and through the completion of our Phase 2 trial for the adjunctive treatment of MDD, complete Part B (PMD) of our Phase 2a clinical trial for PRAX-114, initiate a Phase 3 monotherapy trial in MDD, initiate and complete a Phase 2 trial in PTSD, initiate and complete a Phase 2 trial in ET and pursue the development of PRAX-114 in an additional indication; (ii) complete our ongoing Phase 2a clinical trial and a Phase 2 randomized, controlled clinical trial for PRAX-944 in ET and initiate and complete a Phase 2 trial of PRAX-944 in PD; (iii) complete our ongoing PRAX-562 Phase 1 healthy volunteer trial and initiate and complete Phase 2 trials of PRAX-562 in SUNCT, SUNA and TN, and in DEEs, including SCN8A-DEE and SCN2A-DEE and (iv) advance other programs in our pipeline and support working capital and other general corporate purposes. For a more complete description of our intended use of the proceeds from this offering, see "Use of Proceeds."
Risk factors	You should carefully read the "Risk Factors" section of this prospectus, and the other information included in, or incorporated by reference into, this prospectus for a discussion of factors that you should consider before deciding to invest in our common stock.
Nasdaq Global Select Market symbol	"PRAX".

The number of shares of our common stock after this offering is based on 38,621,049 shares of our common stock issued as of March 31, 2021 and excludes:

- 6,648,367 shares of our common stock issuable upon the exercise of stock options outstanding as of March 31, 2021 under our 2017 Stock Incentive Plan and 2020 Stock Option and Incentive Plan, at a weighted average exercise price of \$15.31 per share;
- 3,515,208 shares of our common stock reserved for future issuance under our 2020 Stock Option and Incentive Plan as of March 31, 2021;
- 654,204 shares of our common stock reserved for future issuance under the 2020 Employee Stock Purchase Plan as of March 31, 2021; and
- 328,363 shares of our common stock reserved for future vesting of restricted stock units as of March 31, 2021.

Unless otherwise indicated, all information in this prospectus reflects or assumes the following:

- no exercise of outstanding options described above; and
- no exercise by the underwriters of their option to purchase up to 750,000 additional shares of common stock in this offering.

SUMMARY CONSOLIDATED FINANCIAL DATA

You should read the following summary consolidated financial data together with our consolidated financial statements and unaudited interim condensed consolidated financial statements and the related notes and “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, 2020 and Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, which are incorporated by reference in this prospectus. We have derived the consolidated statement of operations data for the years ended December 31, 2020 and 2019 from our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020, and have derived the consolidated statement of operations data for the three months ended March 31, 2021 and 2020 and the consolidated balance sheet data of March 31, 2021 from our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, which are incorporated by reference in this prospectus.

	Year Ended December 31,		Three Months Ended March 31,	
	2020	2019	2021	2020
	(Unaudited)			
(In thousands, except share and per share data)				
Consolidated Statement of Operations Data:				
Operating expenses:				
Research and development	\$ 44,976	\$ 29,557	\$ 17,929	\$ 6,868
General and administrative	16,992	6,232	9,490	1,601
Total operating expenses	61,968	35,789	27,419	8,469
Loss from operations	(61,968)	(35,789)	(27,419)	(8,469)
Other income:				
Interest income, net	140	193	46	128
Total other income	140	193	46	128
Loss before benefit from income taxes	(61,828)	(35,596)	(27,373)	(8,341)
Benefit from income taxes	(8)	(84)	—	(11)
Net loss	\$ (61,820)	\$ (35,512)	\$ (27,373)	\$ (8,330)
Accretion and cumulative dividends on redeemable convertible preferred stock	(8,996)	(5,170)	—	(2,064)
Gain on repurchase of redeemable convertible preferred stock	493	—	—	493
Net loss attributable to common stockholders	\$ (70,323)	\$ (40,682)	\$ (27,373)	\$ (9,901)
Net loss per share attributable to common stockholders, basic and diluted(1)	\$ (7.86)	\$ (26.60)	\$ (0.71)	\$ (6.08)
Weighted average common shares outstanding, basic and diluted(1)	8,950,152	1,529,629	38,470,710	1,629,340

(1) See Note 12 to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020 and see Note 9 to our condensed consolidated financial statements included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, which is incorporated by reference in this prospectus, for details on the calculation of basic and diluted net loss per share attributable to common stockholders.

