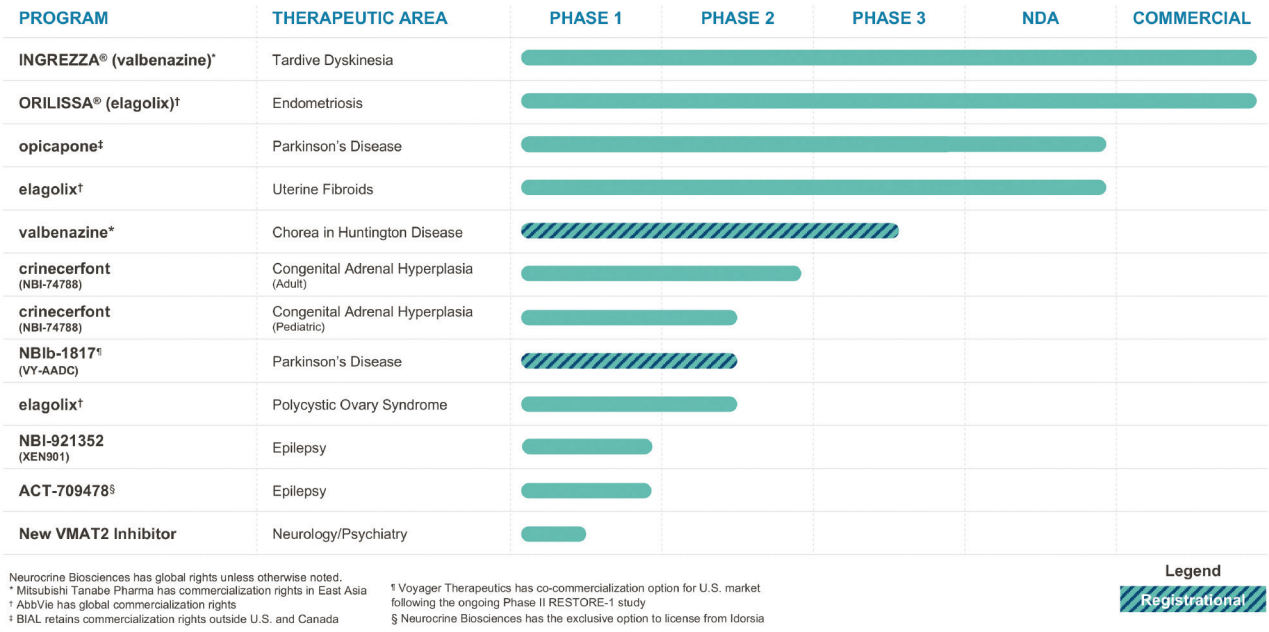
Neurocrine®
BIOSCIENCES

2019 ANNUAL REPORT

Neurocrine Biosciences is positioned to have three approved treatments in the United States across four therapeutic indications in 2020. Since last year, we've nearly doubled the size of our pipeline and plan to advance three pivotal studies and five mid-stage programs later this year.



Neurocrine Biosciences is a neuroscience-focused, biopharmaceutical company with 28 years of experience discovering and developing life-changing treatments for people with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. The company's diverse portfolio includes FDA-approved treatments for tardive dyskinesia and endometriosis* and clinical development programs in multiple therapeutic areas including Parkinson's disease, chorea in Huntington disease, congenital adrenal hyperplasia, epilepsy, uterine fibroids* and polycystic ovary syndrome*. Headquartered in San Diego, Neurocrine Biosciences specializes in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. For more information, visit neurocrine.com, and follow the company on LinkedIn.

*(*in collaboration with AbbVie)*

Dear Fellow Shareholders,

First and foremost, I hope that you, your families and friends are safe and well. The COVID-19 pandemic has dramatically changed the ways in which we live and interact with one another. Like you and many other companies, here at Neurocrine Biosciences, we have made changes to the ways we work together. While we adapt to this new shared reality, our mission remains unchanged: to discover and develop life-changing treatments for people with serious, challenging and under-addressed disorders. While operating in today's environment presents an unquestionably unique set of unprecedented challenges, we remain steadfast in our commitment to bring safe and effective medicines to patients as rapidly as possible.

I would like to share an overview of our key accomplishments in 2019 and vision for the continued growth of Neurocrine Biosciences in 2020 and beyond. As a result of our well-proven business and clinical development strategy, we've nearly doubled our pipeline portfolio in a year. We enter the year well capitalized with $970 million in cash and generating strong free cash flow, and we are poised for a robust commercial portfolio of three U.S. Food and Drug Administration (FDA)-approved medicines for patients with four serious diseases in 2020.

Our first treatment, INGREZZA® (valbenazine), was discovered, developed and is marketed by Neurocrine Biosciences. It is a testament to our fully integrated research, development and commercialization capabilities, and our ability to deliver on our mission. In the three years since launch, I am very proud of the progress we've made in bringing INGREZZA to thousands of patients with tardive dyskinesia (TD). While we have treated over 15,000 patients and generated over $750 million in sales in only our second full year on the market, there are still many more patients with TD who could benefit from treatment with INGREZZA.

Our second FDA-approved medicine, ORILISSA® (elagolix), was discovered and taken into late-stage development by Neurocrine Biosciences and is marketed by our partner, AbbVie. ORILISSA is the first and currently only oral gonadotropin-releasing hormone antagonist approved by the FDA for the management of moderate to severe pain associated with endometriosis. AbbVie is seeking approval for elagolix in a second indication, uterine fibroids, with a Prescription Drug User Fee Act (PDUFA) date in Q2 2020. AbbVie is also conducting a Phase II proof-of-concept study in polycystic ovary syndrome, one of the most common hormonal disorders among women of reproductive age.

In April 2020, we anticipate the potential FDA approval of our third medicine, opicapone, for the adjunctive treatment of Parkinson's disease. Neurocrine Biosciences acquired U.S. and Canadian commercial rights to opicapone from BIAL. Pending FDA approval, we look forward to bringing this important and much-needed treatment to patients with Parkinson's disease.

Being a fully integrated biopharmaceutical company has allowed us to invest in the expansion of our pipeline, which now includes clinical programs in Huntington disease (HD), congenital adrenal hyperplasia (CAH), Parkinson's disease, and epilepsy.

Nearly three decades ago, Neurocrine Biosciences was founded on specific and potent corticotropin-releasing factor type 1 (CRF-1) antagonists. For years, we have explored the use of CRF-1 antagonists for the treatment of classical CAH, a rare and potentially fatal endocrine disorder with limited, sub-optimal treatment options. Today, through the tenacity of our scientists and clinicians, we have completed a Phase II proof-of-concept study of crinecerfont, our lead agent, in adults. Following positive results from this study and given the tremendous clinical need, we've gained agreement with the FDA and European Medicines Agency (EMA)

on the design of a single, global registrational study of crinecerfont in adults which we anticipate will begin in 2020. In addition, we have embarked on a Phase II proof-of-concept study of crinecerfont in the pediatric population where the goal is to treat CAH as early as possible.

While our internal research and development engine has been highly productive, we know great science also occurs outside our labs. Since last year, we entered into three strategic business development agreements with novel treatment approaches in gene therapy and precision medicine to complement our expertise in neuroscience and small molecule therapeutics.

Our strategic collaboration with Voyager Therapeutics is focused on the development and commercialization of four gene therapy programs targeting severe neurological diseases, including Parkinson's disease. Last year, we gained alignment with regulatory agencies on the global registrational study design for NBIb-1817, the most advanced candidate previously referred to as VY-AADC. We expect to initiate two registrational studies in patients with Parkinson's disease this year with one of those studies already underway.

We also announced separate agreements with Xenon Pharmaceuticals and Idorsia to incorporate ion channel precision medicine approaches to develop treatments for rare pediatric forms of epilepsy. Partnering with innovative companies like Voyager, Xenon, and Idorsia, who are at the forefront of research and discovery in their respective fields, will enable us to leverage our development and commercialization expertise to advance the next-generation of life-changing treatments for patients who need them.

At Neurocrine Biosciences, our people are our greatest asset. Since 2015, our success has helped us grow from about 100 employees to approximately 750 today. As we grow and our footprint expands, so does our responsibility and commitment to our community. In the coming year, we will demonstrate the results of the work we've done on environmental, social and governance issues that are aligned with our vision of being a socially responsible corporate citizen.

I am proud of the company Neurocrine Biosciences has become and I am even more enthusiastic about the next chapter in our story. We find ourselves in a unique position for companies in our industry. We've got a best-in-class medicine, INGREZZA, for patients with TD. We have a balanced pipeline with novel treatments for patients who desperately need better options. We are well capitalized and most importantly, we have a team of highly talented individuals who are unwaveringly dedicated to helping patients. With the investments we are making today, we are well on our way to building the leading, global neuroscience focused biopharmaceutical company of tomorrow.

Thank you to all the Neurocrine Bioscience employees, partners, and shareholders who are all part of this incredible journey. Most importantly, at this sobering moment, I think it is only proper to conclude by thanking the brave men and women who make sacrifices everyday to protect us and help the world overcome the COVID-19 pandemic.

Sincerely,

Kevin Gorman
Chief Executive Officer

NEUROCRINE BIOSCIENCES, INC.
12780 El Camino Real
San Diego, CA 92130

Notice of Annual Meeting of Stockholders

To Be Held on May 19, 2020

TO THE STOCKHOLDERS:

NOTICE IS HEREBY GIVEN that the 2020 Annual Meeting of Stockholders of Neurocrine Biosciences, Inc., a Delaware corporation (the "Company"), will be held on May 19, 2020, at 10:30 a.m., local time, at the Company's corporate headquarters located at 12780 El Camino Real, San Diego, California 92130, for the following purposes as more fully described in the Proxy Statement accompanying this Notice:

1. The election of the two nominees for Class III Director named herein to the Board of Directors to serve for a term of three years;
2. An advisory vote on the compensation paid to the Company's named executive officers;
3. To approve the Company's 2020 Equity Incentive Plan;
4. The ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2020; and
5. To transact such other business as may properly come before the Annual Meeting of Stockholders or any continuation, adjournment or postponement thereof.

Only stockholders of record at the close of business on March 23, 2020 are entitled to receive notice of and to vote at the Annual Meeting of Stockholders.

All stockholders are normally invited to attend the Annual Meeting of Stockholders in person. However, based on the evolving COVID-19 situation and related government guidelines, we have concluded that it is appropriate to strongly urge our stockholders not to attend the Annual Meeting in person this year and to instead submit proxy votes. Our Annual Meeting this year will be purely functional in format to comply with the relevant legal requirements. There will be no presentations or exhibitions. No refreshments will be provided, and any Board members or officers attending the meeting will not meet with stockholders individually. Your vote is important. We hope you will vote as soon as possible. You may vote over the Internet, as well as by telephone or by mailing a proxy or voting instruction form. Please review the instructions on each of your voting options described in these proxy materials.

By Order of the Board of Directors,

Darin Lippoldt
Chief Legal Officer and Corporate Secretary

San Diego, California
April 9, 2020

Important Notice Regarding the Availability of Proxy Materials for the Stockholders' Meeting to be Held on May 19, 2020 at 10:30 a.m. Local Time at 12780 El Camino Real, San Diego, California 92130.

The proxy statement and annual report to stockholders are available at www.proxyvote.com . Please have the control number on your proxy card available.

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PROXY SUMMARY

This summary highlights information that is described in more detail elsewhere in this proxy statement. This summary does not contain all the information you should consider before you vote, and you should read the entire proxy statement carefully before voting.

General Information

Annual Meeting of Stockholders	
Meeting Date	**May 19, 2020**
Time	**10:30 a.m. Local Time**
Place	**12780 El Camino Real, San Diego, California 92130**
Record Date	**March 23, 2020**

How to Vote

Your vote is very important. Whether or not you plan to attend the Annual Meeting, we hope you will vote as soon as possible. You may vote in the following ways.

Telephone: Call **1-800-690-6903** from any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the meeting date. Have your proxy card in hand when you call and then follow the instructions. Easy-to-follow voice prompts allow you to submit your proxy and confirm your instructions have been properly recorded.

Internet: Visit **www.proxyvote.com** to transmit your voting instructions and for electronic delivery of information via the Internet up until 11:59 P.M. Eastern Time the day before the meeting date. As with telephone voting, you can confirm that your instructions have been properly recorded.

Mail: Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to **Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717**.

Stockholders may also vote in person at the Annual Meeting; however, based on the evolving COVID-19 situation and related government guidelines, we have concluded that it is appropriate to strongly urge our stockholders not to attend the Annual Meeting in person this year and to instead submit proxy votes using one of the methods above.

Matters to be Voted on

Matter	Board of Directors Recommendation	Page Reference for More Information
Proposal One: Elect Class III Directors	**FOR** all nominees	21
Proposal Two: Advisory vote on executive compensation	**FOR**	23
Proposal Three: Approve 2020 Equity Incentive Plan	**FOR**	24
Proposal Four: Ratify Ernst & Young LLP as independent registered public accounting firm	**FOR**	35

Business Highlights

Business Overview

We are a commercial-stage biopharmaceutical company focused on discovering and developing innovative and life-changing treatments for patients with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. We specialize in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. Currently, we are primarily focused on the commercialization of INGREZZA® (valbenazine) in the United States ("U.S."), our first U.S. Food and Drug Administration ("FDA") approved product.

In April 2017, we received FDA approval of our first product, INGREZZA, for the treatment of adults with tardive dyskinesia ("TD"). Shortly after receiving FDA approval, we began commercializing INGREZZA in the U.S. using a specialty sales force primarily focused on educating physicians who treat patients with TD, including psychiatrists and neurologists.

In addition to our first marketed product, our collaboration partner AbbVie Inc. ("AbbVie"), received approval of ORILISSA® (elagolix) for the management of moderate to severe endometriosis pain in women from the FDA in July 2018 and Health Canada in October 2018. We receive royalties at tiered percentage rates on any net sales of ORILISSA.

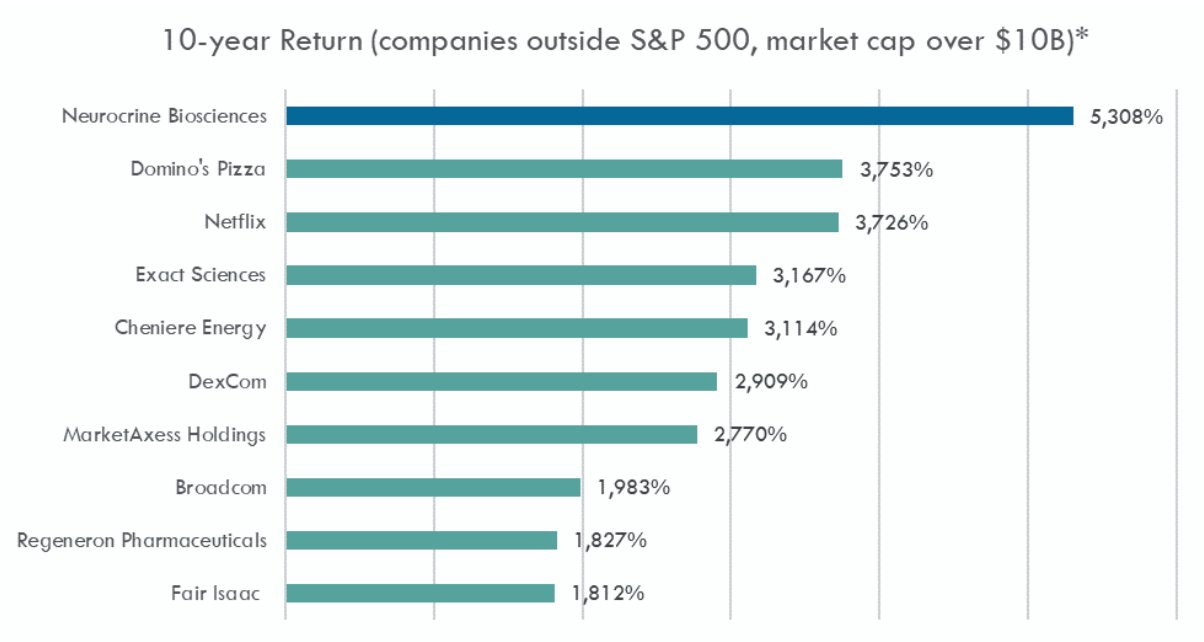
Our late-stage pipeline includes opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients, elagolix for the treatment of heavy menstrual bleeding associated with uterine fibroids in women, valbenazine for the treatment of chorea in adult patients with Huntington's disease ("HD"), and NBIb-1817 (VY-AADC) for the treatment of advanced Parkinson's disease patients with motor fluctuations that are refractory to medical management. Our product candidates for uterine fibroids and advanced Parkinson's disease are partnered with AbbVie and Voyager Therapeutics, Inc. ("Voyager"), respectively.

Our early- and mid-stage clinical pipeline includes crinecerfont (NBI-74788) for the treatment of congenital adrenal hyperplasia ("CAH"), elagolix for the treatment of polycystic ovary syndrome ("PCOS") in women and a vesicular monoamine transporter 2 ("VMAT2") inhibitor with potential use in the treatment of neurologic and psychiatric disorders. Our product candidate for PCOS is partnered with AbbVie.

Going forward, we expect to augment our product pipeline by acquiring, through license or otherwise, additional drug candidates for research and development ("R&D") and potential commercialization.

Stock Performance Highlights

The following chart highlights our strong financial performance from January 1, 2000 to December 13, 2019. As reported by CNBC on December 13, 2019, Neurocrine Biosciences had the highest total returns for this time frame among companies outside of the S&P 500 with a market cap over $10 billion.



*The stock price performance reflected in this chart is not necessarily predictive of future stock price performance.

Environmental, Social and Governance Highlights

Corporate Governance Best Practices

We are committed to maintaining strong corporate governance practices that promote the long-term interests of the Company and our stockholders and help strengthen the oversight functions of our management and Board. Additional information about our corporate governance policies and practices, including our committee charters, Corporate Governance Guidelines, Code of Business Conduct and Ethics, and Policy for Recoupment of Incentive Compensation, can be found on our website at www.neurocrine.com. Additional information about the roles and responsibilities of our Board and its committees can be found under the heading "Corporate Governance" beginning on page 14 of this Proxy Statement. We believe that our strong corporate governance practices empower our independent directors to exercise effective oversight of our business generally and our management team specifically, including the performance of our Chief Executive Officer.

The following table highlights some of our key corporate governance practices:

Corporate Governance Best Practices			
☑	Director resignation policy for directors receiving less than majority support	☑	Stockholder ability to call special meetings
☑	Director overboarding policy	☑	Stockholder action by written consent
☑	Diverse Board and policies emphasizing diversity in all new director searches	☑	No poison pill in force
☑	Separate Chairman and CEO	☑	Clawback policy
☑	All directors attended at least 75% of Board and relevant committee meetings	☑	New director orientation and continuing director education
☑	Code of Business Conduct and Ethics	☑	Executive sessions of independent directors held at every regular Board meeting
☑	Annual board assessment performed by the Nominating/Corporate Governance Committee and reported to the full board	☑	Active stockholder engagement

Culture and Values

At Neurocrine Biosciences, we pride ourselves on having a strong, distinctive and positive culture based on our shared mission and values.

Our Purpose: To relieve suffering and enhance lives

We strive to embody the following values every day in support of our corporate purpose:

- Passion: We are driven and love what we do. We are committed to our goals and to making a difference.
- Integrity: We do the right thing for patients and our community. We take accountability. We speak up.
- Collaboration: We trust one another. We are inclusive. We are respectful. We are transparent. Together we succeed.
- Innovation: We seek and create optimal solutions.
- Tenacity: We do not quit. We adapt. We accomplish what others cannot.

Our Conduct

We have developed a comprehensive compliance program, the goal of which is to maintain a culture that promotes the highest standards of business ethics.

As part of our compliance program:

- All employees are required to read and acknowledge our Code of Business Conduct and Ethics, which includes our anti-bribery and anti-corruption commitments.
- All third-party agreements contain a requirement to comply with all relevant laws, and many third-party agreements additionally contain a requirement to comply with Neurocrine Biosciences policies, including with respect to Good Manufacturing Practices and Quality Systems.
- We fully support the Pharmaceutical Research and Manufacturers of America's (PhRMA) revised "Code on Interactions with U.S. Healthcare Professionals," which provides firm guidance on such interactions including: the use of promotional materials; grants and

consulting arrangements; meals and entertainment; continuing medical education; clinical practice guidelines; and sales and marketing training for company representatives.

- We have established an Ethics Hotline, which is available to receive anonymous reports of a potential violation of law or Neurocrine Biosciences policy 24 hours a day, 7 days a week. Reports can be submitted by calling 1-800-688-2908 or through NeurocrineEthics.com.

Our People

We are a team of approximately 750 people, working in the United States.

Our highly qualified and experienced team of scientists and sales and marketing professionals are critical to our success. We are investing in our team so that we can continue to recruit and retain the expertise we need. We offer a comprehensive and competitive benefits package and invest in training and development programs for our employees to further advance their careers.

We support work-life balance for our employees and promote workforce diversity and inclusion. Over half of our workforce is comprised of women. In 2019, we conducted a three-year organizational planning process. As part of this process, our leaders looked at the skills, roles and organizational structure our teams will need to deliver on our strategy. Through this process, we have identified roles that will change and expand, and new capabilities that will be needed. We expect this assessment to inform our future strategy for developing internal and recruiting new talent.

Our Medicines and Our Patients

We have two marketed products that deliver on hope for patients:

- INGREZZA
    - The first FDA-approved treatment for adults with tardive dyskinesia
    - Tardive dyskinesia is a clinically distinct, drug-induced movement disorder characterized by uncontrollable, abnormal and repetitive movements of the face, torso and/or other body parts, which can be severe and are often persistent and irreversible.
    - Tardive dyskinesia is estimated to affect at least 500,000 people in the U.S.
- ORILISSA
    - The first FDA-approved oral treatment for women with moderate-to-severe endometriosis pain in over a decade
    - Endometriosis occurs when tissue similar to that normally found in the uterus begins to grow outside of the uterus, leading to a range of symptoms, including painful periods, pelvic pain between periods and pain with sex.
    - Endometriosis is estimated to affect at least 7 million women in the U.S.

Access to Medicine

As part of our patient assistance program, we offer our products free to certain individuals who are unable to pay for their medication and meet certain other criteria.

Product Quality and Safety

We have developed and implemented a comprehensive Quality System, which focuses on product safety and quality aspects of the Good Manufacturing Practices (GMP), Good Laboratory Practices (GLP) and Good Clinical Practices (GCP) guidelines that are required by regulators. Our executive team reviews our Quality System on at least a quarterly basis.

Stockholder Engagement

Process

Our Board of Directors is committed to maintaining good corporate governance practices that are in the best interests of the Company and its stockholders. Understanding the priorities and concerns of our stockholders is critical to the Board's efforts in this area. Following the Company's 2019 annual meeting, we contacted stockholders representing over 70% of our outstanding shares and met with stockholders representing approximately 35% of our outstanding shares.

During engagement meetings, we discussed various topics of interest to our stockholders, including corporate governance practices, compensation-related matters and environmental, social and governance issues. Darin Lippoldt, our Chief Legal Officer, participated in

each of these engagement meetings, and feedback from these discussions was relayed to both the Nominating/Corporate Governance Committee and to the full Board.

Feedback and Responsiveness

We discussed a wide range of topics in our stockholder engagement process, but there were some common themes raised in our meetings. We took responsive action on those items as follows.

What we heard	Our response
Multiple stockholders highlighted their voting policies with respect to overboarded directors, expressing concern that they considered certain of our directors overcommitted by virtue of serving on multiple public company boards, in particular while serving in executive roles.	• Our Board believes that each of our directors has demonstrated the ability to devote sufficient time and attention to their duties and to fulfill their responsibilities. • We heard the strong message stockholders sent in their 2019 annual meeting votes and in stockholder engagement meetings and discussed this feedback with Mr. Pops. Since our 2019 annual meeting, Mr. Pops, who serves as the Chief Executive Officer of Alkermes plc, resigned from two public company boards of directors. Specifically, he resigned from the board of directors of Acceleron Pharma Inc. as of December 31, 2019 and provided notice of his resignation from the board of directors of Epizyme, Inc. on March 30, 2020, which will be effective upon the earlier of Epizyme finding a replacement director or October 31, 2020. • We are aware that Mr. Lyons is currently considered overboarded under certain institutional investors' voting policies. In light of the strong message we received on the topic of overboarding, Mr. Lyons has committed to resigning from one of his other public company boards by the end of this year. In addition, because Mr. Lyons devotes all of his professional time to corporate board activities, we believe that Mr. Lyons is able to devote sufficient time and attention to his duties and to fulfill his responsibilities. • We are aware that Ms. Norwalk is currently considered overboarded under certain institutional investors' voting policies. Nonetheless, we believe Ms. Norwalk is able to devote sufficient time and attention to her duties and to fulfill her responsibilities. In particular, other than occasional consulting work, Ms. Norwalk devotes all of her professional time to corporate board activities. Furthermore, she recently reduced her total number of public company directorships from six to five.
Leading up to the 2019 annual meeting and following it, we heard a concern about the lack of diversity represented on our Board of Directors.	• Since our 2019 annual meeting, we have added two women to our board of directors: Leslie Norwalk in September 2019 and Shalini Sharp in February 2020. • In December 2019, our Nominating/Corporate Governance Committee amended its charter as well as our Corporate Governance Guidelines to highlight its commitment to considering diverse candidates (including gender and ethnic diversity) and to require any search firm engaged in a director search to include gender-diverse candidates in such search.

NEUROCRINE BIOSCIENCES, INC.

12780 El Camino Real
San Diego, California 92130

PROXY STATEMENT

This Proxy is solicited on behalf of Neurocrine Biosciences, Inc., a Delaware corporation (the "Company" or "Neurocrine Biosciences"), for use at its 2020 Annual Meeting of Stockholders (the "Annual Meeting") to be held on May 19, 2020 beginning at 10:30 a.m., local time, or at any continuations, postponements or adjournments thereof for the purposes set forth in this proxy statement and the accompanying Notice of Annual Meeting of Stockholders. The Annual Meeting will be held at the Company's corporate headquarters, located at 12780 El Camino Real, San Diego, California 92130. The Company's phone number is (858) 617-7600.

ABOUT THE ANNUAL MEETING

Why did I receive these proxy materials?

The Company has sent you these proxy materials because the Board of Directors of the Company is soliciting your proxy to vote at the Annual Meeting, including at any adjournments or postponements of the Annual Meeting.

We intend to mail these proxy materials on or about April 9, 2020 to all stockholders of record entitled to vote at the Annual Meeting.

What is the purpose of the Annual Meeting?

At the Annual Meeting, stockholders will act upon the matters outlined in these proxy materials, including the election of the two nominees for Class III Director named herein, an advisory vote on the compensation paid to the Company's named executive officers, approval of the Company's 2020 Equity Incentive Plan, and ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2020.

Who can attend the Annual Meeting?

All stockholders of record at the close of business on March 23, 2020 (the "Record Date"), or their duly appointed proxies, may attend the Annual Meeting; however, based on the evolving COVID-19 situation and related government guidelines, we have concluded that it is appropriate to strongly urge our stockholders not to attend the Annual Meeting in person this year and to instead submit proxy votes. Our Annual Meeting this year will be purely functional in format to comply with the relevant legal requirements. There will be no presentations or exhibitions. No refreshments will be provided, and any Board members or officers attending the meeting will not meet with stockholders individually. If you attend, please note that you may be asked to comply with social distancing guidelines, present valid picture identification, such as a driver's license or passport. Cameras, recording devices and other electronic devices will not be permitted at the Annual Meeting.

Please also note that if you hold your shares in "street name" (that is, through a broker or other nominee), you will need to bring a copy of a brokerage statement reflecting your stock ownership as of the record date and check in at the registration desk at the Annual Meeting.

Who is entitled to vote at the Annual Meeting?

Stockholders of record at the close of business on the Record Date are entitled to receive notice of and to participate in the Annual Meeting. At the close of business on the Record Date, 92,779,393 shares of the Company's common stock, $0.001 par value per share, were issued and outstanding. If you were a stockholder of record on that date, you will be entitled to vote all of the shares that you held on that date at the Annual Meeting, or any continuations, postponements or adjournments of the Annual Meeting.

Each outstanding share of the Company's common stock will be entitled to one vote on each proposal considered at the Annual Meeting.

What constitutes a quorum? What are broker non-votes? What are advisory votes?

The presence at the Annual Meeting, in person or by proxy, of the holders of a majority of the aggregate voting power of the common stock outstanding on the Record Date will constitute a quorum, permitting the Company to conduct its business at the Annual Meeting. As of the Record Date, 92,779,393 shares of common stock, representing the same number of votes, were outstanding. Thus, the presence of the holders of common stock representing at least 46,389,697 shares will be required to establish a quorum. The presence of a quorum will be determined by the Inspector of Elections (the "Inspector").

Proxies received but marked as abstentions, as well as "broker non-votes," will be included in the calculation of the number of shares considered to be present at the Annual Meeting. Broker non-votes occur when a holder of shares in "street name" does not give instructions to the broker or nominee holding the shares as to how to vote on "non-routine" matters. Under the rules and interpretations of the New York Stock Exchange (the "NYSE"), "non-routine" matters are matters that may substantively affect the rights or privileges of stockholders, such as mergers, stockholder proposals and elections of directors, even if not contested. In addition, as required by Section 957 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, advisory votes on executive compensation are non-routine matters for which brokers do not have discretionary authority to vote shares held by account holders. Only ratification of our independent registered public accounting firm under Proposal Four is considered a routine matter.

The vote on Proposal Two is advisory. The approval or the disapproval of Proposal Two will not be binding on the Company or the Board of Directors and will not create or imply any change to the fiduciary duties of the Board of Directors. However, the Company and the Board of Directors will consider the results of the advisory vote on Proposal Two in making future decisions about compensation of the Company's named executive officers.

How do I vote my shares in person at the Annual Meeting?

You may vote your shares held in your name as the stockholder of record in person at the Annual Meeting; however, based on the evolving COVID-19 situation and related government guidelines, we have concluded that it is appropriate to strongly urge our stockholders not to attend the Annual Meeting in person this year and to instead submit proxy votes as described below. Our Annual Meeting this year will be purely functional in format to comply with the relevant legal requirements. There will be no presentations or exhibitions. No refreshments will be provided, and any Board members or officers attending the meeting will not meet with stockholders individually. You may vote your shares held beneficially in street name in person at the Annual Meeting only if you obtain a legal proxy from the broker, bank, trustee, or nominee that holds your shares giving you the right to vote the shares. Even if you plan to attend the Annual Meeting, we recommend that you also submit your proxy or voting instructions as described below so that your vote will be counted if you later decide not to attend the Annual Meeting.

How can I vote my shares without attending the Annual Meeting?

Whether you hold shares directly as the stockholder of record or beneficially in street name, you are encouraged to direct how your shares are voted without attending the Annual Meeting. If you are a stockholder of record, you are encouraged to vote by proxy. You can vote by proxy over the Internet, by mail or by telephone pursuant to instructions provided on the enclosed proxy card. If you hold shares beneficially in street name, you may also vote by proxy over the Internet or you can also vote by telephone or mail by following the voting instruction form provided to you by your broker, bank, trustee, or nominee. The deadline for voting by telephone or electronically is 11:59 p.m., Eastern Time, on May 19, 2020.

Who will bear the cost of soliciting votes for the Annual Meeting?

To the extent such costs are incurred, the cost of solicitation of proxies will be borne by the Company. The Company will reimburse expenses incurred by brokerage firms and other persons representing beneficial owners of shares in forwarding solicitation material to beneficial owners. To assist in soliciting proxies (votes), the Company has retained the professional proxy solicitation firm Alliance Advisors, LLC, at an approximate cost of $16,000. Proxies also may be solicited by certain of the Company's directors, officers and regular employees, without additional compensation, personally, by telephone or by other appropriate means.

Can I change my vote after I return my proxy?

Yes. Even after you have submitted your proxy, you may change your vote at any time before the proxy is exercised by filing with the Corporate Secretary of the Company either a notice of revocation or a duly executed proxy bearing a later date. Your proxy will also be revoked if you attend the Annual Meeting and vote in person; however, we are strongly discouraging in person attendance at the Annual Meeting this year as described above.

What does it mean if I receive more than one set of proxy materials?

If you receive more than one set of proxy materials, your common stock is registered in more than one name or are registered in different accounts. Please complete a proxy for each separate set of proxy materials that you receive to ensure that all of your shares are voted.

What are the Board of Directors' recommendations?

Unless you give other instructions on your proxy, the persons named as proxy holders on the proxy will vote in accordance with the recommendations of the Board of Directors. The Board of Directors' recommendation is set forth together with the description of each item in this proxy statement. In summary, the Board of Directors unanimously recommends a vote:

- for election of the two nominees for Class III Director named herein (see Proposal One);
- for an advisory vote on the compensation paid to the Company's named executive officers (see Proposal Two);
- for approval of the Company's 2020 Equity Incentive Plan (see Proposal Three); and
- for ratification of the appointment of Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2020 (see Proposal Four).

With respect to any other matter that properly comes before the meeting, the proxy holders will vote as recommended by the Board of Directors or, if no recommendation is given, in their own discretion.

What vote is required to approve each item?

Election of Directors. The affirmative vote of a plurality of the votes cast at the Annual Meeting is required for the election of directors. A properly executed proxy marked "WITHHOLD AUTHORITY" with respect to the election of one or more directors will not be voted with respect to the director or directors indicated, although it will be counted for purposes of determining whether there is a quorum.

Other Items. For each other item, the affirmative vote of the holders of a majority of the shares represented in person or by proxy and entitled to vote on the item will be required for approval. A properly executed proxy marked "ABSTAIN" with respect to any such matter will not be voted, although it will be counted for purposes of determining the number of shares represented in person or by proxy at the Annual Meeting. Accordingly, an abstention will have the effect of a negative vote for each item. If you hold your shares in "street name" through a broker or other nominee, your broker or nominee will not be permitted to exercise voting discretion with respect to each of the matters to be acted upon, other than Proposal Four. Thus, if you do not give your broker or nominee specific instructions, your shares will not be voted on and will not be counted for any other matter to be acted upon, other than Proposal Four. Shares represented by such "broker non-votes" will, however, be counted in determining whether there is a quorum.

Who counts the votes?

Votes cast by proxy or in person at the Annual Meeting will be tabulated by the Inspector.

How can I find out the results of the voting at the Annual Meeting?

Preliminary voting results will be announced at the Annual Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file with the SEC within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an amended Form 8-K to publish the final results.

What proxy materials are available on the internet?

The proxy statement and annual report to stockholders are available under the "Investors" tab on our corporate website at www.neurocrine.com, and at www.proxyvote.com. However, you can only vote your shares at www.proxyvote.com. Please have the control number on your proxy card available.

STOCK OWNERSHIP

Who are the principal stockholders, and how much stock does management own?

The following table sets forth the beneficial ownership of the Company's common stock as of March 15, 2020 by (i) each of the executive officers named in the table under the heading "Summary Compensation Table," (ii) each current director, (iii) all current directors and executive officers as a group and (iv) all persons known to the Company to be the beneficial owners of more than 5% of the Company's common stock. The table is based upon information supplied by our executive officers, directors and principal stockholders and a review of Schedules 13D and 13G, if any, filed with the SEC. A total of 92,779,393 shares of the Company's common stock were issued and outstanding as of March 15, 2020.

Name and Address of Beneficial Owner (1)	Number of Shares of Common Stock Owned (2)	Number of Shares of Common Stock Acquirable Within 60 Days (3)	Total Number of Shares of Common Stock Beneficially Owned (4)	Percent Ownership
The Vanguard Group (5) 100 Vanguard Blvd., Malvern, PA 19355	8,316,897	—	8,316,897	9.0%
FMR LLC (6) 245 Summer Street, Boston, MA 02210	7,431,373	—	7,431,373	8.0%
Janus Henderson Group plc (7) 201 Bishopsgate EC2M 3AE, United Kingdom	7,373,512	—	7,373,512	7.9%
T. Rowe Price Associates, Inc. (8) 100 E. Pratt Street, Baltimore, MD 21202	7,291,297	—	7,291,297	7.9%
Capital International Investors (9) 11100 Santa Monica Blvd., 16th Floor, Los Angeles, CA 90025	6,740,419	—	6,740,419	7.3%
BlackRock, Inc. (10) 55 East 52nd Street, New York, NY 10055	6,591,552	—	6,591,552	7.1%
Kevin C. Gorman, Ph.D.	432,357	1,009,211	1,441,568	1.6%
Matthew C. Abernethy	5,953	66,131	72,084	*
Eric Benevich	20,235	213,024	233,259	*
Haig P. Bozigian, Ph.D.	146,892	122,241	269,133	*
Eiry W. Roberts, M.D.	7,675	65,023	72,698	*
William H. Rastetter, Ph.D.	24,750	152,917	177,667	*
Gary A. Lyons	225,697	121,667	347,364	*
George J. Morrow	—	91,667	91,667	*
Leslie V. Norwalk	—	3,333	3,333	*
Richard F. Pops	29,512	121,667	151,179	*
Alfred W. Sandrock, Jr., M.D., Ph.D.	—	91,667	91,667	*
Shalini Sharp	—	1,250	1,250	*
Stephen A. Sherwin, M.D.	47,548	121,667	169,215	*
All current executive officers and directors as a group (18 persons)	1,196,897	2,912,032	4,108,929	4.4%

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares of the Company's common stock as of March 15, 2020.

(1) The address of each beneficial owner named is c/o Neurocrine Biosciences, Inc., 12780 El Camino Real, San Diego, CA 92130, unless otherwise indicated.

(2) Represents shares of common stock owned, excluding shares of common stock subject to stock options that are listed under the heading "Number of Shares of Common Stock Acquirable Within 60 Days," by the named parties as of March 15, 2020.

(3) Shares of common stock subject to stock options currently exercisable or exercisable within 60 days of March 15, 2020, regardless of exercise price, are deemed to be outstanding for computing the percentage ownership of the person holding such options and the percentage ownership of any group of which the holder is a member, but are not deemed outstanding for computing the percentage of any other person.

(4) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Except as indicated by footnote, and subject to community property laws where applicable, the Company believes that the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

(5) Based on Amendment No. 4 to Schedule 13G filed by The Vanguard Group, Inc. ("Vanguard Group") on February 12, 2020, reporting ownership as of December 31, 2019. According to such filing, Vanguard Group beneficially owns 8,316,897 shares of common stock and sole voting power as to 71,392 shares of common stock.

(6) Based on Amendment No. 11 to Schedule 13G filed by FMR LLC ("FMR") on February 7, 2020, reporting ownership as of December 31, 2019. According to such filing, FMR beneficially owns 7,431,373 shares of common stock and has sole voting power as to 837,183 shares of common stock. Various persons have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the common stock held by FMR.

(7) Based on Amendment No. 2 to Schedule 13G filed by Janus Henderson Group plc ("Janus") on February 13, 2020, reporting ownership as of December 31, 2019. According to such filing, Janus beneficially owns 7,373,512 shares of common stock and sole voting power as to 0 shares of common stock. These securities are owned by various institutional investors for which Janus has a controlling ownership interest. As a result of its role as an investment adviser or sub-adviser to such institutional investors, for the purposes of the reporting requirements of the Exchange Act, Janus is deemed to be a beneficial owner of such securities; however, Janus expressly disclaims that it is, in fact, the beneficial owner of such securities.

(8) Based on Schedule 13G filed by T. Rowe Price Associates, Inc. ("Price Associates") on February 14, 2020, reporting ownership as of December 31, 2019. According to such filing, Price Associates beneficially owns 7,291,297 shares of common stock and sole voting power as to 1,886,323 shares of common stock. These securities are owned by various individuals and institutional investors which Price Associates serves as an investment adviser with power to direct investments and/or sole power to vote the securities. For the purposes of the reporting requirements of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), Price Associates is deemed to be the beneficial owner of such securities; however, Price Associates, expressly disclaims that it is, in fact, the beneficial owner of such securities.

(9) Based on Schedule 13G filed by Capital International Investors ("Capital International") on February 14, 2020, reporting ownership as of December 31, 2019. According to such filing, Capital International beneficially owns 6,740,419 shares of common stock and sole voting power as to 6,362,060 shares of common stock. These securities are owned by various individuals and institutional investors which Capital International serves as an investment adviser with power to direct investments and/or sole power to vote the securities. For the purposes of the reporting requirements of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), Capital International is deemed to be the beneficial owner of such securities; however, Capital International, expressly disclaims that it is, in fact, the beneficial owner of such securities.

(10) Based on Amendment No. 7 to Schedule 13G filed by BlackRock, Inc. (“BlackRock”) on February 10, 2020, reporting ownership as of December 31, 2019. According to such filing, BlackRock beneficially owns 6,591,552 shares of common stock and sole voting power as to 6,095,205 shares of common stock. Various persons have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of shares of the common stock held by BlackRock. No one person’s interest in the common stock held by BlackRock is more than five percent of the Company’s total outstanding common stock.

BOARD OF DIRECTORS AND COMMITTEES

General

The Company's bylaws, as amended, provide that the Board of Directors is comprised of nine directors. The Company's Certificate of Incorporation provides that the Board of Directors is divided into three classes. There are currently three directors in Class I (William H. Rastetter, Ph.D., George J. Morrow and Leslie V. Norwalk), three directors in Class II (Richard F. Pops, Shalini Sharp and Stephen A. Sherwin, M.D.), and three directors in Class III (Kevin C. Gorman, Ph.D., Gary A. Lyons and Alfred W. Sandrock, Jr., M.D., Ph.D.). With the exception of Kevin C. Gorman, Ph.D., who is the Chief Executive Officer of the Company, all current members of the Board of Directors meet the definition of "independent director" under the Nasdaq Stock Market qualification standards.

The directors in Class I hold office until the 2021 Annual Meeting of Stockholders, the directors in Class II hold office until the 2022 Annual Meeting of Stockholders, and the directors in Class III hold office until the 2020 Annual Meeting of Stockholders (or, in each case, until their earlier resignation, removal from office, or death). After each such election, the directors in each such case will then serve in succeeding terms of three years and until a successor is duly elected and qualified. Officers of the Company serve at the discretion of the Board of Directors. There are no family relationships among the Company's directors and executive officers.

The term of office for directors Kevin C. Gorman, Ph.D., Gary A. Lyons and Alfred W. Sandrock, Jr., M.D., Ph.D. will expire at the 2020 Annual Meeting of Stockholders. On April 6, 2020, Dr. Sandrock informed us that he will not be standing for re-election at the 2020 Annual Meeting of Stockholders, therefore the stockholders will elect two Class III directors for a term of three years at the Annual Meeting.

Director Biographies of Class III Directors Nominated for Reelection at the 2020 Annual Meeting of Stockholders

Kevin C. Gorman, Ph.D. has been employed with the Company since 1993. He was appointed President and Chief Executive Officer in January 2008 after having served as Executive Vice President and Chief Operating Officer since September 2006 and prior to that, as Executive Vice President and Chief Business Officer and Senior Vice President of Business Development. He currently serves as Chief Executive Officer and has served on the Board of Directors since January 2008. Dr. Gorman also serves as a director of Xencor, Inc. a clinical stage biopharmaceutical company. From 1990 until 1993, Dr. Gorman was a principal of Avalon Medical Partners, L.P. where he was responsible for the early stage founding of the Company and several other biotechnology companies such as Onyx Pharmaceuticals, Inc., Metra Biosystems, Inc., Idun Pharmaceuticals, Inc. and ARIAD Pharmaceuticals, Inc. Dr. Gorman received his Ph.D. in immunology and M.B.A. in Finance from the University of California, Los Angeles and did further post-doctoral training at The Rockefeller University.

The continued service of Dr. Gorman on the Company's Board of Directors is based on the fact that as Chief Executive Officer of the Company, Dr. Gorman has extensive knowledge of our commercial products and our product candidates, our employees and the industry in which we operate. Dr. Gorman has also demonstrated exceptional leadership skills, sound business judgment and a strong commitment to the Company.

Gary A. Lyons has served on the Board of Directors since joining Neurocrine Biosciences in February 1993. Mr. Lyons served as the President and Chief Executive Officer of the Company from February 1993 through January 2008. Prior to joining the Company, Mr. Lyons held a number of senior management positions at Genentech, Inc., including Vice President of Business Development and Vice President of Sales. Mr. Lyons is currently the Chairman of the Board of Directors for each of Rigel Pharmaceuticals, Inc., a biotechnology company focused on developing drugs for the treatment of inflammatory/autoimmune and metabolic diseases, and Retrophin, an ultra-orphan disease commercial stage company. Mr. Lyons is a member of the Board of Directors of Brickell Biotech, Inc., a biotechnology company focused on dermatology, and Novus Therapeutics, Inc., a biotechnology company focused on ear, nose and throat therapies. Mr. Lyons was previously a director of Neurogesx, Cytori Therapeutics, and Facet Biotech Corporation. Mr. Lyons holds a B.S. in marine biology from the University of New Hampshire and an M.B.A. from Northwestern University's J.L. Kellogg Graduate School of Management.

The continued service of Mr. Lyons on the Company's Board of Directors is based on Mr. Lyons' extensive business development and corporate governance experience and, as the Company's former Chief Executive Officer, his in-depth understanding of the Company's product candidates, management and culture. With this history with the Company and management, Mr. Lyons brings a unique perspective and point of view to the Company's Board of Directors.

Director Biographies of Class I and Class II Directors not Nominated for Reelection at the 2020 Annual Meeting of Stockholders

William H. Rastetter, Ph.D. has served on the Board of Directors since February 2010 and as Chairman of the Board of Directors since May 2011. Currently, he serves as the Chairman of the Board of Directors for Fate Therapeutics, a publicly traded company focused on cellular therapies, as well as for Daré Bioscience, Inc. (previously known as Cerulean Pharma Inc.), a publicly traded company focused on women's health care. Dr. Rastetter also serves on the Board of Directors for Regulus Therapeutics Inc., a publicly traded company focused on RNA based therapeutics, and Grail, Inc., a private company developing deep sequencing approaches for disease diagnosis, with an initial focus on the early diagnosis of cancer. Dr. Rastetter serves as an advisor to SVB Leerink and Illumina Ventures. Dr. Rastetter was a partner in the venture capital firm, Venrock, from 2006 through early 2013 and was Executive Chairman of Biogen Idec, Inc. from 2003 to 2005. Earlier, he served as Chairman and Chief Executive Officer of IDEC Pharmaceuticals Corporation until its merger with Biogen in 2003; he joined IDEC

Corporation as its Chief Executive Officer at the company's founding in 1986. From 1984 to 1986, Dr. Rastetter was Director of Corporate Ventures at Genentech, where from 1982 to 1984 he held scientific positions. He held a series of faculty positions including Associate Professor at the Massachusetts Institute of Technology ("MIT") from 1975 to 1982. Dr. Rastetter has a Bachelor of Science degree in chemistry from MIT and received Master of Art and doctorate degrees in chemistry from Harvard University.