(in thousands)	As of March 31, 2021	
	Actual	As Adjusted(2)
Consolidated Balance Sheet Data:		
Cash, cash equivalents and marketable securities	\$ 270,811	\$ 355,996
Working capital(1)	\$ 264,826	\$ 350,011
Total assets	\$ 279,253	\$ 364,438
Additional paid-in-capital	\$ 442,524	\$ 527,708
Accumulated deficit	\$(176,927)	\$(176,927)
Total stockholders' equity	\$ 265,515	\$ 350,699

(1) We define working capital as current assets less current liabilities. See our condensed consolidated financial statements and related notes included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, which is incorporated by reference in this prospectus, for further details regarding our current assets and current liabilities.

(2) The as adjusted balance sheet data give effect to the issuance and sale of 5,000,000 shares of our common stock in this offering at the public offering price of \$18.25 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all other information in this prospectus, or incorporated by reference, including our consolidated financial statements and the related notes and the risks and uncertainties discussed under “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2020 which is incorporated by reference in this prospectus, before deciding to invest in our common stock. Any of the risk factors we describe below could adversely affect our business, financial condition or results of operations. The market price of our common stock could decline if one or more of these risks or uncertainties actually occur, causing you to lose all or part of the money you paid to buy our common stock.

Risks Related to This Offering

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The public offering price will be substantially higher than the as adjusted net tangible book value per share of our common stock after this offering. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the as adjusted net tangible book value per share after this offering. As a result, investors purchasing common stock in this offering will incur immediate dilution of \$10.21 per share, based on the public offering price of \$18.25 per share, representing the difference between our as adjusted net tangible book value per share after giving effect to this offering and the public offering price.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering. To the extent outstanding options are exercised, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see the section entitled “Dilution.”

Substantial amounts of our outstanding shares may be sold into the market when lock-up or market standoff periods end. If there are substantial sales of shares of our common stock, the price of our common stock could decline.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on shares of common stock outstanding as of March 31, 2021, upon the completion of this offering we will have outstanding a total of 43,621,049 shares of common stock, assuming no exercise of the underwriters’ option to purchase an additional 750,000 shares. Of these shares, as of the date of this prospectus, 40,589,031 shares of common stock, including the shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters’ option to purchase an additional 750,000 shares, will be freely tradable, without restriction, in the public market immediately following this offering, assuming that our current directors and officers do not purchase shares in this offering. The remaining shares are subject to lock-up restrictions described below and elsewhere in this prospectus. The representatives of the underwriters, however, may, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up restrictions to sell shares prior to the expiration of the lock-up restrictions.

The lock-up agreements pertaining to this offering will expire 90 days from the date of this prospectus, subject to earlier release of all or a portion of the shares subject to such agreements by the representatives of the underwriters in this offering in their sole discretion. After the lock-up agreements expire, based upon the number of shares of common stock outstanding as of March 31, 2021, up to an additional 3,032,018 shares of common stock

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will be eligible for sale in the public market, all of which are beneficially held by directors, executive officers and their affiliates and will be subject to certain limitations of Rule 144 under the Securities Act of 1933, as amended, or the Securities Act.

In addition, shares of common stock that are either subject to outstanding options or reserved for future issuance under our existing equity compensation plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline. Additionally, the number of shares of our common stock reserved for issuance under our 2020 Stock Option and Incentive Plan, or the 2020 Plan, will automatically increase on January 1 of each year, beginning on January 1, 2021, by 5% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors or compensation committee. Moreover, the number of shares of our common stock reserved for issuance under our 2020 Employee Stock Purchase Plan will automatically increase on January 1 of each year, beginning on January 1, 2021, by the lesser of 327,102 shares of common stock, 1% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors or compensation committee. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution.

We have broad discretion in the use of our existing cash, cash equivalents and short-term investments and the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of our existing cash, cash equivalents and short-term investments and the net proceeds from this offering, including for any of the purposes described in the section entitled “Use of Proceeds,” and you will not have the opportunity as part of your investment decision to assess whether such proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of our existing cash, cash equivalents and short-term investments and the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our existing cash, cash equivalents and short-term investments and the net proceeds from this offering in ways that ultimately increase the value of your investment. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference contain express or implied forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the success, cost and timing of our product development activities and clinical trials;
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates;
- the ability to license additional intellectual property relating to our product candidates from third parties and to comply with our existing license agreements and collaboration agreements;
- the ability and willingness of our third-party research institution collaborators to continue research and development activities relating to our product candidates;
- our ability to commercialize our products in light of the intellectual property rights of others;
- our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates;
- the commercialization of our product candidates, if approved;
- our plans to research, develop and commercialize our product candidates;
- future agreements with third parties in connection with the commercialization of our product candidates and any other approved product;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- the rate and degree of market acceptance of our product candidates;
- the pricing and reimbursement of our product candidates, if approved;
- regulatory developments in the United States and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;

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- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act, enacted in April 2012, or a smaller reporting company as defined in the Securities Exchange Act of 1934, as amended;
- the development of major public health concerns, including the novel coronavirus outbreak or other pandemics arising globally, and the future impact of it and COVID-19 on our clinical trials, business operations and funding requirements;
- our use of the proceeds from this offering; and
- other risks and uncertainties, including those listed under the caption “Risk Factors.”