The continued service of Dr. Rastetter on the Company's Board of Directors is based on Dr. Rastetter's scientific and technical expertise combined with his business experience in leading rapidly growing companies in the life science industry. The Company's continued growth is dependent on scientific and technical advances, and the Board of Directors believes that Dr. Rastetter offers both strategic and technical insight into the risks and opportunities associated with our business. In addition, Dr. Rastetter's board and executive leadership experience at other life science companies provides valuable strategic and governance insight to the Board of Directors as a whole.

George J. Morrow has served on the Board of Directors since October 2015. Mr. Morrow served as Executive Vice President, Global Commercial Operations at Amgen Inc., a global biotechnology company, from 2003 until his retirement in 2011. He joined Amgen in 2001 as Executive Vice President, Worldwide Sales and Marketing. His responsibilities included oversight of all commercial functions for Amgen's broad spectrum of products in more than 50 countries worldwide, and the introduction of multiple new products into global markets. From 1992 to 2001, Mr. Morrow held executive management and commercial positions within several subsidiaries of Glaxo Wellcome, including Group Vice President for Commercial Operations (U.S.), Managing Director (U.K.), and most recently as President and Chief Executive Officer of Glaxo Wellcome, Inc. (U.S.). Mr. Morrow currently serves on the board of directors of Align Technology, Inc., a global medical device company. He has previously served on the boards of Vical, Inc., Otonomy, Inc., Glaxo Wellcome, Inc., Human Genome Sciences, Inc., Safeway, Inc., National Commerce Bank, the John Hopkins School of Public Health, and the Duke University Fuqua School of Business. Mr. Morrow holds a B.S. in chemistry from Southampton College, Long Island University, an M.S. in biochemistry from Bryn Mawr College and an M.B.A. from Duke University.

The continued service of Mr. Morrow on the Company's Board of Directors is based on his extensive commercialization experience at Amgen, his broad executive experience at GlaxoSmithKline Inc., and his years of experience in corporate governance as a board member of several publicly traded companies. Mr. Morrow's board experience, leadership experience and commercialization expertise prove valuable strategic insights to the Board of Directors.

Leslie V. Norwalk has served on the Board of Directors since September 2019. Since 2007, Ms. Norwalk has served as Strategic Counsel to healthcare companies at Epstein Becker Green, EBG Advisors and National Health Advisors. Ms. Norwalk is an Operating Partner at Enhanced Equity Fund, L.P., a private equity firm, and also serves as an advisor to Warburg Pincus LLC, and Peloton Equity, both private equity firms. She serves as a director of NuVasive, Inc., Endologix, Inc., Providence Service Corporation, Magellan Health, Inc., and Arvinas, Inc., all publicly traded companies, as well as several privately-held healthcare companies. Additionally, she serves as a healthcare, regulatory and policy advisor to several private equity firms. Ms. Norwalk began her career in the public sector as The White House Special Assistant to the Office of Presidential Personnel under the first Bush administration, following which, she practiced law at the Washington, D.C. office of Epstein Becker Green, P.C. From 2001 to 2007 she served in several roles at the Centers for Medicare & Medicaid Services (CMS) under the George W. Bush administration, including serving as Deputy Administrator, and Counselor and Policy Advisor, before assuming the role of Acting Administrator. Ms. Norwalk holds a Juris Doctorate from the George Mason University School of Law and a Bachelor of Arts degree in economics and international relations from Wellesley College.

The continued service of Ms. Norwalk to the Company's Board of Directors is based on her deep knowledge of, and experience with, the healthcare industry and government regulations, as well as corporate governance and risk management. Such knowledge and experience provides valuable guidance and insight to the Board of Directors.

Richard F. Pops has served on the Board of Directors since April 1998. Mr. Pops is the Chairman and Chief Executive Officer of Alkermes, Inc. He joined Alkermes as Chief Executive Officer in February 1991. Under his leadership, Alkermes has grown from a privately held research-based company with 25 employees to an international, publicly traded pharmaceutical company with more than 1,200 employees. In addition to Alkermes, he currently serves on the Board of Directors of: Epizyme, Inc., a biotechnology company focused on epigenetics; the Biotechnology Industry Organization (BIO); and the Pharmaceutical Research and Manufacturers of America (PhRMA). Mr. Pops provided notice of his resignation from the Board of Directors of Epizyme, Inc. on March 30, 2020, which will be effective upon the earlier of Epizyme finding a replacement director or October 31, 2020. He holds a B.A. in economics from Stanford University.

The continued service of Mr. Pops to the Company's Board of Directors is based on his leadership experience and track record for growing companies, his strength in business strategy and his financial acumen and capital markets experience. In addition, Mr. Pops is recognized for his service to the biopharmaceutical industry as a member of the Boards of the Biotechnology Industry Organization and the Pharmaceutical Research and Manufacturers of America. His breadth and range of industry experience from operations and strategy is a significant contribution to the Board of Directors.

Shalini Sharp has served on the Board of Directors since February 2020. Ms. Sharp is the Chief Financial Officer and Executive Vice President of Ultragenyx Pharmaceutical Inc., a biopharmaceutical company, holding the position of Chief Financial Officer since May 2012 and the position of Executive Vice President since January 2016. Ms. Sharp's will be stepping down from her role as Chief Financial Officer and Executive Vice President of Ultragenyx by September 2, 2020. Between May 2012 and January 2016, Ms. Sharp served as a Senior Vice President of Ultragenyx. Prior to Ultragenyx, Ms. Sharp served in various executive capacities, and ultimately as Chief Financial Officer, of

Agenus Inc., a biotechnology company, from August 2003 until May 2012. Prior to Agenus, Ms. Sharp held strategic planning and corporate finance roles and ultimately served as chief of staff to the chairman of the board at Elan Pharmaceuticals, a biotechnology company, from August 1998 to August 1999 and September 2001 to August 2003. Prior to Elan, Ms. Sharp was a management consultant at McKinsey & Company and an investment banker at Goldman Sachs, specializing in pharmaceuticals and medical devices. Ms. Sharp served as a board member of Array BioPharma Inc. from April 2017 until its acquisition in July 2019. She has also been a board member of Precision Biosciences Inc. and Sutro Biopharma, Inc. since 2018. She previously served as a board member of Agenus Inc. between May 2012 and June 2018. Ms. Sharp holds a B.A. and an M.B.A. from Harvard University.

The continued service of Ms. Sharp to the Company's Board of Directors is based on her extensive experience as a chief financial officer of a public company, her financial acumen, and her management and leadership skills.

Stephen A. Sherwin, M.D. has served on the Board of Directors since April 1999. Dr. Sherwin currently divides his time between advisory work in the life science industry and patient care and teaching in his specialty of medical oncology. He is a Clinical Professor of Medicine at the University of California, San Francisco, and a volunteer Attending Physician in Hematology-Oncology at the Zuckerberg San Francisco General Hospital. Dr. Sherwin currently serves on the Board of Directors of Aduro Biotech, Biogen and Neon Therapeutics. He is a Venture Partner with Third Rock Ventures and a member of the Scientific Steering Committee of the Parker Institute for Cancer Immunotherapy. Previously Dr. Sherwin was chairman and chief executive officer of Cell Genesys, a cancer immunotherapy company, from 1990 until the company's merger in 2009 with BioSante Pharmaceuticals (now ANI Pharmaceuticals). He was also a co-founder and chairman of Abgenix, an antibody company which was acquired by Amgen in 2006, and co-founder and chairman of Ceregene, a gene therapy company which was acquired by Sangamo Biosciences in 2013. From 1983 to 1990, Dr. Sherwin held various positions in clinical research at Genentech, most recently that of Vice President. Prior to 1983, he was on the staff of the National Cancer Institute. In addition, Dr. Sherwin previously served on the board of directors of the Biotechnology Industry Organization from 2001 to 2014 and as its chairman from 2009 to 2011, and was a member of the President's Council of Advisors in Science and Technology (PCAST) Working Group on Drug Development from 2011 to 2013. Dr. Sherwin holds a B.A. in biology summa cum laude from Yale University and an M.D. from Harvard Medical School, is board-certified in internal medicine and medical oncology, and is a fellow of the American College of Physicians.The continued service of Dr. Sherwin for election to the Company's Board of Directors is based on his experience and credentials in the biotechnology industry as the former Chief Executive Officer of Cell Genesys, Inc., the former chairman and co-founder of Abgenix, Inc., the chairman and co-founder of Ceregene, Inc., and his positions at Genentech, Inc. and the National Cancer Institute. Dr. Sherwin is also currently Chairman Emeritus of the Biotechnology Industry Organization. In addition to his biotechnology credentials, Dr. Sherwin's medical expertise in internal medicine and medical oncology provides a unique contribution to the Board of Directors.

CORPORATE GOVERNANCE

General

We have long believed that good corporate governance is important to ensure that Neurocrine Biosciences is managed for the long-term benefit of its stockholders. We periodically review our corporate governance policies and practices. The Board of Directors has adopted Corporate Governance Guidelines which describe our corporate governance practices and address corporate governance issues such as Board composition, responsibilities and director qualifications. These guidelines are available at www.neurocrine.com.

What is the Board's leadership structure?

It is the Company's policy to separate the roles of Chief Executive Officer and Chairman of the Board. This separation recognizes the independent roles of the Board of Directors, Chairman of the Board and Chief Executive Officer. The Board of Directors sets Company strategy and provides oversight and accountability for the Chief Executive Officer and Company management. The Chairman of the Board presides over the Board of Directors and provides guidance to the Chief Executive Officer. The Chief Executive Officer and the balance of the Board of Directors set Company goals with the Chief Executive Officer providing leadership and day to day oversight in furtherance of those goals. The Company believes that separation of the Board of Directors and Company leadership reinforces the independence of the Board of Directors in its oversight of the business and affairs of the Company, and creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of the Board of Directors to monitor whether management's actions are in the best interests of the Company and its stockholders.

Are the members of the Board independent?

The Board of Directors annually reviews the independence of each of the directors. With the exception of Kevin C. Gorman, Ph.D., who is the Chief Executive Officer of Neurocrine Biosciences, all current members of the Board of Directors meet the definition of "independent director" under the Nasdaq Stock Market qualification standards.

How often did the Board meet during fiscal 2019?

The Board of Directors held a total of seven meetings during 2019. For 2019, the Board of Directors had an Audit Committee, a Compensation Committee, a Nominating/Corporate Governance Committee, and a Science and Medical Technology Committee. Charters for each of these committees have been established and approved by the Board of Directors and current copies of the charters for each of the committees have been posted on the Company's website at *www.neurocrine.com.* During 2019, no director attended fewer than 75% of the aggregate of the total meetings of the Board of Directors and no director attended fewer than 75% of the total number of meetings held by all committees of the Board of Directors on which such director served.

What are the various committees of the Board and which directors are on those committees?

The Company's Audit Committee is comprised entirely of directors who meet the independence requirements set forth in Nasdaq Stock Market Rule 5605(c)(2)(A). Information regarding the functions performed by the committee, its membership, and the number of meetings held during the fiscal year is set forth in the "Report of the Audit Committee," included in this proxy statement. The members of the Audit Committee for 2019 were Richard F. Pops, George J. Morrow and Stephen A. Sherwin, M.D. The Board of Directors has determined that Messrs. Pops and Morrow as well as Dr. Sherwin are "audit committee financial experts" within the meaning of item 407(d)(5) of SEC Regulation S-K. This committee met five times during 2019. The members of the Audit Committee as of February 2020 (when Shalini Sharp joined the Board of Directors) are Mr. Pops, Ms. Sharp and Dr. Sherwin. The Board of Directors has also determined that Ms. Sharp is an "audit committee financial expert" within the meaning of item 407(d)(5) of SEC Regulation S-K.

The Company's Compensation Committee consists of directors Richard F. Pops, George J. Morrow and Alfred W. Sandrock, Jr., M.D., Ph.D. The Compensation Committee reviews and recommends to the Board of Directors the compensation of executive officers and other employees of the Company. Under its charter, the Compensation Committee may form, and delegate authority to, subcommittees as appropriate. Each of the current members of the Compensation Committee is an "independent director" as defined by Nasdaq Stock Market Rule 5605(a)(2). This committee met seven times during 2019.

The Company's Nominating/Corporate Governance Committee consists of directors Stephen A. Sherwin, M.D., George J. Morrow and Leslie V. Norwalk. Alfred W. Sandrock, Jr. M.D., Ph.D. served on the committee until Leslie V. Norwalk joined the Board of Directors in September 2019, Dr. Sherwin, Messrs. Morrow and Sandrock, and Ms. Norwalk are all "independent directors" as defined by Nasdaq Stock Market Rule 5605(a)(2). The Nominating/Corporate Governance Committee is responsible for developing and implementing policies and practices relating to corporate governance, including administration of the Company's Code of Business Conduct and Ethics, which applies to all of the Company's officers, directors and employees, and is available on the Company's website at *www.neurocrine.com.* The functions of this committee also include consideration of the composition of the Board of Directors and recommendation of individuals for election as directors of the Company. The Nominating/Corporate Governance Committee will consider nominees recommended by stockholders, provided such nominations are made pursuant to the Company's bylaws and applicable law. This committee met three times during 2019.

The Company's Science and Medical Technology Committee consists of directors Gary A. Lyons, William H. Rastetter, Ph.D. and Alfred W. Sandrock, Jr. M.D., Ph.D. The purpose of the Science and Medical Technology Committee is to assist the Board of Directors in its oversight of management's exercise of its responsibility to make significant scientific judgments relating to the Company's research and development activities and portfolio. This committee met one time during 2019. On April 6, 2020, Dr. Sandrock informed us that he will not be standing for re-election at the Annual Meeting. The Board of Directors will assess committee membership and fill any committee vacancies created by Dr. Sandrock's departure prior to the end of Dr. Sandrock's term.

Compensation Committee interlocks and insider participation

During 2019, the Compensation Committee consisted of George J. Morrow, Richard F. Pops and Alfred W. Sandrock, Jr., M.D., Ph.D. No interlocking relationship existed between any member of the Compensation Committee and any member of any other company's Board of Directors or compensation committee.

What is our director nomination process?

In selecting non-incumbent candidates and reviewing the qualifications of incumbent candidates for the Board of Directors, the Nominating/Corporate Governance Committee considers the Company's corporate governance principles, which include the following:

- Directors should possess the highest ethics, integrity and values, and be committed to representing the long-term interest of the stockholders. They also must have experience they can draw upon to help direct the business strategies of the Company together with sound judgment. They must be actively engaged in the pursuit of information relevant to the Company's business and must constructively engage their fellow Board members and management in dialogue and the decision-making process.

- Directors must be willing to devote sufficient time to carrying out their duties and responsibilities effectively, and should be committed to serve on the Board of Directors for an extended period of time.

- Directors should notify the Chairman of the Board and Chairman of the Nominating/Corporate Governance Committee in the event of any significant change in their employment responsibilities or affiliations. Director nominees should meet the Director Qualification requirements set forth in the Company's Corporate Governance Guidelines.

- In evaluating director nominees, the Nominating/Corporate Governance Committee considers the following factors: personal and professional integrity, ethics and values including any potential conflicts of interest; experience in corporate management and the biopharmaceutical industry, such as serving as an officer or former officer of a publicly held company; experience as a board member of another publicly held company; and additionally, for nominees seeking re-election, meeting attendance and participation and compliance with Company policies.

It is the Company's policy to have a diversity of skills, professional experience, education, associations, achievements, training, points of view and individual qualities and attributes represented on the Board of Directors. The Nominating/Corporate Governance Committee considers the diversity of the Board of Directors, including diversity with respect to gender and ethnicity, when evaluating candidates for election or re-election to the Board of Directors.

The Nominating/Corporate Governance Committee's goal is to assemble a Board of Directors that brings to the Company a variety of perspectives and skills derived from high quality business and professional experience.

In addition to the foregoing, the Nominating/Corporate Governance Committee Charter and Corporate Governance Guidelines set forth minimum criteria for director nominees. The Nominating/Corporate Governance Committee may also consider such other facts as it may deem are in the best interests of the Company and its stockholders. The Nominating/Corporate Governance Committee does, however, believe that at least one, and preferably several members of the Board of Directors, meet the criteria for an "audit committee financial expert" as defined by SEC rules. We believe that all of our directors should have a reputation for honesty, integrity and highest ethical standards, and should demonstrate business acumen, an ability to exercise sound judgment and a commitment to serve the Company.

Board Self-Assessment

The Nominating/Corporate Governance Committee ensures that each member of the Board, the Committees, and the Chair of the Board are annually assessed annually aimed at enhancing effectiveness. Directors complete a number of different evaluations in order to provide performance feedback and suggestions for improved effectiveness or contributions. The assessments are done by way of a questionnaire conducted by our external legal counsel, Cooley LLP. The assessments are treated on a confidential basis, with the results tallied on an anonymous basis for review. The results of the evaluation are analyzed by our Chief Legal Officer, the Nominating/Corporate Governance Committee and the Board, who decide whether any changes are needed to the Board's processes, procedures, composition or Committee structure. The evaluation carried out in 2019 indicated that all individuals and groups were effectively fulfilling their responsibilities.

Board Education

The Board recognizes the importance of ongoing director education. In order to facilitate member of the Board of Directors' educational development, the members of the Board of Directors regularly meet with management and are given periodic presentations on our business and recent business developments. Members of the Board of Directors also attend dinners on the evening before regularly scheduled Board meetings. Generally, at these dinners the Board meets with senior decision-makers within the Company or outside experts in order to enhance the Board's understanding of our business and affairs. In addition, on an annual basis an external expert meets with the Board to discuss new developments relating to corporate governance and the operation of public company boards. The Company also provides funding for members of the Board of Directors to attend outside director continuing education programs sponsored by educational and other institutions.

Identification and Evaluation of Nominees for Director

The Nominating/Corporate Governance Committee identifies nominees for director by first evaluating the current members of the Board of Directors willing to continue in service. Current members with qualifications and skills that are consistent with the Nominating/Corporate Governance Committee's criteria for service and who are willing to continue are considered for re-nomination, balancing the value of continuity of service by existing members of the Board of Directors with that of obtaining members who would offer a new perspective. If any member of the Board of Directors does not wish to continue in service, or if the Board of Directors decides not to re-nominate a member for re-election, the Nominating/Corporate Governance Committee identifies the desired skills and experience of a new nominee in light of the criteria above. The Nominating/Corporate Governance Committee generally polls the Board of Directors and members of management for their recommendations and may also seek input from third-party search firms. The Nominating/Corporate Governance Committee may also seek input from industry experts or analysts. The Nominating/Corporate Governance Committee reviews the qualifications, experience and background of the candidates. Final candidates are then interviewed by the Company's independent directors and executive management. In making its determinations, the Nominating/Corporate Governance Committee evaluates each individual in the context of the Company's Board of Directors as a whole, with the objective of assembling a group that can best perpetuate the success of the Company and represent stockholder interests through the exercise of sound judgment. After review and deliberation of all feedback and data, the Nominating/Corporate Governance Committee makes its recommendation to the Board of Directors.

We have not received director candidate recommendations from the Company's stockholders and do not have a formal policy regarding consideration of such recommendations. However, any recommendations received from stockholders will be evaluated in the same manner that potential nominees suggested by members of our Board of Directors, management or other parties are evaluated. Accordingly, our Board of Directors believes a formal policy regarding consideration of such recommendations is unnecessary.

What is our process for stockholder communications with the Board of Directors?

Stockholders of the Company wishing to communicate with the Company's Board of Directors or an individual director may send a written communication to the Board of Directors or such director c/o Neurocrine Biosciences, Inc., 12780 El Camino Real, San Diego, CA 92130, Attn: Corporate Secretary. Each communication must set forth:

- the name and address of the Company stockholder on whose behalf the communication is sent; and
- the number of Company shares that are beneficially owned by such stockholder as of the date of the communication.

Each stockholder communication will be reviewed by the Company's Corporate Secretary to determine whether it is appropriate for presentation to the Board or such director. Examples of inappropriate communications include advertisements, solicitations or hostile communications.

Communications determined by the Corporate Secretary to be appropriate for presentation to the Board or such director will be submitted to the Board or such director on a periodic basis.

What is the Board's role in risk oversight?

While the Board of Directors has ultimate oversight responsibility for the risk management process, it has delegated portions of this responsibility to various committees. The Board of Directors and its committees oversee risk throughout the business with focus on financial risk, legal/compliance risk, scientific/clinical development risk, and strategic risk. The Audit Committee focuses on financial risk and internal controls. The Nominating/Corporate Governance Committee and Audit Committee each focus on legal/compliance risk with the Nominating/Corporate Governance Committee taking the lead on the governance and management process and the Audit Committee taking the lead on SEC reporting and compliance. The Compensation Committee addresses compensation policies and practices as they relate to risk management practices and risk-taking incentives. The Science and Medical Technology Committee reviews the scientific risk associated with the Company's research and development activities and any related legal/compliance risk. The participation of the full Board of Directors in setting the Company's business strategy incorporates assessment of strategic risk for the Company overall.

How do the Company's compensation policies and practices relate to risk management practices and risk-taking incentives?

During 2019, the Compensation Committee, in conjunction with the Board of Directors, conducted an assessment of how the Company's compensation policies and practices relate to risk management practices and risk-taking incentives. As part of the process, the Compensation Committee engaged the services of an external, independent compensation consulting firm to conduct an independent risk assessment. Based on this assessment, the Compensation Committee concluded that the Company's compensation policies and practices do not create risks that are reasonably likely to have a material adverse effect on the Company.

What is our policy regarding Board member attendance at the Company's Annual Meeting?

The Company does not have a formal policy regarding attendance by members of the Board of Directors at the Annual Meeting. Directors Dr. Rastetter and Dr. Gorman attended the 2019 Annual Meeting of Stockholders.

REPORT OF THE AUDIT COMMITTEE

The following Report of the Audit Committee does not constitute soliciting material and should not be deemed filed or incorporated by reference into any other Company filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent the Company specifically incorporates this Report by reference therein.

The Audit Committee oversees the Company's financial reporting process on behalf of the Board of Directors. Management has the primary responsibility for the Company's financial statements and the reporting process, including the Company's systems of internal controls. In fulfilling its oversight responsibilities, the Audit Committee has reviewed and discussed with management the Company's audited financial statements as of and for the year ended December 31, 2019, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments and the clarity of disclosures in the financial statements.

The Audit Committee also has reviewed and discussed the Company's audited financial statements as of and for the year ended December 31, 2019 with the Company's independent registered public accounting firm, who are responsible for expressing an opinion on the conformity of those audited financial statements with accounting principles generally accepted in the United States, as well as their judgments as to the quality, not just the acceptability, of the Company's accounting principles and such other matters as are required to be discussed with the Audit Committee under the applicable requirements of the Public Company Accounting Oversight Board (United States) (the "PCAOB") and the Securities and Exchange Commission. The independent registered public accounting firm also is responsible for performing an independent audit of the Company's internal control over financial reporting in accordance with the auditing standards of the PCAOB. In addition, the Audit Committee has discussed the independent registered public accounting firm's independence from management and the Company, including the matters in the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB and considered the compatibility of non-audit services with the auditors' independence.

The Audit Committee discussed with the Company's independent registered public accounting firm the overall scope and plans for their audits. The Audit Committee meets with the independent registered public accounting firm, with and without management present, to discuss the results of their examinations, their evaluations of the Company's internal controls, and the overall quality of the Company's financial reporting.

In reliance on the reviews and discussions referred to above, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019, for filing with the Securities and Exchange Commission. The Audit Committee and the Board of Directors are also seeking stockholder ratification of the selection of the Company's independent registered public accounting firm for the year ending December 31, 2020.

Respectfully submitted by:
AUDIT COMMITTEE

Stephen A. Sherwin, M.D.
Richard F. Pops
Shalini Sharp

Audit and non-audit fees

The aggregate fees billed to the Company by Ernst & Young LLP, the Company's independent registered public accounting firm, for the indicated services for each of the last two fiscal years were as follows:

	2019	2018
Audit fees (1)	$ 1,053,634	$ 998,939
Audit related fees (2)	—	—
Tax fees (3)	155,101	140,300
All other fees (4)	—	—
Total	$ 1,208,735	$ 1,139,239

(1) Audit fees consist of fees for professional services performed by Ernst & Young LLP for the integrated audit of the Company's annual financial statements and internal control over financial reporting and review of financial statements included in the Company's 10-Q filings, review of registration statements on Form S-8, and services that are normally provided in connection with statutory and regulatory filings or engagements.

(2) Audit related fees consist of fees for assurance and related services performed by Ernst & Young LLP that are reasonably related to the performance of the audit or review of the Company's financial statements.

(3) Tax fees consist of fees for professional services performed by Ernst & Young LLP with respect to tax compliance, tax advice and tax planning. For 2019, these fees included $90,840 for tax preparation services, $15,450 for services related to Section 382 studies for net operating loss utilization and $48,811 for state tax planning. For 2018, these fees included $78,950 for tax preparation services, $15,450 for services related to Section 382 studies for net operating loss utilization and $45,900 for state tax planning.

(4) All other fees consist of fees for other permissible work performed by Ernst & Young LLP that does not meet with the above category descriptions

The Audit Committee has considered whether the provision of non-audit services is compatible with maintaining the independence of Ernst & Young LLP, and has concluded that the provision of such services is compatible with maintaining the independence of that firm. All of the services rendered by Ernst & Young LLP were pre-approved by the Audit Committee in accordance with the Audit Committee pre-approval policy described below.

Audit Committee policy regarding pre-approval of audit and permissible non-audit services of our independent registered public accounting firm

The Company's Audit Committee has established a policy that all audit and permissible non-audit services provided by the Company's independent registered public accounting firm will be pre-approved by the Audit Committee. These services may include audit services, audit related services, tax services and other services. The Audit Committee considers whether the provision of each non-audit service is compatible with maintaining the independence of the Company's registered public accounting firm. Pre-approval is detailed as to the particular service or category of services and is generally subject to a specific budget. The Company's independent registered public accounting firm and management are required to periodically (at least quarterly) report to the Audit Committee regarding the extent of services provided by the independent registered public accounting firm in accordance with this pre-approval, and the fees for the services performed to date.

COMPENSATION COMMITTEE REPORT

The following Report of the Committee does not constitute soliciting material and should not be deemed filed or incorporated by reference into any other Company filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent the Company specifically incorporates this Report by reference therein.

The Compensation Committee of the Company has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this proxy statement.

Respectfully submitted by:
COMPENSATION COMMITTEE

George J. Morrow
Richard F. Pops
Alfred W. Sandrock, Jr., M.D., Ph.D.

PROPOSAL ONE: ELECTION OF DIRECTORS

The Company's bylaws, as amended, provide that the Board of Directors is comprised of nine directors. The Company's Certificate of Incorporation provides that the Board of Directors is divided into three classes. There are currently three directors in Class I (William H. Rastetter, Ph.D., George J. Morrow and Leslie V. Norwalk), three directors in Class II (Richard F. Pops, Shalini Sharp and Stephen A. Sherwin, M.D.), and two directors in Class III (Kevin C. Gorman, Ph.D. and Gary A. Lyons). With the exception of Kevin C. Gorman, Ph.D., who is the Chief Executive Officer of Neurocrine Biosciences, all current members of the Board of Directors meet the definition of "independent director" under the Nasdaq Stock Market qualification standards.

The directors in Class I hold office until the 2021 Annual Meeting of Stockholders, the directors in Class II hold office until the 2022 Annual Meeting of Stockholders and the directors in Class III hold office until the 2020 Annual Meeting of Stockholders (or, in each case, until their earlier resignation, removal from office, or death). After each such election, the elected directors will then serve in succeeding terms of three years and until a successor is duly elected and qualified. Officers of the Company serve at the discretion of the Board of Directors. There are no family relationships among the Company's directors and executive officers.

The term of office for directors Kevin C. Gorman, Ph.D., Gary A. Lyons and Alfred W. Sandrock, M.D., Ph.D. will expire at the 2020 Annual Meeting of Stockholders. On April 6, 2020, Dr. Sandrock informed us that he will not be standing for re-election at the 2020 Annual Meeting of Stockholders, therefore the stockholders will elect two Class III directors for a term of three years at the Annual Meeting.

Nominees for Election at the Annual Meeting

Both of the nominees (Kevin C. Gorman, Ph.D. and Gary A. Lyons) are currently Class III directors of the Company. All of the nominees were previously elected to the Board of Directors by the Company's stockholders. Information about the nominees is set forth below:

Name of Director	Age	Position in the Company	Director Since
Kevin C. Gorman, Ph.D.	62	Chief Executive Officer and Director	2008
Gary A. Lyons (4)	68	Director	1993

Who are the remaining Directors that are not up for election this year?

The Class I and II directors will remain in office after the 2020 Annual Meeting of Stockholders. The names and certain other current information about the directors whose terms of office continue after the Annual Meeting are set forth below:

Name of Director	Age	Position in the Company	Director Since
George J. Morrow (2) (3)	68	Director	2015
Leslie V. Norwalk (3)	54	Director	2019
Richard F. Pops (1) (2)	57	Director	1998
William H. Rastetter, Ph.D. (4)	71	Chairman of the Board	2010
Shalini Sharp (1)	45	Director	2020
Stephen A. Sherwin, M.D. (1)(3)	71	Director	1999

(1) Member of the Audit Committee.
(2) Member of the Compensation Committee.
(3) Member of the Nominating/Corporate Governance Committee.
(4) Member of the Science and Medical Technology Committee.

Vote Required

The nominees receiving the highest number of affirmative votes of the shares present in person or represented by proxy at the 2020 Annual Meeting of Stockholders and entitled to vote on the election of directors will be elected to the Board of Directors.

Votes withheld from any director are counted for purposes of determining the presence or absence of a quorum, but have no other legal effect under Delaware law.

Unless otherwise instructed, the proxy holders will vote the proxies received by them for the Company's Class III nominees named above. If any of the Company's nominees is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for any nominee who is designated by the present Board of Directors to fill the vacancy. It is not expected that any of the Company's nominees will be unable or will decline to serve as a director. **The Board of Directors unanimously recommends that stockholders vote "FOR" the Class III nominees named above.**

PROPOSAL TWO: ADVISORY VOTE ON COMPENSATION PAID TO THE COMPANY'S NAMED EXECUTIVE OFFICERS

General

At the 2017 Annual Meeting of Stockholders, the Board of Directors, as a matter of good corporate governance, recommended that the stockholders approve an advisory vote on Named Executive Officer compensation ("say-on-pay") on an annual basis. Approximately 94% of the stockholder votes cast at the 2017 Annual Meeting of Stockholders were for the Company's recommendation, and in response the Company holds an annual say-on-pay vote. This annual vote is not intended to address any specific compensation item, but rather the overall compensation of the Company's Named Executive Officers and the philosophy, policies and practices described in this proxy statement.

Summary of the Company's Executive Compensation Philosophy

The Compensation Committee of the Board of Directors (the "Committee") bases its executive compensation decisions on a number of objectives which include aligning management incentives with interests of stockholders, providing competitive compensation, appropriately balancing compensation risk in the context of the Company's business strategy and meeting evolving compensation governance standards. The philosophy of the Committee in establishing the Company's compensation policy for executive officers as well as all other employees is to:

- align compensation plans with both short-term and long-term goals and objectives of the Company and stockholder interests;
- attract and retain highly skilled individuals by offering compensation that compares favorably to other employers who are competing for available employees;
- incentivize employees through a mix of base salary, bonus amounts based on achievement of defined corporate and personal goals and long-term equity awards to generate returns for stockholders; and
- pay for performance by ensuring that an ever-increasing percentage of an individual's compensation is performance-based as they progress to higher levels within the Company.

As discussed below in the Compensation Discussion and Analysis, we believe we have adopted a compensation philosophy that provides strong alignment between executive pay and performance based on strategic goals designed to provide both near-term and long-term growth in stockholder value. The historical approval rates, on an advisory basis, for the Company's executive compensation program have been over 97% for each of the 2017, 2018 and 2019 Annual Meetings of Stockholders. The Committee and our Board of Directors believe that this level of approval of our executive compensation program is indicative of our stockholders' strong support of our compensation philosophy and goals as well as the overall administration of executive compensation by the Committee and the Board of Directors.

You are being asked to approve on an advisory basis, the compensation paid to the Company's Named Executive Officers as set forth in the Compensation Discussion and Analysis, Summary Compensation Table and related notes and narrative set forth herein. This vote is not intended to address any specific compensation item, but rather the overall compensation of the Company's Named Executive Officers and the philosophy, policies and practices described in this proxy statement.

Vote Required

The 'say-on-pay' vote is advisory and therefore not binding on the Company, the Committee or the Board of Directors. However, we value the opinions of our stockholders and will review and will continue to consider the outcome of this advisory vote when making future compensation decisions for our Named Executive Officers and will evaluate whether any actions are necessary to address the stockholders' concerns. Approval of this advisory vote requires the affirmative vote of the majority of shares represented in person or by proxy and entitled to vote on the item. **The Board of Directors unanimously recommends voting "FOR" approval of the Company's Named Executive Officers compensation.**

PROPOSAL THREE: APPROVAL OF THE COMPANY'S 2020 EQUITY INCENTIVE PLAN

The Board of Directors is requesting stockholder approval of the Neurocrine Biosciences, Inc. 2020 Equity Incentive Plan (the "2020 Plan"). The 2020 Plan is intended to be the successor to the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan (the "2011 Plan").

Why We Are Asking Our Stockholders to Approve the 2020 Plan

Currently, we maintain the 2011 Plan to grant equity awards to our employees, directors and consultants. We are seeking stockholder approval of the 2020 Plan to increase the number of shares available for the grant of stock options, restricted stock unit awards and other awards, which will enable us to have a competitive equity incentive program to compete with our peer group for key talent. If the 2020 Plan is approved by our stockholders, no additional awards will be granted under the 2011 Plan following the date of the Annual Meeting. For clarity, pursuant to our current compensation program for our non-employee directors, all stock options that are to be granted on the date of the Annual Meeting to all of our current non-employee directors, other than Dr. Sandrock (who has informed us that he will not be standing for re-election at the Annual Meeting) and Ms. Sharp (who was appointed to the Board in February 2020 and, therefore, is not eligible for such stock option) (collectively, the "2020 Annual Director Grants"), will be granted under the 2011 Plan.

Approval of the 2020 Plan by our stockholders will allow us to grant stock options, restricted stock unit awards and other awards at levels determined appropriate by the Board of Directors or Compensation Committee. The 2020 Plan will also allow us to utilize a broad array of equity incentives in order to secure and retain the services of our employees, directors and consultants, and to provide long-term incentives that align the interests of our employees, directors and consultants with the interests of our stockholders.

Requested Shares

If this Proposal Three is approved by our stockholders, then subject to adjustment for certain changes in our capitalization, the aggregate number of shares of our common stock that may be issued under the 2020 Plan will not exceed the sum of (i) 3,300,000 new shares, (ii) the number of shares remaining available for the grant of new awards under the 2011 Plan as of immediately following the effective date of the 2020 Plan, and (iii) certain shares subject to outstanding awards granted under the 2011 Plan that may become available for issuance under the 2020 Plan, as such shares become available from time to time (as further described below in "Description of the 2020 Plan—Shares Available for Awards").

Stockholder Approval

If this Proposal Three is approved by our stockholders, the 2020 Plan will become effective as of the date of the Annual Meeting and no additional awards will be granted under the 2011 Plan following the date of the Annual Meeting. In the event that our stockholders do not approve this Proposal Three, the 2020 Plan will not become effective and the 2011 Plan will continue to be effective in accordance with its terms. For clarity, in either case, the 2020 Annual Director Grants will be granted under the 2011 Plan.

Why You Should Vote to Approve the 2020 Plan

Equity Awards Are an Important Part of Our Compensation Philosophy

The Board of Directors believes that the grant of equity awards is a key element underlying our ability to attract, retain and motivate our employees, directors and consultants because of the strong competition for highly trained and experienced individuals among biopharmaceutical companies. Therefore, the Board of Directors believes that the 2020 Plan is in the best interests of our business and our stockholders and unanimously recommends a vote in favor of this Proposal Three.

The 2020 Plan will allow us to continue to utilize equity awards as long-term incentives to secure and retain the services of our employees, directors and consultants, consistent with our compensation philosophy and common compensation practice for our industry. To date, equity awards have been a key aspect of our program to attract and retain key employees, directors and consultants. We believe the use of equity awards strongly aligns the interests of our employees with those of our stockholders by placing a considerable proportion of our employees' total compensation "at risk" because it is contingent on the appreciation in value of our common stock. In addition, we believe equity awards encourage employee ownership of our common stock and promote retention through the reward of long-term Company performance.

We Carefully Manage the Use of Equity Awards and Dilution is Reasonable

Our compensation philosophy reflects broad-based eligibility for equity awards, and we grant awards to substantially all of our employees. However, we recognize that equity awards dilute existing stockholders, and, therefore, we are mindful to responsibly manage the growth of our equity compensation program. We are committed to effectively monitoring our equity compensation share reserve, including our "burn rate," to ensure that we maximize stockholders' value by granting the appropriate number of equity awards necessary to attract, reward, and retain employees, directors and consultants.

Overhang

The following table provides certain information regarding our use of equity awards.

	As of March 23, 2020 (Record Date)
Total number of shares of common stock subject to outstanding stock options	7,199,484
Weighted-average exercise price of outstanding stock options	$42.93
Weighted-average remaining term of outstanding stock options	7.02 years
Total number of shares of common stock subject to outstanding full value awards	1,825,955
Total number of shares of common stock available for grant under the 2011 Plan and the Neurocrine Biosciences, Inc. Inducement Plan [(1)]	5,191,822
Total number of shares of common stock subject to outstanding stock options and outstanding full value awards	9,025,439
Total number of shares of common stock outstanding	92,779,393
Per-share closing price of common stock as reported on Nasdaq Global Select Market	$79.01

(1) As of the Record Date, there were no shares of common stock available for grant under any of our equity incentive plans, other than the 2011 Plan and the Neurocrine Biosciences, Inc. Inducement Plan (as described in this table).

The Size of Our Share Reserve Request Is Reasonable

If this Proposal Three is approved by our stockholders, we will have 3,300,000 new shares available for grant after the Annual Meeting, subject to adjustment for certain changes in our capitalization.

The 2020 Plan Combines Compensation and Governance Best Practices

The 2020 Plan includes provisions that are designed to protect our stockholders' interests and to reflect corporate governance best practices, including:

- *Stockholder approval is required for additional shares*. The 2020 Plan does not contain an annual "evergreen" provision. The 2020 Plan authorizes a fixed number of shares, so that stockholder approval is required to issue any additional shares.

- *No discounted stock options or stock appreciation rights*. All stock options and stock appreciation rights granted under the 2020 Plan must have an exercise price equal to or greater than the fair market value of our common stock on the date the stock option or stock appreciation right is granted.

- *Limit on non-employee director compensation*. The aggregate value of all compensation granted or paid by us to any individual for service as a non-employee director with respect to any period commencing on the date of the annual stockholders meeting for a particular year and ending on the date of the annual stockholders meeting for the next subsequent year (such period, the "annual period"), including awards granted under the 2020 Plan and cash fees paid to such non-employee director, will not exceed $1,250,000 in total value. In addition, the aggregate value of any equity award(s) granted by us to any individual for service as a non-employee director upon or in connection with his or her initial election or appointment to the Board of Directors will not exceed $2,000,000 in total value (such that the aggregate compensation granted or paid to any individual for service as a non-employee director with respect to an annual period in which such individual is first appointed or elected to the Board of Directors will not exceed $3,250,000 in total value). For purposes of these limitations, the value of any equity awards is calculated based on the grant date fair value of such awards for financial reporting purposes.

- *Awards subject to forfeiture/clawback*. Awards granted under the 2020 Plan will be subject to recoupment in accordance with the Neurocrine Biosciences, Inc. Policy for Recoupment of Incentive Compensation and any other clawback policy that we are required to adopt pursuant to the listing standards of any national securities exchange or association on which our securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law, and any other clawback policy that the Company adopts. In addition, the Board may impose other clawback, recovery or recoupment provisions in an award agreement, including a reacquisition right in respect of previously acquired shares or other cash or property upon the occurrence of cause.

- *Restrictions on dividends*. The 2020 Plan provides that dividends or dividend equivalents may not be paid or credited to any awards granted under the 2020 Plan.

- *No liberal change in control definition*. The change in control definition in the 2020 Plan is not a "liberal" definition. A change in control transaction must actually occur in order for the change in control provisions in the 2020 Plan to be triggered.

- *No liberal share counting provisions*. The following shares will not become available again for issuance under the 2020 Plan: (i) any shares that are reacquired or withheld (or not issued) by us to satisfy the exercise or purchase price of an award; (ii) any shares that are reacquired or withheld (or not issued) by us to satisfy a tax withholding obligation in connection with an award; (iii) any shares repurchased by us on the open market with the proceeds of the exercise or purchase price of an award; and (iv) in the event that a stock appreciation right is settled in shares, the gross number of shares subject to such award.

- *Material amendments require stockholder approval*. Consistent with Nasdaq rules, the 2020 Plan requires stockholder approval of any material revisions to the 2020 Plan. In addition, certain other amendments to the 2020 Plan require stockholder approval.

Vote Required

At the Annual Meeting, the stockholders are being asked to approve the 2020 Plan. The affirmative vote of the holders of a majority of the shares represented in person or by proxy at the Annual Meeting and entitled to vote on the item will be required to approve the 2020 Plan. **The Board of Directors unanimously recommends voting "FOR" the approval of the 2020 Plan.**

Description of the 2020 Plan

The material features of the 2020 Plan are described below. The following description of the 2020 Plan is a summary only and is qualified in its entirety by reference to the complete text of the 2020 Plan. Stockholders are urged to read the actual text of the 2020 Plan in its entirety, which is attached to this proxy statement as Appendix A.

Purpose

The 2020 Plan is designed to secure and retain the services of our employees, non-employee directors and consultants, to provide incentives for such persons to exert maximum efforts for the success of the Company and our affiliates, and to provide a means by which such persons may be given an opportunity to benefit from increases in the value of our common stock. The 2020 Plan is also designed to align employees' interests with stockholder interests.

Successor to 2011 Plan

The 2020 Plan is intended to be the successor to the 2011 Plan. If the 2020 Plan is approved by our stockholders, no additional awards will be granted under the 2011 Plan following the date of the Annual Meeting. If the 2020 Plan is not approved by our stockholders, the 2020 Plan will not become effective and the 2011 Plan will continue to be effective in accordance with its terms. For clarity, in either case, the 2020 Annual Director Grants will be granted under the 2011 Plan.

Types of Awards

The terms of the 2020 Plan provide for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards, and other awards.

Shares Available for Awards

Subject to adjustment for certain changes in our capitalization, the aggregate number of shares of our common stock that may be issued under the 2020 Plan will not exceed the sum of (i) 3,300,000 new shares, (ii) the number of shares remaining available for the grant of new awards under the 2011 Plan as of immediately following the effective date of the 2020 Plan, and (iii) the Prior Plan's Returning Shares (as defined below), as such shares become available from time to time.

The "Prior Plan's Returning Shares" are shares of our common stock subject to outstanding awards granted under the 2011 Plan (referred to as the "Prior Plan" in this Proposal Three) that following the effective date of the 2020 Plan: (i) are not issued because such award or any portion thereof expires or otherwise terminates without all of the shares covered by such award having been issued; (ii) are not issued because such award or any portion thereof is settled in cash; or (iii) are forfeited back to or repurchased by us because of the failure to meet a contingency or condition required for the vesting of such shares.

The following actions will not result in an issuance of shares of our common stock under the 2020 Plan and accordingly will not reduce the number of shares of our common stock available for issuance under the 2020 Plan: (i) the expiration or termination of any portion of an award granted under the 2020 Plan without the shares covered by such portion of the award having been issued; or (ii) the settlement of any portion of an award granted under the 2020 Plan in cash.

If any shares of our common stock issued pursuant to an award granted under the 2020 Plan are forfeited back to or repurchased by us because of the failure to meet a contingency or condition required for the vesting of such shares, then such shares will become available again for issuance under the 2020 Plan.

The following shares of our common stock will not become available again for issuance under the 2020 Plan: (i) any shares that are reacquired or withheld (or not issued) by us to satisfy the exercise or purchase price of an award granted under the 2020 Plan or the Prior Plan (including any shares subject to such award that are not delivered because such award is exercised through a reduction of shares subject to such award); (ii) any shares that are reacquired or withheld (or not issued) by us to satisfy a tax withholding obligation in connection with an award granted under the 2020 Plan or the Prior Plan; (iii) any shares repurchased by us on the open market with the proceeds of the exercise or purchase price of an award granted under the 2020 Plan or the Prior Plan; and (iv) in the event that a stock appreciation right granted under the 2020 Plan or the Prior Plan is settled in shares, the gross number of shares subject to such award.

Full Value Award Limitations

Subject to adjustment for certain changes in our capitalization, the aggregate number of shares of our common stock that may be issued pursuant to the grant of "full value awards" (i.e., any award other than a stock option or stock appreciation right with respect to which the exercise or strike price is at least 100% of the fair market value of the common stock subject to the stock option or stock appreciation right on the date of grant) will not exceed 50% of the total number of shares of our common stock issuable under the 2020 Plan.

Eligibility

Under the terms of the 2020 Plan, all of our (including our affiliates') employees, non-employee directors and consultants are eligible to participate in the 2020 Plan and may receive all types of awards other than incentive stock options. Incentive stock options may be granted under the 2020 Plan only to our (including our affiliates') employees. Generally, we do not provide equity grants to consultants and have no plans to do so at this time.

As of March 23, 2020, we (including our affiliates) had approximately 730 employees, eight non-employee directors and approximately 70 consultants. Dr. Sandrock has informed us that he will not be standing for re-election at the Annual Meeting and, therefore, he will not be eligible to participate in the 2020 Plan.

Administration

The 2020 Plan will be administered by our Board of Directors, which may in turn delegate some or all of the administration of the 2020 Plan to a committee or committees composed of members of the Board of Directors. Our Board of Directors has delegated concurrent authority to administer the 2020 Plan to our Compensation Committee, but may, at any time, revest in itself some or all of the power delegated to our Compensation Committee. Our Board of Directors and Compensation Committee are each considered to be a Plan Administrator for purposes of this Proposal Three.

Subject to the terms of the 2020 Plan, the Plan Administrator may determine the recipients, the types of awards to be granted, the number of shares of our common stock subject to or the cash value of awards, and the terms and conditions of awards granted under the 2020 Plan, including the period of their exercisability and vesting. The Plan Administrator also has the authority to provide for accelerated exercisability and vesting of awards. Subject to the limitations set forth below, the Plan Administrator also determines the fair market value applicable to an award and the exercise or strike price of stock options and stock appreciation rights granted under the 2020 Plan.