In some cases, forward-looking statements can be identified by terminology, such as “may,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors” and elsewhere in this prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the information contained in such publications.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately \$85.2 million, or \$98.1 million if the underwriters exercise in full their option to purchase additional shares, based on the public offering price of \$18.25 per share, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We currently estimate that we will use the net proceeds from this offering, along with our existing cash, cash equivalents and short-term investments as follows:

- approximately \$40.0 million to \$50.0 million to advance PRAX-114 into and through the completion of our Phase 2/3 Aria Study in monotherapy MDD, which is intended to satisfy one of two registrational trials required by the FDA to support clinical efficacy for monotherapy MDD, advance PRAX-114 into and through the completion of our Phase 2 trial for the adjunctive treatment of MDD, complete Part B (PMD) of our ongoing Phase 2a clinical trial for PRAX-114, initiate a Phase 3 monotherapy trial in MDD, initiate and complete a Phase 2 trial in PTSD, initiate and complete a Phase 2 trial in ET and pursue the development of PRAX-114 in an additional indication;
- approximately \$20.0 million to \$30.0 million to complete our ongoing Phase 2a clinical trial and a Phase 2 randomized, controlled clinical trial for PRAX-944 in ET and initiate and complete a Phase 2 trial of PRAX-944 in PD;
- approximately \$10.0 million to \$20.0 million to complete our ongoing Phase 1 healthy volunteer trial in PRAX-562 and initiate and complete a Phase 2 trial of PRAX-562 rare adult cephalgias, including SUNCT, SUNA and TN, and initiate and complete a Phase 2 trial of PRAX-562 in DEEs, including SCN8A-DEE and SCN2A-DEE; and
- the remainder for advancement of other programs in our pipeline and support of working capital and other general corporate purposes.

Based on our current 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 operations for at least the next 24 months. We have based this estimate on assumptions that may prove to be incorrect, and we could use our available capital resources sooner than we currently expect.

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures and the extent of clinical development may vary significantly depending on numerous factors, including the progress of our development, the status of and results from preclinical studies or clinical trials we may commence in the future, as well as any collaborations that we may enter into with third parties for our product candidates, and any unforeseen cash needs. We may also use a portion of the net proceeds to in-license, acquire or invest in additional businesses, technologies, products or assets, although currently we have no specific agreements, commitments or understandings in this regard. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

Pending our use of proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation instruments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and any future earnings to fund the growth and development of our business. We do not intend to pay cash dividends to our stockholders in the foreseeable future. In addition, any future financing instruments could preclude us from paying dividends. Any future determination to pay dividends will be made at the discretion of our board of directors subject to applicable laws, and will depend upon, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. Investors should not purchase our common stock with the expectation of receiving cash dividends.

CAPITALIZATION

The following table sets forth our cash, cash equivalents, and marketable securities and our capitalization as of March 31, 2021:

- on an actual basis; and
- on an as adjusted basis to give effect to the issuance and sale of 5,000,000 shares of our common stock in this offering at the public offering price of \$18.25 per share, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the information in this table together with the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our condensed consolidated financial statements and the related notes included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, which is incorporated by reference in this prospectus.

(In thousands, except share and per share data)	As of March 31, 2021	
	Actual	As Adjusted
Cash, cash equivalents, and marketable securities	<u>\$ 270,811</u>	<u>\$ 355,996</u>
Stockholders’ equity:		
Preferred stock, \$0.0001 par value; 10,000,000 shares authorized and no shares issued or outstanding, actual; 10,000,000 shares authorized and no shares issued or outstanding, as adjusted	—	—
Common stock, \$0.0001 par value; 150,000,000 shares authorized and 38,621,049 shares issued and outstanding, actual; 150,000,000 shares authorized; 43,621,049 shares issued and outstanding, as adjusted	4	4
Additional paid-in capital	442,524	527,708
Accumulated other comprehensive loss	(86)	(86)
Accumulated deficit	<u>(176,927)</u>	<u>(176,927)</u>
Total stockholders’ equity	<u>265,515</u>	<u>350,699</u>
Total	<u>\$ 265,515</u>	<u>\$ 350,699</u>

This table excludes:

- 6,648,367 shares of our common stock issuable upon the exercise of stock options outstanding as of March 31, 2021 under our 2017 Stock Incentive Plan and 2020 Stock Option and Incentive Plan, at a weighted average exercise price of \$15.31 per share;
- 3,515,208 shares of our common stock reserved for future issuance under our 2020 Stock Option and Incentive Plan as of March 31, 2021;
- 654,204 shares of our common stock reserved for future issuance under the 2020 Employee Stock Purchase Plan as of March 31, 2021; and
- 328,363 shares of our common stock reserved for future vesting of restricted stock units as of March 31, 2021.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the public offering price per share of common stock in this offering and the as adjusted net tangible book value per share of common stock immediately after this offering.

Our historical net tangible book value as of March 31, 2021 was \$265.5 million, or \$6.87 per share of common stock. Our historical net tangible book value is the amount of our total tangible assets less our total liabilities. Historical net tangible book value per share represents historical net tangible book value divided by the 38,621,049 issued shares of our common stock as of March 31, 2021.

After giving further effect to the sale and issuance of 5,000,000 shares of our common stock in this offering at the offering price of \$18.25 per share, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2021 would have been \$350.7 million, or \$8.04 per share. This represents an immediate increase in as adjusted net tangible book value per share of \$1.17 to existing stockholders and immediate dilution of \$10.21 in as adjusted net tangible book value per share to new investors participating in this offering. Dilution per share to new investors is determined by subtracting the as adjusted net tangible book value per share after this offering from the public offering price per share paid by new investors.

The following table illustrates this dilution on a per share basis to new investors:

Public offering price per share		\$18.25
Historical net tangible book value per share as of March 31, 2021	\$6.87	
Increase in net tangible book value per share attributable to this offering	<u>\$1.17</u>	
As adjusted net tangible book value per share after this offering		\$ 8.04
Dilution per share to new investors participating in this offering		<u>\$10.21</u>

If the underwriters exercise their option in full to purchase 750,000 additional shares of common stock in this offering, our as adjusted net tangible book value per share after this offering would be \$363.6 million, representing an immediate increase in as adjusted net tangible book value per share of \$8.19 to existing stockholders and immediate dilution in as adjusted net tangible book value per share of \$10.06 to investors participating in this offering at the public offering price of \$18.25 per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The above discussion and table are based on issued shares of our common stock and exclude:

- 6,648,367 shares of our common stock issuable upon the exercise of stock options outstanding as of March 31, 2021 under our 2017 Stock Incentive Plan and 2020 Stock Option and Incentive Plan, at a weighted average exercise price of \$15.31 per share;
- 3,515,208 shares of our common stock reserved for future issuance under our 2020 Stock Option and Incentive Plan as of March 31, 2021;
- 654,204 shares of our common stock reserved for future issuance under the 2020 Employee Stock Purchase Plan as of March 31, 2021; and
- 328,363 shares of our common stock reserved for future vesting of restricted stock units as of March 31, 2021.

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You will experience further dilution if new options or warrants are issued under our equity incentive plans or we issue additional shares of common stock, other equity securities or convertible debt securities in the future. 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 sets forth certain information known to us regarding beneficial ownership of our capital stock as of April 16, 2021, as adjusted to reflect the sale of common stock offered by us in this offering, for:

- each person or group of affiliated persons known by us to be the beneficial owner of more than five percent of our capital stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

To the extent that the underwriters sell more than 5,000,000 shares in this offering, the underwriters have the option to purchase up to an additional 750,000 shares at the public offering price less the underwriting discount.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Under those rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. Except as noted by footnote, and subject to community property laws where applicable, we believe, based on the information provided to us, that the persons and entities named in the table below have sole voting and investment power with respect to all common stock shown as beneficially owned by them.

The percentage of beneficial ownership prior to this offering in the table below is based on 38,626,547 shares of common stock deemed to be outstanding as of April 16, 2021, and the percentage of beneficial ownership after this offering in the table below is based on 43,621,049 shares of common stock assumed to be outstanding after the closing of the offering. The information in the table below assumes no exercise of the underwriters' option to purchase additional shares. Options to purchase shares of common stock that are exercisable within 60 days of April 16, 2021 are deemed to be beneficially owned by the persons holding these options for the purpose of computing percentage ownership of that person, but are not treated as outstanding for the purpose of computing any other person's ownership percentage.