The Plan Administrator may also delegate to one or more executive officers the authority to designate employees who are not executive officers to be recipients of certain awards and the number of shares of our common stock subject to such awards. Under any such delegation, the Plan Administrator will specify the total number of shares of our common stock that may be subject to the awards granted by such executive officer. The executive officer may not grant an award to himself or herself.

Repricing; Cancellation and Re-Grant of Stock Options or Stock Appreciation Rights

Under the 2020 Plan, except in connection with a corporate transaction or a change in control or an adjustment for certain changes in our capitalization, or unless our stockholders have approved such an action within 12 months prior to such an event, the Plan Administrator does not have the authority to reprice any outstanding stock option or stock appreciation right by (1) reducing the exercise or strike price of the stock option or stock appreciation right or (2) canceling any outstanding stock option or stock appreciation right that has an exercise or strike price greater than the then-current fair market value of our common stock in exchange for cash or other awards.

Dividends and Dividend Equivalents

The 2020 Plan provides that dividends or dividend equivalents may not be paid or credited to any awards granted under the 2020 Plan.

Limit on Non-Employee Director Compensation

The aggregate value of all compensation granted or paid by us to any individual for service as a non-employee director with respect to any period commencing on the date of the annual stockholders meeting for a particular year and ending on the date of the annual stockholders meeting for the next subsequent year (such period, the "annual period"), including awards granted under the 2020 Plan and cash fees paid to such non-employee director, will not exceed $1,250,000 in total value. In addition, the aggregate value of any equity award(s) granted by us to

any individual for service as a non-employee director upon or in connection with his or her initial election or appointment to the Board of Directors will not exceed $2,000,000 in total value (such that the aggregate compensation granted or paid by us to any individual for service as a non-employee director with respect to an annual period in which such individual is first appointed or elected to the Board of Directors will not exceed $3,250,000 in total value). For purposes of these limitations, the value of any equity awards is calculated based on the grant date fair value of such awards for financial reporting purposes.

Stock Options

Stock options may be granted under the 2020 Plan pursuant to stock option agreements. The 2020 Plan permits the grant of stock options that are intended to qualify as incentive stock options, or ISOs, and nonstatutory stock options, or NSOs.

The exercise price of a stock option granted under the 2020 Plan may not be less than 100% of the fair market value of the common stock subject to the stock option on the date of grant and, in some cases (see "—Limitations on Incentive Stock Options" below), may not be less than 110% of such fair market value.

The term of stock options granted under the 2020 Plan may not exceed ten years from the date of grant and, in some cases (see "—Limitations on Incentive Stock Options" below), may not exceed five years from the date of grant. Except as otherwise provided in a participant's stock option agreement or other written agreement with us or one of our affiliates, if a participant's service relationship with us or any of our affiliates (referred to in this Proposal Three as "continuous service") terminates (other than for cause (as defined in the 2020 Plan) or the participant's death or disability (as defined in the 2020 Plan)), the participant may exercise any vested stock options for up to three months following the participant's termination of continuous service. Except as otherwise provided in a participant's stock option agreement or other written agreement with us or one of our affiliates, if a participant's continuous service terminates due to the participant's disability, the participant may exercise any vested stock options for up to 12 months following the participant's termination due to the participant's disability. Except as otherwise provided in a participant's stock option agreement or other written agreement with us or one of our affiliates, if a participant's continuous service terminates due to the participant's death (or the participant dies within a specified period following termination of continuous service), the participant's beneficiary may exercise any vested stock options for up to 18 months following the participant's death. Except as explicitly provided otherwise in a participant's stock option agreement or other written agreement with us or one of our affiliates, if a participant's continuous service is terminated for cause, all stock options held by the participant will terminate upon the participant's termination of continuous service and the participant will be prohibited from exercising any stock option from and after such termination date. Except as otherwise provided in a participant's stock option agreement or other written agreement with us or one of our affiliates, the term of a stock option may be extended if a participant's continuous service terminates for any reason other than for cause and, at any time during the applicable post-termination exercise period, the exercise of the stock option would be prohibited by applicable laws or the sale of any common stock received upon such exercise would violate our insider trading policy. In no event, however, may a stock option be exercised after its original expiration date.

In addition, the current form of stock option agreement for employees under the 2020 Plan provides that if an employee's continuous service terminates due to the employee's retirement (as defined in the employee's stock option agreement and described below), the employee's stock option will become fully vested as of the date of such retirement, and the employee may exercise such stock option for up to 12 months following such retirement. For purposes of the foregoing, "retirement" generally means a termination of an employee's continuous service upon or after the employee has reached age 60 with at least five years of continuous service, provided that the employee complies with any other requirements in the Company's then-current policy regarding retirement.

Acceptable forms of consideration for the purchase of our common stock pursuant to the exercise of a stock option under the 2020 Plan will be determined by the Plan Administrator and may include payment: (i) by cash, check, bank draft or money order payable to us; (ii) pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board; (iii) by delivery to us of shares of our common stock (either by actual delivery or attestation); (iv) by a net exercise arrangement (for NSOs only); or (v) in other legal consideration approved by the Plan Administrator.

Stock options granted under the 2020 Plan may become exercisable in cumulative increments, or "vest," as determined by the Plan Administrator at the rate specified in the stock option agreement. Shares covered by different stock options granted under the 2020 Plan may be subject to different vesting schedules as the Plan Administrator may determine.

The Plan Administrator may impose limitations on the transferability of stock options granted under the 2020 Plan in its discretion. Generally, a participant may not transfer a stock option granted under the 2020 Plan other than by will or the laws of descent and distribution or, subject to approval by the Plan Administrator, pursuant to a domestic relations order. However, the Plan Administrator may permit transfer of a stock option in a manner that is not prohibited by applicable tax and securities laws. Options may not be transferred to a third party financial institution for value.

Limitations on Incentive Stock Options

In accordance with current federal tax laws, the aggregate fair market value, determined at the time of grant, of shares of our common stock with respect to ISOs that are exercisable for the first time by a participant during any calendar year under all of our stock plans may not exceed $100,000. The stock options or portions of stock options that exceed this limit or otherwise fail to qualify as ISOs are treated as NSOs.

No ISO may be granted to any person who, at the time of grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power unless the following conditions are satisfied:

- the exercise price of the ISO must be at least 110% of the fair market value of the common stock subject to the ISO on the date of grant; and
- the term of the ISO must not exceed five years from the date of grant.

Subject to adjustment for certain changes in our capitalization, the aggregate maximum number of shares of our common stock that may be issued pursuant to the exercise of ISOs under the 2020 Plan is 18,000,000 shares.

Stock Appreciation Rights

Stock appreciation rights may be granted under the 2020 Plan pursuant to stock appreciation right agreements. Each stock appreciation right is denominated in common stock share equivalents. The strike price of each stock appreciation right will be determined by the Plan Administrator, but will in no event be less than 100% of the fair market value of the common stock subject to the stock appreciation right on the date of grant. The term of stock appreciation rights granted under the 2020 Plan may not exceed ten years from the date of grant. The Plan Administrator may also impose restrictions or conditions upon the vesting of stock appreciation rights that it deems appropriate. The appreciation distribution payable upon exercise of a stock appreciation right may be paid in shares of our common stock, in cash, in a combination of cash and stock, or in any other form of consideration determined by the Plan Administrator and set forth in the stock appreciation right agreement. Stock appreciation rights will be subject to the same conditions upon termination of continuous service and restrictions on transfer as stock options under the 2020 Plan.

Restricted Stock Awards

Restricted stock awards may be granted under the 2020 Plan pursuant to restricted stock award agreements. A restricted stock award may be granted in consideration for cash, check, bank draft or money order payable to us, the participant's services performed for us, or any other form of legal consideration acceptable to the Plan Administrator. Shares of our common stock acquired under a restricted stock award may be subject to forfeiture to or repurchase by us in accordance with a vesting schedule to be determined by the Plan Administrator. Rights to acquire shares of our common stock under a restricted stock award may be transferred only upon such terms and conditions as are set forth in the restricted stock award agreement. Upon a participant's termination of continuous service for any reason, any shares subject to restricted stock awards held by the participant that have not vested as of such termination date may be forfeited to or repurchased by us.

Restricted Stock Unit Awards

Restricted stock unit awards may be granted under the 2020 Plan pursuant to restricted stock unit award agreements. Payment of any purchase price may be made in any form of legal consideration acceptable to the Plan Administrator. A restricted stock unit award may be settled by the delivery of shares of our common stock, in cash, in a combination of cash and stock, or in any other form of consideration determined by the Plan Administrator and set forth in the restricted stock unit award agreement. Restricted stock unit awards may be subject to vesting in accordance with a vesting schedule to be determined by the Plan Administrator. Except as otherwise provided in a participant's restricted stock unit award agreement or other written agreement with us, restricted stock units that have not vested will be forfeited upon the participant's termination of continuous service for any reason.

Performance Awards

The 2020 Plan allows us to grant performance awards. A performance award is an award that may vest or may be exercised, or that may become earned and paid, contingent upon the attainment of certain performance goals during a performance period. A performance award may require the completion of a specified period of continuous service. The length of any performance period, the performance goals to be achieved during the performance period, and the measure of whether and to what degree such performance goals have been attained will be determined by the Plan Administrator in its discretion. In addition, to the extent permitted by applicable law and the applicable award agreement, the Plan Administrator may determine that cash may be used in payment of performance awards.

Performance goals under the 2020 Plan will be based on any one or more of the following performance criteria: (1) earnings (including earnings per share and net earnings, in either case before or after any or all of: interest, taxes, depreciation and amortization, legal settlements or other income (expense), or stock-based compensation, other non-cash expenses and changes in deferred revenue); (2) total stockholder return; (3) return on equity or average stockholder's equity; (4) return on assets, investment, or capital employed; (5) stock price; (6) margin (including gross margin); (7) income (before or after taxes); (8) operating income; (9) operating income after taxes; (10) pre-tax profit; (11) operating cash flow; (12) sales, prescriptions, or revenue targets; (13) increases in revenue or product revenue; (14) expenses and cost reduction goals; (15) improvement in or attainment of working capital levels; (16) economic value added (or an equivalent metric); (17) market share; (18) cash flow; (19) cash flow per share; (20) cash burn; (21) share price performance; (22) debt reduction; (23) implementation or completion of projects or processes (including, without limitation, discovery of a pre-clinical drug candidate, recommendation of a drug candidate to enter a clinical trial, clinical trial initiation, clinical trial enrollment and dates, clinical trial results, regulatory filing submissions, regulatory filing acceptances, regulatory or advisory committee interactions, regulatory approvals, presentation of studies and launch of commercial plans,

compliance programs or education campaigns); (24) customer satisfaction; (25) stockholders' equity; (26) capital expenditures; (27) debt levels; (28) financings; (29) operating profit or net operating profit; (30) workforce diversity; (31) growth of net income or operating income; (32) billings; (33) employee hiring; (34) funds from operations; (35) budget management; (36) strategic partnerships or transactions (including acquisitions, joint ventures or licensing transactions); (37) engagement of thought leaders and patient advocacy groups; (38) enhancement of intellectual property portfolio, filing of patent applications and granting of patents; (39) litigation preparation and management; and (40) any other measure of performance selected by the Plan Administrator.

Performance goals may be based on a Company-wide basis, with respect to one or more business units, divisions, affiliates or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Plan Administrator (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the performance goals are established, the Plan Administrator will appropriately make adjustments in the method of calculating the attainment of the performance goals for a performance period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated performance goals; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (12) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the U.S. Food and Drug Administration or any other regulatory body.

In addition, the Plan Administrator retains the discretion to define the manner of calculating the performance criteria it selects to use for a performance period and to reduce or eliminate the compensation or economic benefit due upon the attainment of any performance goal.

Other Awards

Other forms of awards valued in whole or in part by reference to, or otherwise based on, our common stock may be granted either alone or in addition to other awards under the 2020 Plan. Subject to the terms of the 2020 Plan, the Plan Administrator will have sole and complete authority to determine the persons to whom and the time or times at which such other awards will be granted, the number of shares of our common stock to be granted and all other terms and conditions of such other awards.

Clawback Policy

Awards granted under the 2020 Plan will be subject to recoupment in accordance with the Neurocrine Biosciences, Inc. Policy for Recoupment of Incentive Compensation and any other clawback policy that we are required to adopt pursuant to the listing standards of any national securities exchange or association on which our securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law, and any other clawback policy that the Company adopts. In addition, the Board may impose other clawback, recovery or recoupment provisions in an award agreement, including a reacquisition right in respect of previously acquired shares or other cash or property upon the occurrence of cause.

Changes to Capital Structure

In the event of certain capitalization adjustments, the Plan Administrator will appropriately and proportionately adjust: (i) the class(es) and maximum number of shares of our common stock subject to the 2020 Plan; (ii) the class(es) and maximum number of shares of our common stock that may be issued pursuant to the exercise of ISOs; and (iii) the class(es) and number of shares of our common stock and the exercise, strike or purchase price per share of our common stock subject to outstanding awards.

Corporate Transaction and Change in Control

The following applies to each outstanding award under the 2020 Plan in the event of a corporate transaction (as defined in the 2020 Plan and described below) or a change in control (as defined in the 2020 Plan and described below), unless provided otherwise in the applicable award agreement, in any other written agreement between a participant and the Company or an affiliate, or in any director compensation policy of the Company. For purposes of this Proposal Three, the term "Transaction" will mean such corporate transaction or change in control.

In the event of a Transaction, any awards outstanding under the 2020 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company) (such entity, the "acquiring entity"), and any reacquisition or repurchase rights held by us with respect to the award may be assigned to the acquiring entity. If the acquiring entity does not assume, continue or substitute for such awards, then (i) with respect to any such awards that are held by participants who are employees or non-employee directors and, in each case, whose continuous service has not terminated prior to the effective time of the Transaction (such participants, the "current employee and director

participants"), the vesting (and exercisability, if applicable) of such awards will be accelerated in full (and with respect to any such awards that are subject to performance-based vesting conditions or requirements, vesting will be deemed to be satisfied at the greater of (x) the target level of performance or (y) the actual level of performance measured in accordance with the applicable performance goals as of the date of the Transaction) to a date prior to the effective time of the Transaction (contingent upon the effectiveness of the Transaction), and such awards will terminate if not exercised (if applicable) at or prior to the effective time of the Transaction, and any reacquisition or repurchase rights held by us with respect to such awards will lapse (contingent upon the effectiveness of the Transaction), and (ii) any such awards that are held by persons other than current employee and director participants will terminate if not exercised (if applicable) at or prior to the effective time of the Transaction, except that any reacquisition or repurchase rights held by us with respect to such awards will not terminate and may continue to be exercised notwithstanding the Transaction.

In the event an award will terminate if not exercised at or prior to the effective time of a Transaction, the Plan Administrator may provide that the holder of such award may not exercise such award but instead will receive a payment equal in value to the excess, if any, of (i) the value of the property the participant would have received upon the exercise of the award, over (ii) any exercise price payable by such holder in connection with such exercise.

Except as otherwise provided in the applicable award agreement, in any other written agreement between a participant and the Company or an affiliate, or in any director compensation policy of the Company, in the event that an employee or director's continuous service is involuntarily terminated without cause (including any such termination due to such employee or director's death or disability) upon or within 12 months following the effective time of a Transaction, the vesting (and exercisability, if applicable) of any assumed awards (as defined in the 2020 Plan and described below) held by such employee or director as of the date of such termination will be accelerated in full (and with respect to any such awards that are subject to performance-based vesting conditions or requirements, vesting will be deemed to be satisfied at the greater of (x) the target level of performance or (y) the actual level of performance measured in accordance with the applicable performance goals as of the date of such termination), effective as of the date of such termination. For purposes of the foregoing, an "assumed award" generally means any outstanding award under the 2020 Plan that was assumed or continued, or any outstanding similar award that was granted in substitution for an award under the 2020 Plan, in each case by the acquiring entity in connection with the applicable Transaction.

Under the 2020 Plan, a "corporate transaction" generally means the consummation of any one or more of the following events: (1) a sale or other disposition of all or substantially all of our assets; (2) a sale or other disposition of at least 90% of our outstanding securities; (3) a merger, consolidation or similar transaction where we do not survive the transaction; or (4) a merger, consolidation or similar transaction where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Under the 2020 Plan, a "change in control" generally means the occurrence of any one or more of the following events: (1) the acquisition by any person, entity or group of our securities representing more than 50% of the combined voting power of our then outstanding securities, other than by virtue of a merger, consolidation, or similar transaction; (2) a merger, consolidation or similar transaction in which our stockholders immediately before such transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity) in substantially the same proportions as their ownership immediately prior to such transaction; (3) our stockholders approve or our Board of Directors approves our complete dissolution or liquidation, or our complete dissolution or liquidation otherwise occurs; (4) a sale, lease, exclusive license or other disposition of all or substantially all of our assets, other than to an entity, more than 50% of the combined voting power of which is owned by our stockholders in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such transaction; or (5) when a majority of our Board of Directors becomes comprised of individuals who were not serving on our Board of Directors on the date the 2020 Plan was adopted by our Compensation Committee (the "incumbent Board of Directors"), or whose nomination, appointment, or election was not approved by a majority of the incumbent Board of Directors still in office.

Plan Amendments and Termination

The Plan Administrator will have the authority to amend or terminate the 2020 Plan at any time. However, except as otherwise provided in the 2020 Plan, no amendment or termination of the 2020 Plan may materially impair a participant's rights under his or her outstanding awards without the participant's consent. We will obtain stockholder approval of any amendment to the 2020 Plan as required by applicable law and listing requirements. Unless terminated sooner by the Plan Administrator, the 2020 Plan will automatically terminate on March 15, 2030, which is the day before the tenth anniversary of the date the 2020 Plan was adopted by our Compensation Committee.

U.S. Federal Income Tax Consequences

The following is a summary of the principal United States federal income tax consequences to participants and us with respect to participation in the 2020 Plan. This summary is not intended to be exhaustive and does not discuss the income tax laws of any local, state or foreign jurisdiction in which a participant may reside. The information is based upon current federal income tax rules and therefore is subject to change when those rules change. Because the tax consequences to any participant may depend on his or her particular situation, each participant should consult the participant's tax adviser regarding the federal, state, local and other tax consequences of the grant or exercise of an award or the disposition of stock acquired the 2020 Plan. The 2020 Plan is not qualified under the provisions of Section 401(a) of the Internal Revenue Code of 1986, as amended, (the "Code") and is not subject to any of the provisions of the Employee Retirement Income

Security Act of 1974. Our ability to realize the benefit of any tax deductions described below depends on our generation of taxable income as well as the requirement of reasonableness and the satisfaction of our tax reporting obligations.

Nonstatutory Stock Options

Generally, there is no taxation upon the grant of an NSO if the stock option is granted with an exercise price equal to the fair market value of the underlying stock on the grant date. Upon exercise, a participant will recognize ordinary income equal to the excess, if any, of the fair market value of the underlying stock on the date of exercise of the stock option over the exercise price. If the participant is employed by us or one of our affiliates, that income will be subject to withholding taxes. The participant's tax basis in those shares will be equal to his or her fair market value on the date of exercise of the stock option, and the participant's capital gain holding period for those shares will begin on that date.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the participant.

Incentive Stock Options

The 2020 Plan provides for the grant of stock options that are intended to qualify as "incentive stock options," as defined in Section 422 of the Code. Under the Code, a participant generally is not subject to ordinary income tax upon the grant or exercise of an ISO. If the participant holds a share received upon exercise of an ISO for more than two years from the date the stock option was granted and more than one year from the date the stock option was exercised, which is referred to as the required holding period, the difference, if any, between the amount realized on a sale or other taxable disposition of that share and the participant's tax basis in that share will be long-term capital gain or loss.

If, however, a participant disposes of a share acquired upon exercise of an ISO before the end of the required holding period, which is referred to as a disqualifying disposition, the participant generally will recognize ordinary income in the year of the disqualifying disposition equal to the excess, if any, of the fair market value of the share on the date of exercise of the stock option over the exercise price. However, if the sales proceeds are less than the fair market value of the share on the date of exercise of the stock option, the amount of ordinary income recognized by the participant will not exceed the gain, if any, realized on the sale. If the amount realized on a disqualifying disposition exceeds the fair market value of the share on the date of exercise of the stock option, that excess will be short-term or long-term capital gain, depending on whether the holding period for the share exceeds one year.

For purposes of the alternative minimum tax, the amount by which the fair market value of a share of stock acquired upon exercise of an ISO exceeds the exercise price of the stock option generally will be an adjustment included in the participant's alternative minimum taxable income for the year in which the stock option is exercised. If, however, there is a disqualifying disposition of the share in the year in which the stock option is exercised, there will be no adjustment for alternative minimum tax purposes with respect to that share. In computing alternative minimum taxable income, the tax basis of a share acquired upon exercise of an ISO is increased by the amount of the adjustment taken into account with respect to that share for alternative minimum tax purposes in the year the stock option is exercised.

We are not allowed a tax deduction with respect to the grant or exercise of an ISO or the disposition of a share acquired upon exercise of an ISO after the required holding period. If there is a disqualifying disposition of a share, however, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the participant, subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and provided that either the employee includes that amount in income or we timely satisfy our reporting requirements with respect to that amount.

Restricted Stock Awards

Generally, the recipient of a restricted stock award will recognize ordinary income at the time the stock is received equal to the excess, if any, of the fair market value of the stock received over any amount paid by the recipient in exchange for the stock. If, however, the stock is not vested when it is received (for example, if the employee is required to work for a period of time in order to have the right to sell the stock), the recipient generally will not recognize income until the stock becomes vested, at which time the recipient will recognize ordinary income equal to the excess, if any, of the fair market value of the stock on the date it becomes vested over any amount paid by the recipient in exchange for the stock. A recipient may, however, file an election with the Internal Revenue Service, within 30 days following his or her receipt of the restricted stock award, to recognize ordinary income, as of the date the recipient receives the restricted stock award, equal to the excess, if any, of the fair market value of the stock on the date the restricted stock award is granted over any amount paid by the recipient for the stock.

The recipient's basis for the determination of gain or loss upon the subsequent disposition of shares acquired from a restricted stock award will be the amount paid for such shares plus any ordinary income recognized either when the stock is received or when the stock becomes vested.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the restricted stock award.

Restricted Stock Unit Awards

Generally, the recipient of a restricted stock unit award structured to comply with the requirements of Section 409A of the Code or an exception to Section 409A of the Code will recognize ordinary income at the time the stock is delivered equal to the excess, if any, of the fair market value of the stock received over any amount paid by the recipient in exchange for the stock. To comply with the requirements of Section 409A of the Code, the stock subject to a restricted stock unit award may generally only be delivered upon one of the following events: a fixed calendar date (or dates), separation from service, death, disability or a change in control. If delivery occurs on another date, unless the restricted stock unit award otherwise complies with or qualifies for an exception to the requirements of Section 409A of the Code (including delivery upon achievement of a performance goal), in addition to the tax treatment described above, the recipient will owe an additional 20% federal tax and interest on any taxes owed.

The recipient's basis for the determination of gain or loss upon the subsequent disposition of shares acquired from a restricted stock unit award will be the amount paid for such shares plus any ordinary income recognized when the stock is delivered.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the restricted stock unit award.

Stock Appreciation Rights

Generally, if a stock appreciation right is granted with an exercise price equal to the fair market value of the underlying stock on the grant date, the recipient will recognize ordinary income equal to the fair market value of the stock or cash received upon such exercise. Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the stock appreciation right.

Section 162(m) Limitations

Under Section 162(m) of the Code, compensation paid to any publicly held corporation's "covered employees" that exceeds $1 million per taxable year for any covered employee is generally non-deductible. Awards granted under the 2020 Plan will be subject to the deduction limit under Section 162(m) of the Code and will not be eligible to qualify for the performance-based compensation exception under Section 162(m) of the Code pursuant to the transition relief provided by the Tax Cuts and Jobs Act. For further information regarding the deduction limit under Section 162(m) of the Code and such transition relief, please see the section entitled "Compensation Discussion and Analysis—Tax Considerations—Internal Revenue Code Section 162(m)."

New Plan Benefits under 2020 Plan

The following table sets forth certain information regarding future benefits under the 2020 Plan.

Name and Position	Number of Shares
Kevin C. Gorman, Ph.D. Chief Executive Officer	(1)
Matthew C. Abernethy Chief Financial Officer	(1)
Eric Benevich Chief Commercial Officer	(1)
Haig P. Bozigian, Ph.D. Chief Development Officer	(1)
Eiry W. Roberts, M.D. Chief Medical Officer	(1)
All current executive officers as a group	(1)
All current directors who are not executive officers as a group	(1)
All current employees, including current officers who are not executive officers, as a group	(1)

(1) Awards granted under the 2020 Plan to our executive officers, other employees, and non-employee directors are discretionary and are not subject to set benefits or amounts under the terms of the 2020 Plan, and we have not granted any awards under the 2020 Plan subject to stockholder approval of this Proposal Three. Accordingly, the benefits or amounts that will be received by or allocated to our executive officers, other employees, and non-employee directors under the 2020 Plan are not determinable.

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" PROPOSAL THREE

EQUITY COMPENSATION PLANS

The following table sets forth information regarding all of the Company's equity compensation plans as of December 31, 2019:

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (a)		Weighted Average Exercise Price of Outstanding Options, Warrants and Rights (b) (3)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column a) (c)
Equity compensation plans approved by security holders (1)	7,595,811	$	52.22	6,828,566
Equity compensation plans not approved by security holders (2)	190,000	$	65.10	55,182
Total	7,785,811	$	52.53	6,883,748

(1) The number of securities remaining available for future issuance under equity compensation plans as of December 31, 2019 are from the 2011 Plan. The shares available for issuance under the 2011 Plan may be issued in the form of option awards, restricted stock awards, restricted stock unit awards or stock bonus awards subject to limitations set forth in the 2011 Plan.

(2) Consists of stock options and restricted stock unit awards that were issued to certain employees under the Neurocrine Biosciences, Inc. Inducement Plan, or the Inducement Plan, which was not approved by security holders. These stock option grants have a four-year vesting period and the restrictted stock units RSUs generally have vesting periods of three to four years. For additional details regarding the Inducement Plan, see Note 8 of the Notes to the Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019 filed with the SEC on February 7, 2020.

(3) The weighted average exercise price excludes restricted stock unit awards, which have no exercise price.

PROPOSAL FOUR: RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

General

The Audit Committee has selected Ernst & Young LLP to audit the financial statements of the Company for the current fiscal year ending December 31, 2020. Ernst & Young LLP has audited the Company's financial statements since 1992. Representatives of Ernst & Young LLP are expected to be present at the Annual Meeting, will have the opportunity to make a statement if they so desire, and are expected to be available to respond to appropriate questions.

Stockholders are not required to ratify the selection of Ernst & Young LLP as the Company's independent registered public accounting firm. However, the Audit Committee is submitting the selection of Ernst & Young LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in their discretion may direct the selection of a different independent registered public accounting firm at any time during the year if they determine that such a change would be in the best interests of the Company and its stockholders.

Vote Required

The affirmative vote of the holders of a majority of the shares represented in person or by proxy at the Annual Meeting and entitled to vote on the item will be required to approve and ratify the Audit Committee's selection of Ernst & Young LLP. **The Board of Directors unanimously recommends voting "FOR" approval and ratification of such selection.** In the event of a negative vote on such ratification, the Audit Committee will reconsider its selection.

EXECUTIVE OFFICERS AND MANAGEMENT

The following table sets forth information regarding our executive officers and other management team members as of the Record Date:

Name	Age	Position
Kevin C. Gorman, Ph.D.	62	Chief Executive Officer and Director
Matthew C. Abernethy	40	Chief Financial Officer
Eric Benevich	54	Chief Commercial Officer
David W. Boyer	41	Chief Corporate Affairs Officer
Haig P. Bozigian, Ph.D.	62	Chief Development Officer
Julie Cooke	54	Chief Human Resources Officer
Kyle W. Gano, Ph.D.	47	Chief Business Development and Strategy Officer
Dimitri E. Grigoriadis, Ph.D.	62	Chief Research Officer
Darin M. Lippoldt	54	Chief Legal Officer and Corporate Secretary
Malcolm C. Lloyd-Smith	64	Chief Regulatory Officer
Eiry W. Roberts, M.D.	56	Chief Medical Officer

See above for biographical information concerning Kevin C. Gorman, Ph.D.

Matthew C. Abernethy was appointed Chief Financial Officer in November 2017 and is responsible for leading corporate finance activities and commercial supply chain operations, as well as information technology and investor relations functions at Neurocrine Biosciences. Mr. Abernethy has over 15 years of experience in the financial sector and investor relations with expertise in the healthcare industry. He joined Neurocrine Biosciences from Zimmer Biomet, where he held various positions from February 2009 to November 2017, including most recently, Vice President, Investor Relations and Treasurer and Vice President of Finance for the Americas and Global Product Engines. He began his career with KPMG LLP and is a certified public accountant. Mr. Abernethy earned his B.S. in Accounting and Business Administration from Grace College and an MBA from the University of Chicago.

Eric Benevich was appointed Chief Commercial Officer in May 2015 and is responsible for all aspects of commercial development, marketing and sales of the Neurocrine Biosciences product portfolio. Previously, Mr. Benevich was at Avanir Pharmaceuticals, Inc., from 2005 to 2015, serving most recently as Vice President of Marketing where he was responsible for NUEDEXTA ® and commercialization of their CNS pipeline. Mr. Benevich has over 20 years of experience in the pharmaceutical industry and previously served in various positions of increasing responsibility at Peninsula Pharmaceuticals Inc., Amgen and AstraZeneca in the sales and marketing of drugs such as Enbrel ® , Epogen ® and Prilosec ® . Mr. Benevich has a BBA in International Business from Washington State University.

David W. Boyer was appointed Chief Corporate Affairs Officer in September 2019 and is responsible for patient advocacy and engagement, corporate communications, government relations, and public policy at Neurocrine Biosciences. Mr. Boyer brings nearly 20 years of experience in public affairs, specializing in the life sciences and biopharmaceutical sectors. He joins Neurocrine Biosciences from nine years at BGR Group, where he served as a Principal and the Head of the Health & Lifesciences Practice, leading the firm's healthcare advocacy, policy and strategy development, and strategic consulting team. During his tenure at BGR Group, Mr. Boyer led public policy, advocacy, and strategic communications initiatives for a wide range of healthcare clients. Prior to joining BGR Group, Mr. Boyer served as Special Assistant to the President for Legislative Affairs under President George W. Bush, Assistant Commissioner for Legislation at the U.S. Food and Drug Administration, and Special Assistant to the Secretary at the U.S. Department of Health and Human Services. In addition to his public service, Mr. Boyer held senior advocacy positions at the Biotechnology Innovation Organization (BIO) and the Pharmaceutical Research and Manufacturers of America (PhRMA). Mr. Boyer holds a B.A. in Government from Georgetown University.

Haig P. Bozigian, Ph.D. was appointed Chief Development Officer in 2013 after having served as Senior Vice President of Pharmaceutical and Preclinical Development. Dr. Bozigian is responsible for all preclinical development, chemistry manufacturing and controls (CMC) and clinical pharmacology, and has led such functions since 2006. Dr. Bozigian joined Neurocrine Biosciences in 1997. With extensive expertise in CNS related new product development, Dr. Bozigian has participated in research and development for approximately 30 years. Prior to joining Neurocrine Biosciences, Dr. Bozigian served as Director of Pharmaceutical Development at Procyte Corporation, Associate Director of Pharmacokinetics and Drug Metabolism at Sphinx Pharmaceuticals Corporation and as a Clinical Pharmacokineticist at GlaxoSmithKline. Dr. Bozigian earned his B.S. in Microbiology from the University of Massachusetts, his M.S. in Pharmacodynamics and Toxicology from the University of Nebraska Medical Center, and earned his Ph.D. in Pharmaceutical Sciences from the University of Arizona.

Julie Cooke was appointed Chief Human Resources Officer in September 2017. She joined Neurocrine Biosciences from the Sanford Burnham Prebys Medical Research Institute where she served as Senior Vice President for Human Resources and was a member of the executive management team. Previously, Ms. Cooke held multiple positions at Life Technologies, including being the human resource partner to the Chief Operating Officer, Division Presidents and Global Function Leads. Prior to Life Technologies, she ran human resources and was a member of the executive management team at SGX Pharmaceuticals. Ms. Cooke began her career at PepsiCo., The Pepsi Bottling Group, and Gateway , where she held positions of increasing responsibility in human resources. She holds a Bachelor of Arts in Economics from Colorado College.

Kyle W. Gano, Ph.D. was appointed Chief Business Development Officer in 2011, and Chief Business Development and Strategy Officer in 2020, and is responsible for all business and corporate development activities, including the management of ongoing collaborations with AbbVie, Mitsubishi Tanabe Pharma, BIAL, Jnana Therapeutics ,Voyager Therapeutics, Xenon Pharmaceuticals and Idorsia Pharmaceuticals Ltd. From 2001 to 2011, Dr. Gano held several positions of increasing responsibility at Neurocrine Biosciences spanning marketing analytics to business development. Dr. Gano received his B.S. in Chemistry from the University of Oregon, B.S. in Biochemistry from the University of Washington, and his Ph.D. in Organic Chemistry and M.B.A in Finance from the University of California, Los Angeles.

Dimitri E. Grigoriadis, Ph.D. was appointed Chief Research Officer in 2013. Dr. Grigoriadis oversees all research functions, including drug discovery, biology and chemistry, and has led such functions since 2006. Dr. Grigoriadis joined Neurocrine Biosciences in 1993, established the pharmacology and drug screening groups and was most recently a Neurocrine Biosciences Fellow and Vice President of Discovery Biology. Prior to joining Neurocrine Biosciences, he was a Senior Scientist in the Neuroscience group at the DuPont Pharmaceutical Company from 1990 to 1993. Dr. Grigoriadis received his B.Sc. from the University of Guelph in Ontario, Canada, and his M.Sc. and Ph.D. in Pharmacology from the University of Toronto, Ontario, Canada. He conducted his postdoctoral research at the National Institute on Drug Abuse from 1987 to 1990.

Darin M. Lippoldt was appointed Chief Legal Officer and Corporate Secretary in October 2014 and has oversight of all corporate legal matters, intellectual property, and corporate compliance. Prior to joining Neurocrine Biosciences, Mr. Lippoldt served as Executive Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary of Volcano Corporation, a company he joined in 2010. Prior to Volcano, Mr. Lippoldt served as Associate General Counsel at Amylin Pharmaceuticals, Inc. since 2003. He previously practiced corporate and securities law with the law firms of Fulbright & Jaworski LLP and Matthews and Branscomb, P.C. Mr. Lippoldt received a B.B.A. in Finance, an M.A. in International Relations and a J.D. from St. Mary's University.

Malcolm C. Lloyd-Smith was appointed Chief Regulatory Officer in September 2014 and is responsible for regulatory affairs and quality assurance. Prior to joining Neurocrine Biosciences, Mr. Lloyd-Smith served at Cadence Pharmaceuticals, Inc. as Senior Vice President, Regulatory Affairs, Quality and Clinical from August 2012 to September 2014, and previously as Senior Vice President, Regulatory Affairs and Quality Assurance from August 2008. Mr. Lloyd-Smith served as Vice President and Head of Global Regulatory Affairs for Elan Pharmaceuticals, Inc. from September 2003 to August 2008, after having served in the United Kingdom as its Vice President, International Regulatory Affairs from March 2002 to August 2003. Previously, Mr. Lloyd-Smith served in various positions of increasing responsibility with DuPont Pharmaceuticals in Germany, Switzerland, USA and UK. Mr. Lloyd-Smith holds a B.Sc. in Pharmacology from the University of Leeds and a M.Sc. in Pharmacological Biochemistry from Hatfield Polytechnic.

Eiry W. Roberts, M.D. was appointed Chief Medical Officer in January 2018 and is responsible for all clinical development and medical affairs activities at Neurocrine Biosciences. Dr. Roberts has over 25 years of research and development experience in the pharmaceutical industry across all phases of drug development from research through commercialization in multiple therapeutic areas, including neuroscience, inflammation, oncology and metabolic diseases. She joined Neurocrine Biosciences from Eli Lilly and Company where she had worked since May 1991. During her tenure at Eli Lily and Company Dr. Roberts held various positions of increasing responsibility, including Vice President, Clinical Pharmacology/Managing Director of Chorus a position she held from October 2014 until December 2017 and Vice President of R&D, BioMedicines Business Unit. At Eli Lilly Dr. Roberts was the Chair of the Medical Review Committee, where she was responsible for review and approval of all the integrated clinical plans for molecules in the Lilly portfolio. Dr. Roberts was accountable for early clinical development programs across all therapeutic areas within Lilly, as well as registration for new chemical entities and biproducts in Phase III development. During her time at Lilly, Dr. Roberts established a new therapeutic area, which resulted in the development of five potential novel medicines from Phase I through to approval, with two of them successfully receiving regulatory approval. Dr. Roberts also has extensive leadership and business development experience, including the management of strategic alliances, business partnerships and venture capital collaborations. Dr. Roberts is a physician who trained in pharmacology and medicine in the UK, qualifying from the University of London in 1987. Her post-graduate clinical training was in clinical pharmacology and cardiology at St. Bartholomew's Hospital and the Royal London Hospital.

COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis describes Neurocrine Biosciences' executive officer compensation program for 2019 and certain elements of our 2020 program. It provides qualitative information on the factors relevant to these decisions and the manner in which compensation is awarded to the following individuals who are our Named Executive Officers ("NEOs") for 2019:

- Chief Executive Officer, Kevin C. Gorman, Ph.D.;
- Chief Financial Officer, Matthew C. Abernethy;
- Chief Commercial Officer, Eric Benevich;
- Chief Development Officer, Haig P. Bozigian, Ph.D.; and
- Chief Medical Officer, Eiry W. Roberts, M.D.

Executive Summary

Business Overview

As further detailed in the Proxy Summary included in this Proxy Statement, we are a commercial-stage biopharmaceutical company focused on discovering and developing innovative and life-changing treatments for patients with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. We specialize in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. Currently, we are primarily focused on the commercialization of INGREZZA, our first FDA-approved product, in the U.S., which is indicated for the treatment of adults with TD.

In addition to our first marketed product:

- We receive royalties at tiered percentage rates on any net sales of ORILISSA, which our collaboration partner, AbbVie, received approval for from the FDA in July 2018 and Health Canada in October 2018.

- We have product candidates in our late-stage clinical pipeline for (1) opicapone for the treatment of Parkinson's disease, (2) elagolix for the treatment of uterine fibroids and (3) NBIb-1817 (VY-AADC) for the treatment of advanced Parkinson's disease. Our product candidates for uterine fibroids and advanced Parkinson's disease are partnered with AbbVie and Voyager, respectively.

- We have product candidates in our early- and mid-stage clinical pipeline for (1) crinecerfont (NBI-74788) for the treatment of CAH, (2) elagolix for the treatment of PCOS in women and (3) a VMAT2 inhibitor with potential use in the treatment of neurologic and psychiatric disorders. Our product candidate for PCOS is partnered with AbbVie.

Going forward, we expect to augment our product pipeline by acquiring, through license or otherwise, additional drug candidates for R&D and potential commercialization.

2019 and Early 2020 Corporate Performance Highlights

- In 2019, we continued the successful launch of INGREZZA for the treatment of TD with product revenues of over $750 million.

- We recorded net income of $37.0 million for 2019.

- In January 2019, we entered into a strategic collaboration with Voyager focused on the development and commercialization of Voyager's gene therapy programs, NBIb-1817 (VY-AADC) for Parkinson's disease and for Friedreich's ataxia, as well as rights to two programs to be determined. This collaboration combines our expertise in neuroscience, drug development and commercialization with Voyager's innovative gene therapy programs targeting severe neurological diseases.

- In the third quarter of 2019, the FDA accepted our new drug application, or NDA, for opicapone for the treatment of Parkinson's disease with a Prescription Drug User Fee Act, or PDUFA, target action date of April 26, 2020. Also, in the third quarter of 2019, the FDA accepted AbbVie's NDA for elagolix for the treatment of uterine fibroids with a PDUFA target action date in the second quarter of 2020.

- In December 2019, we entered into a license and collaboration agreement with Xenon Pharmaceuticals Inc., or Xenon, a clinical-stage biopharmaceutical company. Pursuant to the terms of the agreement, we acquired an exclusive license to NBI-921352 (XEN901), a clinical-stage candidate with potential in epilepsy.

- In January 2020, we announced a collaboration and optional licensing agreement with Idorsia Pharmaceuticals Ltd, or Idorsia, granting us an option to license ACT-709478, a potent, selective, orally active and brain penetrating T-type calcium channel blocker, in clinical development for the treatment of a rare pediatric epilepsy. The option also includes a research collaboration to discover,

identify and develop additional novel T-type calcium channel blockers.

Pay for Performance/At Risk Pay

Our executive officer compensation program is designed to reward achievement of the specific strategic goals that we believe will advance our business strategy and create long-term value for our stockholders. Consistent with our goal of attracting, motivating and retaining a high-caliber executive team, our executive officer compensation program is designed to pay for performance. We utilize compensation elements that meaningfully align our NEOs' interests with those of our stockholders to create long-term value. As such, a significant portion of our CEO's and other executive officers' compensation is "at-risk," performance-based compensation, in the form of long-term equity awards that have performance-based vesting criteria or only have value to the executive officer if the Company's stock price increases, and annual cash incentives that are only earned if we achieve multiple corporate metrics.

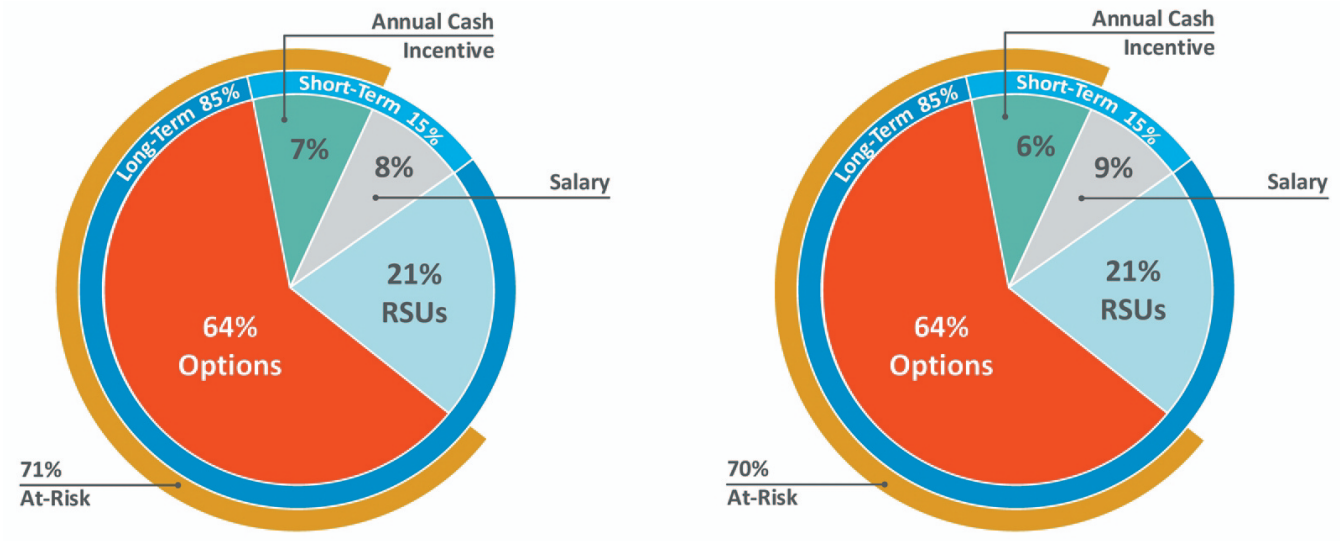
With respect to long-term equity awards, the Compensation Committee of our Board of Directors (the "Committee") annually considers the appropriate mix of equity awards and incorporates performance-based equity awards when it determines that important milestones should form the basis of a performance-based equity award and that such a grant would not promote excessive risk-taking that could adversely impact the Company. The Committee believes that combining such performance-vesting equity awards with time-vesting equity awards complements the performance-vesting equity awards and facilitates a focus on the totality of the Company's ongoing and future activities as potential contributors to stock price appreciation. For example:

- In February 2018, based upon an analysis of the Company's ongoing and future strategic focus and potential upcoming development and commercial milestones, the Committee granted a mix of performance-vesting restricted stock unit ("PRSU") awards with a three-year performance period, time-vesting stock options and time-vesting restricted stock unit ("RSU") awards to our NEOs.

- In February 2019, based upon an analysis of the same factors and considering the performance criteria underlying the PRSU awards granted in 2018, one of which was receiving FDA approval of opicapone, the Committee granted a mix of time-vesting stock options and time-vesting RSU awards to our NEOs, as further described below under "2019 Executive Officer Compensation Decisions—Long-Term Equity Awards."

- In February 2020, to further align our executive officers' financial interests with those of our stockholders, the Committee granted a mix of PRSU awards with a three-year performance period, time-vesting stock options and time-vesting RSU awards to our NEOs, except Dr. Bozigian. The Committee targeted allocating the aggregate value of each NEO's long-term equity awards 50% to stock options, 25% to RSUs and 25% to PRSUs.

The graphics below illustrate the elements of our CEO's compensation mix for 2019 and the aggregate compensation mix for 2019 for the other named executive officers as a group. The percentages in the chart below reflect the actual cash incentives paid and the grant-date value of equity awards, in each case as reported in our 2019 Summary Compensation Table.