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	Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After offering
5% or Greater Stockholders			
Entities affiliated with Blackstone(1)	8,501,487	22.0%	19.5%
FMR LLC(2)	4,163,834	10.8%	9.5%
Entities affiliated with Eventide(3)	3,513,081	9.1%	8.1%
Vida Ventures, LLC(4)	2,939,329	7.6%	6.7%
Novo Holdings A/S(5)	1,442,080	3.7%	3.3%
Directors, Named Executive Officers and Other Executive Officers			
Dean Mitchell	—	—	—
Jeffrey Chodakewitz(6)	2,144	*	*
Merit Cudkowicz(7)	1,072	*	*
Gregory Norden(8)	18,420	*	*
Stefan Vitorovic(4)	2,939,329	7.6%	6.7%
William Young(9)	30,169	*	*
Marcio Souza(10)	283,190	*	*
Bernard Ravina(11)	154,535	*	*
Nicole Sweeny	—	—	—
All executive officers and directors as a group (10 persons)(12)	3,437,968	8.8%	7.9%

* Represents beneficial ownership of less than one percent.

- (1) Based solely on information contained in a Schedule 13G filed jointly by Clarus Lifesciences III, L.P., or Clarus, BSOF Parallel Master Fund L.P., Clarus Ventures III GP, L.P., Blackstone Clarus III L.L.C., Blackstone Strategic Opportunity Associates L.L.C., Blackstone Alternative Solutions L.L.C., Blackstone Holdings I L.P., Blackstone Holdings II L.P., Blackstone Holdings I/II GP L.L.C., The Blackstone Group Inc., Blackstone Group Management L.L.C. and Stephen A. Schwarzman with the SEC on February 16, 2021. Clarus directly holds 7,594,109 shares of common stock and BSOF Parallel Master Fund L.P. directly holds 907,378 shares of common stock. Clarus Ventures III GP, L.P. is the general partner of Clarus. Blackstone Clarus III L.L.C. is the general partner of Clarus GP. The sole member of Blackstone Clarus III L.L.C. is Blackstone Holdings II L.P. Blackstone Strategic Opportunity Associates L.L.C. is the general partner of BSOF Parallel Master Fund L.P. Blackstone Holdings II L.P. is the sole member of Blackstone Strategic Opportunity Associates L.L.C. Blackstone Alternative Solutions L.L.C. is the investment manager of BSOF Parallel Master Fund L.P. Blackstone Holdings I L.P. is the sole member of Blackstone Alternative Solutions L.L.C. The general partner of Blackstone Holdings I L.P. and Blackstone Holdings II L.P. is Blackstone Holdings I/II GP L.L.C. The sole member of Blackstone Holdings I/II GP L.L.C. is The Blackstone Group Inc. The sole holder of the Class C common stock of The Blackstone Group Inc. is Blackstone Group Management L.L.C. Blackstone Group Management L.L.C. is wholly-owned by Blackstone's senior managing directors and controlled by its founder, Stephen A. Schwarzman. Each of such entities and Mr. Schwarzman may be deemed to beneficially own the shares beneficially owned by the Blackstone Funds controlled by it or him, but each (other than the Blackstone Funds to the extent of their direct ownership) disclaims beneficial ownership of such shares. The address for each of Clarus and Clarus Ventures III GP, L.P. is c/o Clarus Ventures LLC, 101 Main Street, Suite 1210, Cambridge, MA 02142. The address for each of the other Blackstone entities and Mr. Schwarzman is c/o The Blackstone Group Inc., 345 Park Avenue, New York, NY 10154.
- (2) Based solely on information contained in a Schedule 13G/A filed by FMR LLC with the SEC on February 10, 2021. FMR LLC has sole voting power with respect to 1,564,801 shares of common stock and sole dispositive power with respect to 4,163,834 shares of common stock. Abigail P. Johnson is a Director,

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the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company ("FMR Co"), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. FMR Co carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address of FMR LLC is 245 Summer Street, Boston, MA 02210.