Our Compensation Practices

Below are key elements of our compensation program, as well as problematic pay practices that we avoid:

WHAT WE DO

- ✓ Heavily weight our executive officer compensation toward "at risk," performance-based compensation
- ✓ Balance short-term and long-term incentive compensation
- ✓ Use multi-year vesting for all executive officer equity awards
- ✓ Have an incentive compensation recoupment or clawback policy for performance-based cash and equity incentives
- ✓ Structure our executive officer compensation program to minimize inappropriate risk-taking and encourage appropriate risk-taking
- ✓ Cap annual cash incentives at a maximum payout amount
- ✓ Select peer companies that we compete with for executive officer talent, have a similar business and are of similar size as us, and review their pay practices
- ✓ Solicit advice from the Committee's independent compensation consultant
- ✓ Have meaningful stock ownership guidelines for executive officers
- ✓ Hold annual say-on-pay advisory vote

WHAT WE DON'T DO

- × Provide guaranteed bonuses or base salary increases
- × Allow for the repricing of stock options without stockholder approval
- × Pay dividends or dividend equivalents on unearned shares
- × Permit hedging or other forms of speculative transactions by employees or directors
- × Permit pledging by employees or directors
- × Provide single-trigger change in control benefits
- × Include gross-ups in new executive employment agreements or change-in-control arrangements
- × Provide excessive perquisites to our executive officers
- × Provide retirement or pension benefits to our executive officers that are not available to employees generally

Role of the Compensation Committee

As discussed in greater detail below, the Committee takes into consideration a peer group, survey data and advice from an independent compensation consultant when setting the compensation philosophy and compensation structure for the Company. The Committee's complete roles and responsibilities are set forth in a written charter, which was adopted by the Board of Directors and is available at *www.neurocrine.com*. Some of the significant roles and responsibilities of the Committee include:

- reviewing and, if necessary, revising the compensation philosophy of the Company;
- reviewing and approving corporate goals and objectives relating to the compensation of the Company's employees, including executive officers, and evaluating the performance of the Company, and its executive officers, in light of these corporate goals and objectives;
- reviewing and approving compensation for all executive officers, including perquisite benefits, if any;
- reviewing and approving all employment and severance agreements for executive officers;
- reviewing and approving all promotions to executive officer positions and the hiring of all new executive officers;
- reviewing director compensation by taking into consideration peer group data and advice from an independent compensation consultant, and making recommendations to the Board of Directors;
- reviewing and approving guidelines for salaries, merit salary increases, cash incentive payments, stock-based grants and performance-based stock grants for all non-executive officer employees of the Company;
- reviewing and approving equity grants to non-employees of the Company, if any;
- reviewing and approving equity and incentive plans, including amendments or modifications to such equity and incentive plans;
- administering the Company's equity and incentive plans and employee pension and benefit plans;
- reviewing and taking into consideration stockholder feedback regarding compensation matters, including our annual "say-on-pay" vote;
- retaining independent compensation consultants and advisors when appropriate to advise the Committee on

compensation policies and plans;
- complying with requirements established by the SEC, assessing the risks arising from the Company's compensation policies and taking any actions required as a result thereof;
- reviewing executive officer and director compliance with our Stock Ownership Guidelines; and
- preparing and approving the Compensation Discussion and Analysis to be included as part of the Company's annual proxy statement.

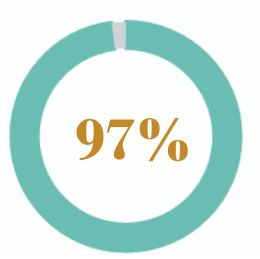
Committee Actions in Connection with Say-on-Pay Vote

Our Committee is committed to ensuring that our executive officer compensation program is effective and aligned with our stockholders' interests and concerns. Accordingly, a critical component of our Committee's process has been to continue:

- reviewing emerging compensation "best practices" in the U.S., with a focus toward companies of similar size, market capitalization and revenues; and
- soliciting advice from our Committee's independent compensation consultant.

In 2019, we sought a say-on-pay advisory vote from our stockholders regarding our executive officer compensation program. Each year, the Committee considers the results of the advisory vote as it completes its annual review of each pay element and the compensation provided to our NEOs and other executive officers.

2019 Say-on-Pay Voting Results



Given the significant level of stockholder support, the Committee concluded that:

- ✓ our executive officer compensation program continues to align executive officer pay with stockholder interests;
- ✓ our executive officer compensation program provides competitive pay that encourages retention and effectively incentivizes performance of talented NEOs and executive officers;
- ✓ no significant changes to our programs are necessary; and
- ✓ the Committee will continue to consider the outcome of our say-on-pay votes and our stockholders' views when making future compensation decisions for the NEOs and executive officers.

Following our 2019 annual meeting, we contacted stockholders representing over 70% of our outstanding shares and met with stockholders representing approximately 35% of our outstanding shares in order to solicit feedback on a variety of topics, including corporate governance and executive compensation practices. Overall, stockholders expressed strong support for our current corporate governance and executive compensation practices. We are pleased with our say-on-pay advisory vote results and stockholder feedback, and we will continue to engage with our stockholders to ensure alignment between our executive officer compensation program and our stockholders' interests.

Compensation Philosophy

We believe that in order to create value for our stockholders, it is critical to attract, motivate and retain key executive officer talent by providing competitive compensation packages. Accordingly, we design our executive officer compensation programs to:

ATTRACT, DEVELOP & RETAIN
executive officers with the skills and expertise to execute our business plans within the highly competitive life sciences industry

MOTIVATE & REWARD
executives fairly over time for actions consistent with creating long-term stockholder value

MAXIMIZE
stockholder value via an appropriate blend of short-term and long-term incentives

Our compensation philosophy for executive officers provides that cash compensation should be structured such that at least one-third of each executive officer's total cash compensation, consisting of base salary and target cash incentives, is at risk and dependent upon the Company's achievement of specific corporate metrics that drive stockholder value. Non-cash long-term equity compensation for executive officers is generally a combination of performance-based and time-based vesting, and is designed to motivate executive officers to increase long-term stockholder value as well as reward and retain key employees.

Overall Compensation Determination Process

The implementation of the compensation philosophy is carried out under the supervision of the Committee. The Committee uses the

services of an independent compensation consultant who is retained by, and reports directly to, the Committee. Management, under guidelines and procedures approved by the Committee, determines the compensation of our non-executive officer employees.

In the early part of each year, the Committee deliberates and makes decisions regarding the base salary, target cash incentives and long-term equity award components of compensation to be awarded to our executive officers, including our Chief Executive Officer, for the new fiscal year, as well as performance-based compensation payouts for the prior fiscal year. In setting compensation for our other NEOs, the Committee solicits the input of our Chief Executive Officer, who recommends to the Committee the base salary, target cash incentives and long-term equity award components of compensation to be awarded to our NEOs for the new fiscal year, as well as performance-based compensation payouts for the prior fiscal year. The Committee remains solely responsible for making the final decisions on compensation for all of our NEOs. Our NEOs, including our Chief Executive Officer, are not present during discussions of their respective compensation packages nor do they participate in approving any portion of their own or other NEO compensation packages.

The Committee considers a variety of factors, as described below, which may vary from year to year, to set the compensation of our NEOs at levels that the Committee considers to be competitive and appropriate for each NEO, using the Committee's professional experience and judgment:

- ✓ Market data from the independent compensation consultant
- ✓ Chief Executive Officer's recommendations (other than for himself), based on direct knowledge of NEO performance and his extensive industry experience
- ✓ Independent compensation consultant recommendations
- ✓ Internal pay equity among individuals and positions
- ✓ Criticality and scope of job function
- ✓ Retention risk
- ✓ Company performance
- ✓ Individual performance
- ✓ Total targeted and historical compensation
- ✓ Any other factors the Committee determines appropriate

In addition, during the first quarter of the year, Company-wide performance goals for the then current year are finalized by the Committee and the Board of Directors, and progress against these goals is reviewed at meetings throughout the year. Later in the year, the Committee reviews the Company's compensation philosophy, policies and procedures. Committee meetings in the fourth quarter of the year generally focus on Company goal achievement, selection of the peer group for the following year and executive officer performance.

Compensation Consultant

The Committee uses the services of an independent compensation consultant who is retained by, and reports directly to, the Committee to provide the Committee with an additional external perspective with respect to its evaluation of relevant market and industry practices. The Committee elected to continue with Radford, which is part of the Rewards Solutions practice at Aon plc, as a third-party compensation consultant to assist the Committee in establishing 2019 and 2020 overall compensation levels. Radford conducted analyses and provided advice on, among other things, the appropriate peer group, executive officer compensation for our executive officers and compensation trends in the life sciences industry.

In weighing its recommendations for executive officer compensation for the fiscal year 2019, the Committee directed Radford to advise the Committee on both best practices and peer practices when designing and modifying our compensation program for executive officers in order to achieve our objectives. As part of its duties, Radford provided the Committee with the following services with respect to 2019 compensation decisions:

- carried out a comprehensive review of our peer group for use in making 2019 executive officer compensation decisions;
- provided compensation data for the peer group and relevant executive officer pay survey data and an analysis of the compensation of the Company's executive officers as compared to this market data;
- provided a competitive assessment of, and comparison to, incentive design and executive officer pay program structure based on peer group data;
- conducted a comprehensive pay for performance assessment;
- provided recommendations regarding the annual cash incentive and long-term equity incentive program design for 2019;
- assisted the Committee with the design of 2019 pay programs consistent with the Company's business strategy and pay philosophy;
- provided background information and data for 2019 adjustments to the Company's executive officer compensation program consistent with good governance practices and the Company's objectives; and
- prepared an analysis of the Board of Directors' 2019 compensation program.

The Committee annually assesses whether the work of Radford as a compensation consultant has raised any conflict of interest, taking into consideration the following factors: (i) the provision of other services, if any, to the Company by Radford; (ii) the amount of fees the Company paid to Radford as a percentage of the firm's total revenue; (iii) Radford's policies and procedures that are designed to prevent conflicts of interest; (iv) any business or personal relationship of Radford or the individual compensation advisors employed by the firm with an executive officer of the Company; (v) any business or personal relationship of the individual compensation advisors with any member of the Committee and (vi) any stock of the Company owned by Radford or the individual compensation advisors employed by the firm. The Committee has determined, based on its analysis of the above factors, that the work of Radford and the individual compensation advisors employed by Radford as compensation consultants to the Company have not created any conflict of interest.

Competitive Assessment of Compensation—Peer Group and Market Data

2019 Peer Group. When developing a proposed list of our peer group companies to be used in connection with making compensation decisions for 2019, Radford reexamined our compensation philosophy and peer group and recommended changes to our 2018 peer group company list to reflect our growth, market capitalization and the stage of our commercial development. Radford suggested biopharmaceutical companies that were primarily recently commercial companies with revenue generally between $200 million and $1.5 billion, had market capitalizations of approximately one half (0.5x) to two-and-a-half (2.5x) our market capitalization at the time (resulting in a range of between $4 billion to $25 billion in market capitalization) and had headcounts of up to 2,000 employees. As a result of the growth in revenue, market capitalization and headcount that we experienced from when our 2018 peer group was determined, there was a change to the criteria used to determine our 2019 peer group, as compared to the criteria used to determine our 2018 peer group.

Based on these criteria, for 2019 Radford recommended, and our Committee approved, the following peer group:

Agios Pharmaceuticals, Inc.	Alexion Pharmaceuticals, Inc.	Alkermes plc
Alnylam Pharmaceuticals, Inc.	BeiGene, Ltd.	BioMarin Pharmaceuticals, Inc.
bluebird bio, Inc.	Exelixis, Inc.	Incyte Corporation
Intercept Pharmaceuticals, Inc.	Ionis Pharmaceuticals, Inc.	Jazz Pharmaceuticals plc
Nektar Therapeutics	Sage Therapeutics, Inc.	Sarepta Therapeutics, Inc.
Seattle Genetics, Inc.	Ultragenyx Pharmaceutical Inc.	United Therapeutics Corporation

The 2019 peer group reflects the following changes from our 2018 peer group, all of which were recommended by Radford and approved by our Committee: (i) the removal of the following companies: ACADIA Pharmaceuticals, Inc., Clovis Oncology, Inc., Halozyme Therapeutics, Inc., Ironwood Pharmaceuticals, Inc., Juno Therapeutics, Inc., Portola Pharmaceuticals, Inc., Puma Biotechnology, Inc., TESARO, Inc., and The Medicines Company, which no longer meet the criteria above or were acquired since the 2018 peer group had been approved and (ii) the addition of the following companies, which met the criteria above: Alexion Pharmaceuticals, Inc., Alkermes plc, BeiGene, Ltd., BioMarin Pharmaceuticals, Inc., Incyte Corporation, Intercept Pharmaceuticals, Inc., Jazz Pharmaceuticals plc, Sage Therapeutics, Inc., and United Therapeutics Corporation.

In determining executive officer compensation for 2019, the Committee reviewed data from this group of peer companies. At the time of approval of our 2019 peer group, our Company was approximately in the 78th percentile of the peer group for market capitalization and in the 40th percentile of the peer group for revenue.

2019 Market Data. In early 2019, Radford completed an assessment of executive officer compensation based on the 2019 peer group to inform the Committee's determinations of executive officer compensation for 2019. The data for this assessment was compiled from multiple sources, including: (i) the 2019 peer group companies' publicly disclosed information, or public peer data and (ii) data from public biotechnology and pharmaceutical companies in the 2018 Radford Global Life Sciences Survey that had market values between $4 billion and $25 billion, or the general survey data. The components of this data were based on the availability of sufficient comparative data for an executive officer's position. The general survey data and the public peer data, collectively referred to in this proxy statement together as market data, were reviewed by the Committee, with the assistance of Radford, and used as one reference point, in addition to other factors, in setting our executive officers' compensation.

Use of 2019 Market Data. The Committee generally reviews target total direct compensation, comprising both target cash compensation and equity compensation, against the market data described above primarily to ensure that our executive officer compensation program as a whole is positioned competitively to attract and retain the highest caliber executive officers and that the total direct compensation opportunity for the executive officer group is aligned with our corporate objectives and strategic needs. The Committee does not have a specific target compensation level for the NEOs; rather, the Committee reviews a range of market data reference points (generally at the 25th, 50th and 75th percentiles of the market data) with respect to target total direct compensation, target total cash compensation (including both base salary and the target annual cash incentive) and equity compensation (valued based on an approximation of grant date fair value). In making compensation determinations, the Committee considers the market data, along with the other factors described above under "Overall Compensation Determination Process".

2020 Peer Group. In October 2019, when developing a proposed list of our peer group companies to be used in connection with making compensation decisions for 2020, Radford selected primarily recently commercial or commercial biopharmaceutical companies with revenue

generally between $200 million and $2.0 billion, market capitalization between $3 billion to $25 billion and employee headcount up to 2,000, reflecting our then-current revenue, market capitalization and headcount.

Based on these criteria, for 2020 Radford recommended, and our Committee approved, the following peer group:

ACADIA Pharmaceuticals, Inc.	Alexion Pharmaceuticals, Inc.	Alkermes plc
Alnylam Pharmaceuticals, Inc.	BeiGene, Ltd.	BioMarin Pharmaceuticals, Inc.
bluebird bio, Inc.	Exelixis, Inc.	Incyte Corporation
Ionis Pharmaceuticals, Inc.	Jazz Pharmaceuticals plc	Nektar Therapeutics
Sage Therapeutics, Inc.	Sarepta Therapeutics, Inc.	Seattle Genetics, Inc.
Ultragenyx Pharmaceutical Inc.	United Therapeutics Corporation	

The 2020 peer group reflects the following changes from our 2019 peer group, all of which were recommended by Radford and approved by our Committee: (i) the removal of the following companies: Agios Pharmaceuticals, Inc., and Intercept Pharmaceuticals, Inc., which no longer meet the criteria above and (ii) the addition of ACADIA Pharmaceuticals, Inc., which meets the criteria above.

Components of Executive Compensation

The Committee considers each executive officer's performance, contribution to Company goals, responsibilities, experience, qualifications, and where in the competitive range the executive officer's compensation compares to the Company's identified peer group when determining the appropriate compensation for each executive officer. The Committee considers each component of compensation independently and each component in the context of each executive officer's total compensation. Compensation for our NEOs currently consists of three key elements that are designed to reward performance in a simple and straightforward manner: base salaries, annual performance-based cash incentives and long-term equity awards, which generally include RSUs and stock options, which both vest based on continued service over time, and in some years include PRSUs, which vest upon achievement of key corporate metrics that we believe will create stockholder value. The purpose and key characteristics of each of these elements are summarized below.

Compensation Element	Purpose of This Element	Key Characteristics
Base Salary	Designed to compensate competitively at levels necessary to attract and retain qualified executive officers in the life sciences industry; generally based on the scope of each executive officer's responsibilities, as well as his/her qualifications, breadth of experience, performance record and depth of applicable functional expertise; established and adjusted to be appropriate as compared to the applicable market data, enabling the Company to attract, motivate, reward and retain highly skilled executive officers; gives executive officers a degree of certainty in light of having a majority of their compensation at risk.	Fixed compensation where year-to-year adjustments to each executive officer's base salary are based upon sustained superior performance, changes in the general level of base salaries of persons in comparable positions within our industry, and any average merit salary increase for such year for all employees of the Company established by the Committee, as well as other factors the Committee judges to be pertinent during an assessment period. In making base salary decisions, the Committee exercises its judgment to determine the appropriate weight to be given to each of these factors. Although adjustments may also be made during the year for special circumstances, no mid-year adjustments have been made in the past five years.
Annual Cash Incentives	Motivates executive officers to achieve our short-term strategic plan and milestones that are designed to drive long-term growth and performance while providing flexibility to respond to opportunities and changing market conditions.	Annual cash award opportunity based on corporate performance compared to pre-established corporate goals with pre-established target and maximum payout opportunities for each executive officer. The cash incentive program, including corporate goals and target payouts, are reviewed and approved by the Committee annually and may include individual performance targets for each

		executive officer. The corporate goals are prepared in an interactive process between management and the Committee based on the Company's business plan and budget for the year. Cash incentive payments are linked to the attainment of overall corporate goals and the individual performance of each executive officer, or other factors the Committee determines appropriate.
Long-Term Equity Incentives (RSUs)	Motivates executive officers to achieve our business objectives by tying compensation to the performance of our common stock over the long term; creates an ownership culture; motivates our executive officers to remain with the Company by mitigating swings in incentive values during periods when market volatility impacts our stock price; directly motivates an executive officer to maximize long-term stockholder value and serve as an effective tool for incentivizing and retaining those executive officers who are most responsible for influencing stockholder value.	RSUs generally vest on an annual basis, ratably over four years subject to executive officer's continued service; the ultimate value realized varies with our common stock price.
Long-Term Equity Incentives (Stock Options)	Motivates executive officers to achieve our business objectives by tying incentives to the appreciation of our common stock over the long-term and creates an ownership culture.	Stock options with an exercise price equal to the fair market value on the date of grant generally vesting monthly over four years subject to executive officer's continued service; the ultimate realizable value, if any, depends on the appreciation of our common stock price from the date of grant. The Committee views stock options as performance-based compensation, as stock options provide a return to our executive officers only if the market price of our common shares appreciates over the stock option term.
Long-Term Equity Incentives (PRSUs)	Creates a strong link to the Company's long-term performance, creates an ownership culture and closely aligns the interests of our executive officers with those of our stockholders because the value that the grants deliver are directly dependent on our performance goal attainment.	PRSUs only vest upon achievement of objectively measurable performance goals tied to our business strategy that focus executive officers on achieving these long-term Company performance goals and increasing stockholder value. We determined not to grant PRSUs to our executive officers in 2019; however, in February 2020, the Committee granted PRSUs to our executive officers, as further described below under "2020 Named Executive Officer Compensation Decisions – Long-Term Equity Awards."
Other Compensation	Provides benefits that promote employee health and welfare, which assists in attracting and retaining our executive officers; certain additional benefits reflect market standards and are reasonable and necessary to attract	Executive officers are eligible to participate in the Company's employee benefit plans on the same terms as all other full-time employees. These plans include medical, dental and life insurance and eligibility to participate in

	and/or retain each of our executive officers and allow the executive officers to realize the full benefit of the other elements of compensation we provide.	the Company's employee stock purchase plan. Additional benefits include disability insurance premiums, an annual physical examination and financial planning services. The terms of the Company's 401(k) Savings Plan (the "401(k) Plan") provide for executive officer and broad-based employee participation on the same general terms. Under the 401(k) Plan, all Company employees are eligible to receive basic matching contributions from the Company that vest annually over three years from date of hire.
Severance and Change in Control Benefits	Serves our retention objectives by helping our executive officers maintain continued focus and dedication to their responsibilities to maximize stockholder value, including in the event of a transaction that could result in a change in control of the Company.	Provides protection in the event of a termination of employment under specified circumstances, including following a change in control of the Company as described below under "Potential Payments Upon Termination or Change-in-Control". Compensation components for executive officers in the event of a termination by the Company without cause or termination by the executive officer due to constructive termination within six months after the consummation of a change in control include payments for accrued annual base salary, a cash compensation payment, cash compensation for the value of all outstanding stock awards, limited Company-paid health insurance benefits, and any accrued vacation and any accrued benefits under any plans of the Company in which the executive officer is a participant. Eligibility for these benefits requires a signed release agreement by the executive officer. Certain individuals whose offer letters were first entered into or amended in or before 2007, including Dr. Gorman and Dr. Bozigian, are entitled to tax gross-ups in the event of certain levels of payments they may receive upon a change in control. We have not entered into any new change in control gross-ups for executive officers since 2007, nor does the Company intend to enter into any new agreements containing such gross-ups. Accordingly, Mr. Benevich's, Mr. Abernethy's and Dr. Roberts' employment agreements do not provide for such tax gross-ups.

2019 and Early 2020 Named Executive Officer Compensation Decisions

2019 Base Salary Decisions

In February 2019, our Committee reviewed and determined the 2019 base salaries for each of the NEOs as set forth in the table below, effective January 1, 2019. In making these 2019 decisions, the Committee considered the Company's performance in 2018, market data for each individual NEO's position, as well as the individual's historical salary levels, our then-current budget for employee salary adjustments, anticipated role and responsibilities for the coming year, along with the other factors described under "Overall Compensation Determination Process" set forth above. Specifically, the Committee determined that the increases reflected in the table below were appropriate due to (i) the Company's performance in 2018, (ii) the adjustments made to our peer group for 2019, which resulted in shifts in median salaries for similarly situated executives and (iii) our NEOs' experience, job criticality and performance. Although the Committee does not have a specific target compensation level for each NEO, the NEOs' salaries are generally within the 25th to 50th percentiles of the market data, with the exception of Dr. Roberts, whose base salary is at approximately the 75th percentile. In determining Dr. Roberts' 2019 base salary, our Committee considered, in addition to the aforementioned factors, Dr. Roberts' historical salary levels, her anticipated responsibilities for the coming year and the critical importance of incentivizing her to assume the role of our Chief Medical Officer.

Named Executive Officer	2019 Base Salary	% Change from 2018 Base Salary
Kevin C. Gorman, Ph.D.	$ 725,000	7.4%
Matthew C. Abernethy	$ 495,600	18.0%
Eric Benevich	$ 467,200	8.0%
Haig P. Bozigian, Ph.D.	$ 461,500	5.0%
Eiry W. Roberts, M.D.	$ 538,200	3.5%

2019 Annual Cash Incentives

In February 2019, the Committee approved the Company's executive officer cash incentive target percentages and performance goals for 2019. The table below sets forth the targets for our Chief Executive Officer and other NEOs for 2019. After considering market data for each NEO's position, no changes were made to the target percentages of our NEOs who were employed with us in 2018, except with respect to our Chief Executive Officer, whose target percentage was increased from 70% to 80% to place a greater amount of focus on at-risk pay and to align more closely with the 50th percentile of the market data. The target percentage is paid as a percentage of such executive officer's base salary. For example, if 100% of the Company's corporate goals for 2019 are achieved, this would yield our Chief Executive Officer a cash incentive award of 80% of his 2019 base salary.

Executive Officer	Target Percentage of Base Salary
Chief Executive Officer	80%
All Other Executive Officers	50%

In February 2019, the Committee established the corporate goals described below. Our objective corporate goals are directly aligned with our specific strategic goals, including advancing our development programs, our research function, our clinical activities, commercialization activities and certain corporate and financial goals, which we believe will create long-term value for stockholders. The Board of Directors and the Committee did not assign specific relative weightings to the goals for 2019. Overall corporate goal achievement for 2019, and thus maximum bonus payout, was capped at 120% of target. In February 2020, the Committee evaluated the accomplishments and performance of the Company against such corporate goals. After its consideration of the Company's performance, as more specifically described below, the Committee rated our 2019 corporate achievement at 115% of our 2019 corporate goals.