- (3) Based solely on information contained in a Schedule 13G filed by Eventide Asset Management, LLC with the SEC on February 12, 2021. Eventide Asset Management, LLC, a Delaware limited liability company, is the beneficial owner of 3,513,081 common shares by virtue of being the investment adviser to registered investment companies. Mutual Fund Series Trust, On Behalf Of Eventide Gilead Fund, or Eventide Gilead, directly holds 1,566,708 shares of common stock and the Mutual Fund Series Trust, On Behalf Of Eventide Healthcare & Life Sciences Fund, or Eventide Healthcare, directly holds 1,946,373 shares of common stock. The address for both Eventide Healthcare and Eventide Gilead is One International Place, Suite 4210, Boston, Massachusetts 02110.
- (4) Based solely on information contained in a Schedule 13G filed by Vida Ventures, LLC with the SEC on February 16, 2021. All shares are held directly by Vida Ventures, LLC, a United States limited liability company. Stefan Vitorovic is the Co-Founder and Managing Director of Vida Ventures, LLC and is also a member of our Board of Directors. VV Manager, LLC, or VV Manager, is the managing member of Vida. Stefan Vitorovic, Arjun Goyal, Fred Cohen, Arie Beldegrun and Leonard Potter are managing directors of VV Manager, and may be deemed to share voting and dispositive power over the shares held by Vida. The address of Vida is 40 Broad Street, Suite 201, Boston, Massachusetts 02109.
- (5) Based solely on information contained in a Schedule 13G/A filed by Novo Holdings A/S, or Novo, with the SEC on May 3, 2021. All shares are held directly by Novo Holdings A/S, a Danish limited liability company that manages investments and financial assets. Novo Holdings A/S is wholly owned by Novo Nordisk Foundation, or the Foundation, a Danish commercial foundation. Novo Holdings A/S is the holding company in the group of Novo companies (currently comprised of Novo Nordisk A/S and Novozymes A/S) and is responsible for managing the Foundation's assets, including its financial assets. Based on the governance structure of Novo Holdings A/S and the Foundation, the Foundation is not deemed to have any beneficial ownership of the shares held by Novo Holdings A/S. The address for Novo Holdings A/S is Tuborg Havnevej 19, DK-2900 Hellerup, Denmark.
- (6) Consists of 2,144 shares of common stock underlying options exercisable within 60 days of April 16, 2021.
- (7) Dr. Cudkowicz was appointed as a member of our Board of Directors on April 28, 2021. Her holdings consist of 1,072 shares of common stock underlying options exercisable within 60 days of April 16, 2021.
- (8) Consists of 18,420 shares of common stock underlying options exercisable within 60 days of April 16, 2021.
- (9) Consists of 30,169 shares of common stock underlying options exercisable within 60 days of April 16, 2021.
- (10) Consists of (i) 24,450 shares of common stock and (ii) 258,740 shares of common stock underlying options exercisable within 60 days of April 16, 2021.
- (11) Consists of (i) 56,021 shares of common stock and (ii) 98,514 shares of common stock underlying options exercisable within 60 days of April 16, 2021.
- (12) Consists of (i) 3,019,800 shares of common stock and (ii) 418,168 shares of common stock underlying options exercisable within 60 days of April 16, 2021.

SHARES ELIGIBLE FOR FUTURE SALE

Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time.

Based on the number of shares outstanding as of March 31, 2021, upon the completion of this offering, 43,621,049 shares of our common stock will be outstanding, assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options. Of the outstanding shares, all of the shares sold in this offering will be freely tradable, except that any shares held by our affiliates, as that term is defined in Rule 144 under the Securities Act, may only be sold in compliance with the limitations described below, and shares of our common stock are restricted shares of common stock subject to service-based vesting terms. 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.

Rule 144

In general, a person who has beneficially owned restricted stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale and (ii) we are subject to the Securities Exchange Act of 1934, as amended, or the Exchange Act, periodic reporting requirements for at least 90 days before the sale. Persons who have beneficially owned restricted shares for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares then outstanding, which will equal approximately shares immediately after this offering, assuming no exercise of the underwriters' option to purchase additional shares, based on the number of shares outstanding as of March 31, 2021; or
- the average weekly trading volume of our common stock on The Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and under "Underwriting" included elsewhere in this prospectus and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

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Lock-Up Agreements

All of our directors, officers and certain affiliates have entered into lock-up agreements with the underwriters of this offering, under which our directors, officers and certain affiliates have agreed, subject to certain exceptions, not to sell or otherwise transfer or dispose of any of our securities for a period of 90 days from the date of this prospectus. The representatives of the underwriters of this offering may, in their sole discretion, permit early release of shares subject to the lock-up agreements. See the section entitled “Underwriting,” appearing elsewhere in this prospectus for more information.

Registration Rights

Certain holders of our securities are entitled to various rights with respect to registration of their shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See the section entitled “Description of Capital Stock—Registration Rights” appearing elsewhere in this prospectus for more information.

Equity Incentive Plans

We have filed a registration statement on Form S-8 under the Securities Act to register our shares issued or reserved for issuance under our equity incentive plans. Accordingly, shares registered under such registration statement will be available for sale in the open market, unless such shares are subject to vesting restrictions with us or the lock-up restrictions described above.

DESCRIPTION OF CAPITAL STOCK

The information required by this section is hereby incorporated herein by reference to Exhibit 4.3 filed with our Annual Report on Form 10-K for the year ended December 31, 2020.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF COMMON STOCK

The following discussion is a summary of certain material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is for U.S. federal income tax purposes:

- a non-resident alien individual;
- a foreign corporation or any other foreign organization taxable as a corporation for U.S. federal income tax purposes; or
- a foreign estate or trust, the income of which is not subject to U.S. federal income tax on a net income basis.

This discussion does not address the tax treatment of partnerships or other entities that are pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code, which is generally property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances nor does it address any U.S. state, local or non-U.S. taxes, the alternative minimum tax, the Medicare tax on net investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code or "Section 1244 stock" within the meaning of Section 1244 of the Code, or any other aspect of any U.S. federal tax other than the income tax. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;
- brokers or dealers in securities;
- regulated investment companies;
- pension plans;

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- “controlled foreign corporations,” “passive foreign investment companies” and corporations that accumulate earnings to avoid U.S. federal income tax;
- “qualified foreign pension funds,” or entities wholly owned by a “qualified foreign pension fund”;
- persons that elect to apply Section 1400Z-2 of the Code to gains recognized with respect to shares 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;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- certain U.S. expatriates.

This discussion is for general information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock.

Distributions on Our Common Stock

As indicated in the “Dividend Policy” section of this prospectus, we have never declared or paid cash dividends on any of our capital stock and currently intend to retain all available funds and any future earnings to fund the development and growth of our business.

In the event that we do make distributions, subject to the discussions below under the sections titled “Backup Withholding and Information Reporting” and “Withholding and Information Reporting Requirements—FATCA”, distributions paid on our common stock will 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 a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder’s investment, up to such holder’s tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on Sale or Other Taxable Disposition of Our Common Stock.”

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

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A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for such lower rate of U.S. withholding tax as may be specified under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing a U.S. tax return with the IRS.

Gain on Sale or Other Taxable Disposition of Our Common Stock

Subject to the discussions below under "Backup Withholding and Information Reporting" and "Withholding and Information Reporting Requirements—FATCA," a non-U.S. holder generally will not be subject to any U.S. federal income or withholding tax on any gain realized upon such holder's sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed-base maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on a net income basis at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on Our Common Stock" also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for a period or periods aggregating 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence) on the net gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- we are, or have been, at any time during the five-year period preceding such sale or other taxable disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," unless our common stock is regularly traded on an established securities market, as defined by applicable U.S. Treasury Regulations, and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. 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 own tax advisors about the consequences that could result if we are, or become, a U.S. real property holding corporation.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S.

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holders may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in “Distributions on Our Common Stock,” generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker.

Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder’s U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

Withholding and Information Reporting Requirements—FATCA

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally impose a U.S. federal withholding tax at a rate of 30% on payments of dividends on our common stock paid to a foreign entity unless (i) if the foreign entity is a “foreign financial institution,” such foreign entity undertakes certain due diligence, reporting, withholding and certification obligations, (ii) if the foreign entity is not a “foreign financial institution,” such foreign entity identifies certain of its U.S. investors, if any or (iii) the foreign entity is otherwise exempt under FATCA. Such withholding may also apply to payments of gross proceeds of sales or other dispositions of our common stock, although under recently proposed U.S. Treasury Regulations (the preamble to which specifies that taxpayers are permitted to rely on such proposed U.S. Treasury Regulations pending finalization), no withholding will apply to such payments of gross proceeds. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Non-U.S. holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

The preceding discussion of material U.S. federal tax considerations is for prospective investors’ information only. It is not tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local, and non-U.S. tax consequences of purchasing, holding, and disposing of our common stock, including the consequences of any proposed changes in applicable laws.

UNDERWRITING

BofA Securities, Inc., Cowen and Company, LLC and Piper Sandler & Co. 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.

Underwriter	Number of Shares
BofA Securities, Inc.	1,800,000
Cowen and Company, LLC	1,525,000
Piper Sandler & Co.	1,225,000
Wedbush Securities Inc.	450,000
Total	5,000,000

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 nondefaulting 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 \$0.6570 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.

	Per Share	Without Option	With Option
Public offering price	\$ 18.250	\$ 91,250,000	\$ 104,937,500
Underwriting discount	\$ 1.095	\$ 5,475,000	\$ 6,296,250
Proceeds, before expenses, to Praxis Precision Medicines, Inc.	\$ 17.155	\$ 85,775,000	\$ 98,641,250

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The expenses of the offering, not including the underwriting discount, are estimated at \$590,000 and are payable by us. We have also agreed to reimburse the underwriters for up to \$30,000 for their FINRA counsel fee. In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering.

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 750,000 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, directors and certain 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., Cowen and Company, LLC and Piper Sandler & Co. 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 a registration statement related to the common stock, or
- enter into any swap or other agreement that transfers, 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.

Nasdaq Global Market Listing

The shares are listed on the Nasdaq Global Select Market under the symbol "PRAX."

Price Stabilization, 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.

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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 Select 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 Select 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, 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.

European Economic Area

In relation to each Member State of the European Economic Area (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 the 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 the Issuer or any Manager 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 the Company and Managers 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.

The Company, 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 Relevant 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.

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

Notice to Prospective Investors in the United Kingdom

In relation to the United Kingdom (“UK”), no Shares have been offered or will be offered pursuant to the offering to the public in the UK prior to the publication of a prospectus in relation to the Shares which has

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been approved by the Financial Conduct Authority in the UK in accordance with the UK Prospectus Regulation and the FSMA, except that offers of Shares may be made to the public in the UK at any time under the following exemptions under the UK Prospectus Regulation and the FSMA:

- a. to any legal entity which is a qualified investor as defined under the UK Prospectus Regulation;
- b. to fewer than 150 natural or legal persons (other than qualified investors as defined under the UK Prospectus Regulation), subject to obtaining the prior consent of representatives for any such offer; or
- c. at any time in other circumstances falling within section 86 of the FSMA,

provided that no such offer of Shares shall require the Issuer or any Manager to publish a prospectus pursuant to Section 85 of the FSMA or Article 3 of the UK Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

Each person in the UK who initially acquires any Shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the Company and the Managers that it is a qualified investor within the meaning of the UK 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 UK 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 the UK to qualified investors, in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, 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 the UK 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, the expression “UK Prospectus Regulation” means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, and the expression “FSMA” means the Financial Services and Markets Act 2000.

In connection with the offering, BofA Securities, Inc., Cowen and Company, LLC and Piper Sandler & Co. are not acting for anyone other than the issuer and will not be responsible to anyone other than the issuer for providing the protections afforded to their clients nor for providing advice in relation to the offering.

This document is for distribution only to persons who (i) have professional experience in matters relating to investments 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 “Financial Promotion 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

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (“SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to 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 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, the Company, 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 (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 supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (“DFSA”). This prospectus supplement 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 supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The shares to which this prospectus supplement 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 supplement 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 (“ASIC”), 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 shares 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,

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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.

Notice to Prospective Investors in Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728–1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the "Addressed Investors"); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728–1968, subject to certain conditions (the "Qualified Investors"). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728–1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728–1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone

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acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728–1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728–1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728–1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728–1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728–1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor’s name, address and passport number or Israeli identification number.

We have not authorized and do not authorize the making of any offer of securities through any financial intermediary on our behalf, other than offers made by the underwriters and their respective affiliates, with a view to the final placement of the securities as contemplated in this document. Accordingly, no purchaser of the shares, other than the underwriters, is authorized to make any further offer of shares on our behalf or on behalf of the underwriters.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Certain legal matters related to this offering will be passed upon for the underwriters by Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C., Boston, Massachusetts.

EXPERTS

The consolidated financial statements of Praxis Precision Medicines, Inc. appearing in the Praxis Precision Medicines, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2020 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm 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 (File Number 333-256005) under the Securities Act with respect to the common stock we are offering by this prospectus. This prospectus does not contain all of the information included in the registration statement. For further information pertaining to us and our common stock, you should refer to the registration statement and to its exhibits. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document.

We are subject to the informational requirements of the Exchange Act and will file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read our SEC filings, including the registration statement, at the SEC's website at www.sec.gov. We also maintain a website at <http://praxismedicines.com>. The information contained in or accessible from our website is not incorporated into this prospectus, and you should not consider it part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file, 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 (SEC File No. 001-39620):

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2020, filed with the SEC on March 17, 2021; and
- our [Definitive Proxy Statement](#) filed with the SEC on April 29, 2021, to the extent information therein is filed and not furnished;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2021, filed with the SEC on May 11, 2021;
- our Current Reports on Form 8-K filed with the SEC on [April 15, 2021](#) and [April 29, 2021](#); and
- the description of our common stock contained in our registration statement on [Form 8-A](#) filed with the SEC on October 14, 2020, including any amendments or reports filed for the purposes of updating this description.

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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 Praxis Precision Medicines, Inc., One Broadway, 16th Floor, Cambridge, Massachusetts 02142.

You also may access these filings on our website at <http://praxismedicines.com>. We do not incorporate the information contained on or accessible through our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to 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.

5,000,000 Shares



Common Stock

PROSPECTUS

BofA Securities
Cowen
Piper Sandler

Wedbush PacGrow