Corporate Goal	Targets	Target Achievements	Overall Goal Achievement
Maximize medical and economic value of INGREZZA®	• Meet sales forecast • Initiate HD pivotal program • Implement investigator initiated trials to better understand the scientific potential of valbenazine	Exceed Achieved Not achieved	Achieved
Execute significant business development transactions	• Execute significant business development transactions	Exceed (Voyager, Xenon and Idorsia)	Exceed
Advance and expand clinical pipeline	• Advance CAH programs in adults and adolescents	Achieved	Partial achievement

	• Advance an additional compound into clinical trials	Not Achieved	
Submit NDA for opicapone in Q2	• Submit NDA for opicapone in Q2	Achieved	Achieved
Fully staff and integrate Gene Therapy team	• Define regulatory pathway for NBIb-1817	Achieved	Partial Achievement
	• Start IND enabling studies for Friedreich's Ataxia	Not achieved	
Stay on budget for both operations and cash burn	• Stay on budget for both operations and cash burn	Achieved	Achieved
	2019 Corporate Achievement Percentage:		**115%**

In February 2020, after making these determinations regarding level of corporate performance achieved against the pre-established performance goals, the Committee reviewed and approved corporate cash incentives as set forth in the table below. The Committee may, in its sole discretion, eliminate any individual cash incentive, or reduce or increase the amount of compensation payable with respect to any individual cash incentive. The Committee exercised its discretion to increase the amount of the individual cash incentive with respect to Mr. Benevich for 2019 by paying his cash incentive at the rate noted below, rather than 115%, due to his significant individual performance related to the achievement of the corporate goals and his individual goals. Specifically, the Committee recognized Mr. Benevich's contributions to exceeding our sales forecast.

	2019 Target Annual Cash Incentive		2019 Actual Annual Cash Incentive Paid	
Named Executive Officer	% of Base Salary	$	% of Target Annual Cash Incentive	$
Kevin C. Gorman, Ph.D.	80 %	$ 580,000	115 %	$ 667,000
Matthew C. Abernethy	50 %	$ 247,800	115 %	$ 284,970
Eric Benevich	50 %	$ 233,600	120 %	$ 280,320
Haig P. Bozigian, Ph.D.	50 %	$ 230,750	115 %	$ 265,363
Eiry W. Roberts, M.D.	50 %	$ 269,100	115 %	$ 309,465

2020 Base Salary and Annual Cash Incentive Decisions

In February 2020, our Committee reviewed and determined the 2020 base salaries and target bonus percentages for each of the NEOs as set forth in the table below. The target bonus percentages for our NEOs remained the same, with the exception of Dr. Gorman's, which was increased from 80% to 100%.

Named Executive Officer	2020 Base Salary	2020 Target Percentage of Base Salary
Kevin C. Gorman, Ph.D.	$ 775,000	100 %
Matthew C. Abernethy	$ 545,200	50 %
Eric Benevich	$ 499,900	50 %
Haig P. Bozigian, Ph.D.	$ 484,600	50 %
Eiry W. Roberts, M.D.	$ 575,900	50 %

2019 Long-Term Equity Awards

Size of 2019 Equity Awards. In determining the size of the total equity compensation opportunity in 2019, the Committee:

- aimed to have the aggregate target award value result in target total direct compensation at a level that is competitive in the marketplaces in which we compete;
- focused a larger portion of total direct compensation in the form of long-term equity awards intended to drive long-term differentiated value relative to our peers and maximize long-term stockholder value; and
- considered the recommendations of Dr. Gorman for the other NEOs.

2019 Equity Award Mix. The Committee determined that the aggregate value of the long-term equity awards granted to the NEOs on February 7, 2019 should be allocated 75% to stock options and 25% to time-vesting RSU grants, as set forth in the Grants of Plan-Based Awards Table. The Committee determined these two types of equity awards provided the appropriate balance of long-term incentives for our executive officers in 2019. Specifically, RSUs that vest over time provide tangible value to executive officers and serve as an incentive and retention tool during a difficult operating or volatile business environment, while still being tied to our stockholder value. It is the Committee's view that stock options are inherently performance oriented because the executive officer realizes no value from stock options unless and until the Company's stock price increases over the strike price. The Committee believes it is important to evaluate the equity award mix each year to determine what types of equity awards should be granted and incorporates performance-based equity awards when it determines that important

milestones should form the basis of a performance-based equity grant and that such a grant would not promote excessive risk taking that could adversely impact the Company or its research, development or commercialization of pharmaceutical products.

2019 Equity Award Vesting Criteria. The Committee determined with respect to the February 7, 2019 equity grants that the use of both stock options, which vest in equal monthly installments over a four-year period, and RSUs, which vest in equal annual installments over a four-year period, were the appropriate time-vesting equity compensation vehicles to use. The Committee and Board of Directors believe that these long-term equity awards closely align stockholder and management interests.

2020 Long-Term Equity Awards

2020 Equity Award Mix. In February 2020, our Committee granted long-term equity awards to our NEOs, except Dr. Bozigian, in the form of stock options, RSUs and PRSUs. The Committee targeted allocating the aggregate value of each NEO's long-term equity awards 50% to stock options, 25% to RSUs and 25% to PRSUs.

2020 Equity Award Vesting Criteria. The Committee determined that the February 2020 equity grants vest as follows: (i) the stock options vest in equal monthly installments over a four-year period; (ii) the RSUs vest in equal annual installments over a four-year period; and (iii) the PRSUs vest based on objectively measurable performance goals that focus executive officers on achieving longer-term Company performance goals that are key to our business strategy and increasing stockholder value. The Committee determined that these three types of equity awards provided the appropriate balance of long-term and performance-based incentives for our executive officers.

Specifically, the PRSUs vest on the date, or dates, that the Committee determines achievement of two underlying performance goals, which must occur before December 31, 2022. Such goals relate to (i) specific metrics related to the commercialization of INGREZZA and (ii) specific metrics regarding the advancement and enhancement of our product candidate pipeline, each within the three-year performance period commencing on January 1, 2020 and ending on December 31, 2022. The actual number of units subject to the PRSUs will be determined based on level of achievement of such goals, with minimum, target, and maximum levels specified.

Retirement Benefits

The Company's matching contribution to the 401(k) Plan for 2019 was 100% of eligible participant contributions, subject to applicable federal limits. Our NEOs are eligible for these benefits on the same basis as our other employees. The Company made no additional discretionary contributions to the 401(k) Plan in 2019.

Equity Ownership Guidelines

Since 2014, we have maintained equity ownership guidelines for our executive officers. The Committee amended these guidelines in November 2018 to increase the guideline for our Chief Executive Officer from three to six times his base salary. The equity ownership guidelines are designed to further align the interests of the executive officers with those of our stockholders by ensuring that our executive officers have a meaningful financial stake in the Company's long-term success. The equity ownership guidelines establish a minimum equity ownership level by position, with such values determined based on the value of our common stock owned by such persons as of certain measurement dates. All shares directly or beneficially owned by the executive officer, including the net exercisable value of outstanding vested stock options (where the market price of our common stock exceeds the strike price of such option) are included in determining the value of equity owned under our equity ownership guidelines. The equity ownership requirements are as follows:

Chief Executive Officer	6 times base salary
All other executive officers	1 times base salary

New executive officers are granted a five-year period to reach the equity ownership requirements set forth in the guidelines and are expected to make annual progress toward the equity ownership requirements during this five-year period. When an executive officer does not meet the equity ownership requirements set forth in the guidelines, he/she is restricted from selling any held shares until such requirements are met. Additionally, should an executive officer who does not meet the equity ownership requirements choose to exercise a stock option or vest in any RSUs, he or she is required to retain all shares acquired through those transactions, aside from any shares necessary to fulfill such transaction related tax obligations, until full compliance with the equity ownership guidelines is attained.

Annual compliance with the equity ownership guidelines is assessed during the first quarter of each year. As of March 2, 2020, each of our executive officers is in compliance with the equity ownership guidelines.

Equity Trading Policies and Procedures

The Company has policies and procedures in place that prohibit direct or indirect participation by employees and directors of the Company in transactions involving trading activities in Company common stock which by their aggressive or speculative nature may give rise

to an appearance of impropriety. Such prohibited activities would include the purchase of put or call options, or the writing of such options as well as short sales, hedging transactions such as "cashless" collars, forward sales, equity swaps and other related arrangement which may indirectly involve short-sale and any other transactions designed for profit from short-term movement in the Company's stock price. In addition, no officer, director or employee of the Company may margin, or make any offer to margin, any Company common stock, including without limitation, borrowing against such stock, at any time.

To the Company's knowledge, there were no transactions involving hedging, pledging or margining Company common stock during 2019, nor were there any such transactions as of the Record Date.

The Company also requires directors and executive officers to complete all equity related open-market purchase and sale transactions via a 10b5-1 plan. The 10b5-1 plans typically cover, among other transactions, direct sales and purchases of Company stock, as well as same-day-sales related to option exercises and sales of stock for tax payments upon the vesting of restricted stock units. All 10b5-1 plans are required to have a waiting period from the election date to the date of the first transaction. Additionally, Company policy restricts the executive officers from making certain changes to 10b5-1 trading plan subsequent to adoption of the plan.

Compensation Recoupment Policy

In February 2017, we adopted a clawback policy, even though the SEC has not yet issued final rules implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act requirement. Our policy currently provides that, in the event that (i) we are required to prepare an accounting restatement for any fiscal quarter or year due to our material noncompliance with any financial reporting requirement and (ii) it is determined that misconduct contributed to the noncompliance that resulted in the obligation to restate our financial statements, we may take action to recover from any officer whose misconduct contributed to the noncompliance which resulted in the obligation to restate our financial statements, the incentive compensation, including cash and equity, that was paid or vested to such officer during the twelve-month period preceding the restatement obligation. We will also comply with the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act and will modify our policy to the extent required by law once the SEC adopts final regulations on the subject.

Tax Considerations

Internal Revenue Code Section 162(m)

Under Section 162(m) of the Internal Revenue Code ("Section 162(m)"), compensation paid to any publicly held corporation's "covered employees" that exceeds $1 million per taxable year for any covered employee is generally non-deductible.

Prior to the enactment of the Tax Cuts and Jobs Act, Section 162(m) provided a performance-based compensation exception, pursuant to which the deduction limit under Section 162(m) did not apply to any compensation that qualified as "performance-based compensation" under Section 162(m). Pursuant to the Tax Cuts and Jobs Act, the performance-based compensation exception under Section 162(m) was repealed with respect to taxable years beginning after December 31, 2017, except that certain transition relief is provided for compensation paid pursuant to a written binding contract which was in effect on November 2, 2017 and which is not modified in any material respect on or after such date.

Compensation paid to each of the Company's "covered employees" in excess of $1 million per taxable year generally will not be deductible unless it qualifies for the performance-based compensation exception under Section 162(m) pursuant to the transition relief described above. Because of certain ambiguities and uncertainties as to the application and interpretation of Section 162(m), as well as other factors beyond the control of the Committee, no assurance can be given that any compensation paid by the Company will be eligible for such transition relief and be deductible by the Company in the future. Although the Committee will continue to consider tax implications as one factor in determining executive officer compensation, the Committee also looks at other factors in making its decisions and retains the flexibility to provide compensation for the Company's NEOs in a manner consistent with the goals of the Company's executive officer compensation program and the best interests of the Company and its stockholders, which may include providing for compensation that is not deductible by the Company due to the deduction limit under Section 162(m). The Committee also retains the flexibility to modify compensation that was initially intended to be exempt from the deduction limit under Section 162(m) if it determines that such modifications are consistent with the Company's business needs.

Internal Revenue Code Section 409A

Section 409A governs deferred compensation arrangements. The Committee structures our deferred compensation programs with the assistance of our external counsel to be exempt from, or compliant with, Section 409A.

Accounting Considerations

The Company accounts for equity compensation paid to our employees under the FASB ASC Topic 718, which requires us to estimate and record an expense over the service period of the equity award. Our cash compensation is recorded as an expense at the time the obligation is incurred. The accounting impact of our compensation programs are one of many factors that the Committee considers in determining the structure and size of our executive officer compensation programs.

Risk Analysis of Our Compensation Program

Our Committee has reviewed our compensation policies as generally applicable to our employees and believes that our policies do not encourage excessive or inappropriate risk taking and that the level of risk that they do encourage is not reasonably likely to have a material adverse effect on the Company. As part of its assessment, the Committee considered, among other factors, the allocation of compensation among base salary and short- and long-term compensation, our approach to establishing Company-wide and individual financial, operational and other performance targets, our bonus structure of payouts at multiple levels of performance (including maximum payout caps and payments for performance below target levels) and the nature of our key performance metrics. We believe these practices encourage our employees to focus on sustained, long-term Company growth, which we believe will ultimately contribute to the creation of stockholder value.

EXECUTIVE COMPENSATION AND OTHER INFORMATION

Summary Compensation Table The following table sets forth the compensation paid by the Company for the fiscal years ended December 31, 2017, 2018 and 2019 to the NEOs named below.

Summary Compensation Table

Name and Principal Position (1)	Year	Salary ($)(2)	Bonus ($)(2)	Option Awards ($)(3)	Stock Awards ($)(4)	All Other Compensation ($)(5)	Total ($)
Kevin C. Gorman, Ph.D.	2017	$ 640,000	$ 515,200	$ 4,929,898	$ 1,426,920	$ 44,356	$ 7,556,374
Chief Executive Officer	2018	$ 675,000	$ 425,250	$ 4,486,852	$ 2,998,832	$ 47,045	$ 8,632,979
	2019	$ 725,000	$ 667,000	$ 6,000,525	$ 2,000,071	$ 58,230	$ 9,450,826
Matthew C. Abernethy	2017	$ 38,231	$ 20,071	$ 2,416,800	$ 920,000	$ 394,190	$ 3,789,292
Chief Financial Officer	2018	$ 420,000	$ 199,500	$ —	$ 1,996,506	$ 69,741	$ 2,685,747
	2019	$ 495,600	$ 284,970	$ 3,750,345	$ 1,250,035	$ 42,170	$ 5,823,120
Eric Benevich	2017	$ 410,000	$ 246,000	$ 1,825,536	$ 458,344	$ 37,722	$ 2,977,602
Chief Commercial Officer	2018	$ 432,600	$ 205,485	$ 1,496,335	$ 1,499,417	$ 38,768	$ 3,672,605
	2019	$ 467,200	$ 280,320	$ 3,750,345	$ 1,250,035	$ 45,547	$ 5,793,447
Haig P. Bozigian, Ph.D.	2017	$ 408,800	$ 235,060	$ 1,825,536	$ 458,344	$ 41,694	$ 2,969,434
Chief Development Officer	2018	$ 439,500	$ 197,775	$ 1,309,024	$ 1,003,685	$ 43,822	$ 2,993,806
	2019	$ 461,500	$ 265,363	$ 3,000,285	$ 1,000,076	$ 53,772	$ 4,780,996
Eiry W. Roberts, M.D.	2018	$ 490,700	$ 220,800	$ 2,863,700	$ 4,053,869	$ 671,554	$ 8,300,623
Chief Medical Officer	2019	$ 538,200	$ 309,465	$ 3,000,285	$ 1,000,076	$ 51,889	$ 4,899,915

(1) The titles and capacities set forth in the table above are as of December 31, 2019.

(2) Salary and bonus figures represent amounts earned during each respective fiscal year, regardless of whether part or all of such amounts were paid in subsequent fiscal year(s). Bonuses are awarded pursuant to a bonus program.

(3) The amounts shown are the full grant date fair value in accordance with Accounting Standards Codification 718-10, Compensation—Stock Compensation (ASC 718). The assumptions used to calculate the grant date fair value of stock awards are set forth under Note 8 of the Notes to the Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019 filed with the SEC on February 7, 2020. The grant date fair values of option awards for 2017, 2018 and 2019 (other than Mr. Abernethy's 2017 option award and Dr. Roberts' 2018 new hire award) are based on per share Black-Scholes values of $23.77, $43.06 and $45.00 respectively. Mr. Abernethy's 2017 option awards are based on per share Black-Scholes value of $40.28 and Dr. Roberts' new hire option awards are based on per share Black-Scholes value of $40.91.

(4) Stock awards consist of restricted stock units and performance restricted stock units and may be subject to deferred delivery arrangements. The amounts shown are the full grant date fair value in accordance with Accounting Standards Codification 718-10, Compensation—Stock Compensation (ASC 718). The assumptions used to calculate the grant date fair value of stock awards are set forth under Note 8 of the Notes to the Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019 filed with the SEC on February 7, 2020. The fair values of restricted stock units granted in 2017, 2018 and 2019 are based on the Company's closing market price per share on the grant date, which was $43.24 for all 2017 grants (other than Mr. Abernethy's grant, for which it was $73.60), which was $81.49 for all 2018 grants (other than Dr. Roberts' new hire grant, for which it was $77.81) and which was $81.05 for all 2019 grants.

(5) Includes all other compensation as described in the table below.

All Other Compensation Table

Name	Year	401(k) Employer Match	Insurance Premiums (1)	Inducement Payments	Relocation Expense	Total Other
Kevin C. Gorman, Ph.D.	2017	$ 7,950	$ 36,406	$ —	$ —	$ 44,356
	2018	$ 8,250	$ 38,795	$ —	$ —	$ 47,045
	2019	$ 16,800	$ 41,430	$ —	$ —	$ 58,230
Matthew C. Abernethy	2017	$ —	$ 2,190	$ 180,000	$ 212,000	$ 394,190
	2018	$ 8,250	$ 27,817	$ —	$ 33,674	$ 69,741
	2019	$ 16,800	$ 25,370	$ —	$ —	$ 42,170
Eric Benevich.	2017	$ 7,950	$ 29,772	$ —	$ —	$ 37,722
	2018	$ 8,250	$ 30,518	$ —	$ —	$ 38,768
	2019	$ 16,800	$ 28,747	$ —	$ —	$ 45,547
Haig P. Bozigian, Ph.D.	2017	$ 7,950	$ 33,744	$ —	$ —	$ 41,694
	2018	$ 8,250	$ 35,572	$ —	$ —	$ 43,822
	2019	$ 16,800	$ 36,972	$ —	$ —	$ 53,772
Eiry W. Roberts, M.D.	2018	$ 8,250	$ 35,522	$ 225,000	$ 402,782	$ 671,554
	2019	$ 16,800	$ 35,089	$ —	$ —	$ 51,889

(1) The amounts in this column represent the costs for medical insurance for Company-wide plans, as well as disability insurance premiums and related tax gross-up amounts.

Grants of Plan-Based Awards During the Fiscal Year Ended December 31, 2019

The following table sets forth certain information regarding plan based-awards granted by the Company during the year ended December 31, 2019 to the NEOs below:

Name	Grant Date	All Other Stock Awards: Number of Shares of Stock or Units (#)(1)	All Other Option Awards: Number of Securities Underlying Options (#)(1)	Exercise or Base Price of Awards ($/Sh)(1)	Grant Date Fair Value (2)
Kevin C. Gorman, Ph.D.	2/7/2019	24,677		$ —	$ 2,000,071
	2/7/2019		133,345	$ 81.05	$ 6,000,525
Matthew C. Abernethy.	2/7/2019	15,423		$ —	$ 1,250,035
	2/7/2019		83,341	$ 81.05	$ 3,750,345
Eric Benevich.	2/7/2019	15,423		$ —	$ 1,250,035
	2/7/2019		83,341	$ 81.05	$ 3,750,345
Haig P. Bozigian, Ph.D.	2/7/2019	12,339		$ —	$ 1,000,076
	2/7/2019		66,673	$ 81.05	$ 3,000,285
Eiry W. Roberts, M.D.	2/7/2019	12,339		$ —	$ 1,000,076
	2/7/2019		66,673	$ 81.05	$ 3,000,285

(1) All options and restricted stock units were granted and approved on the same date with option awards having an exercise price equal to the closing market price of the Company's common stock on the date of grant. All option awards are time-based awards, which vest monthly, on a pro-rata basis, over four years and have an option term of ten years. These restricted stock units vest annually, on a pro-rata basis, over a four-year period.

(2) Reflects the grant date per share Black-Scholes value of $45.00 for option awards and the grant date per share value of $81.05 for restricted stock units, each granted on February 7, 2019 which was calculated in accordance with ASC 718.

Agreements with Named Executive Officers

Kevin C. Gorman, Ph.D. has an employment contract that provides that: (i) Dr. Gorman will serve as the Company's Executive Vice President and Chief Operating Officer commencing on August 1, 2007 at an initial annual salary of $400,000, subject to annual adjustment by the Board of Directors (subsequent to entering into the employment contract, Dr. Gorman became Chief Executive Officer and his annual base salary for 2019 is $725,000); (ii) the agreement terminates upon death, disability, termination by the Company with or without cause, constructive termination or voluntary resignation; (iii) Dr. Gorman is eligible for a discretionary annual bonus as determined by the Board of Directors, based upon achieving certain performance criteria; and (iv) each year starting in 2007 and continuing for the term of the agreement, Dr. Gorman will be eligible to receive equity awards with the number of shares, vesting terms, and exercise price as shall be determined by the Board of Directors.

Matthew C. Abernethy has an employment contract that provides that: (i) Mr. Abernethy will be entitled to receive an initial base salary of $420,000 per year, which was his base salary for 2018, subject to future adjustments (Mr. Abernethy's annual base salary for 2019 is $495,600); (ii) the agreement terminates upon death, disability, termination by the Company with or without cause, constructive termination or voluntary resignation; (iii) Mr. Abernethy is eligible for a discretionary annual bonus as determined by the Board of Directors, based upon achieving certain performance criteria; (iv) Mr. Abernethy is eligible to receive equity awards with the number of shares, vesting terms, and exercise price as shall be determined by the Board of Directors; (v) Mr. Abernethy received a one-time cash inducement advance in the amount of $180,000, which will be deemed earned when Mr. Abernethy completes two full years of employment with the Company; and (vi) Mr. Abernethy received relocation benefits, including a one-time cash relocation advance in the amount of $140,000.

Eric Benevich has an employment contract that provides that: (i) Mr. Benevich will serve as the Company's Chief Commercial Officer commencing on May 26, 2015 at an initial annual salary of $365,000, subject to annual adjustment by the Board of Directors (Mr. Benevich's annual base salary for 2019 is $467,200); (ii) the agreement terminates upon death, disability, termination by the Company with or without cause, constructive termination or voluntary resignation; (iii) Mr. Benevich is eligible for a discretionary annual bonus as determined by the Board of Directors, based upon achieving certain performance criteria; and (iv) Mr. Benevich is eligible to receive stock option awards with the equity awards with the number of shares, vesting terms, and exercise price as shall be determined by the Board of Directors.

Haig P. Bozigian, Ph.D. has an employment contract that provides that: (i) Dr. Bozigian will serve as the Company's Senior Vice President, Pharmaceutical and Preclinical Development commencing on August 1, 2007 at an initial annual salary of $260,000, subject to annual adjustment by the Board of Directors (Dr. Bozigian's annual base salary for 2019 is $461,500); (ii) the agreement terminates upon death, disability, termination by the Company with or without cause, constructive termination or voluntary resignation; (iii) Dr. Bozigian is eligible for a discretionary annual bonus as determined by the Board of Directors, based upon achieving certain performance criteria; and (iv) Dr. Bozigian is eligible to receive stock option awards with the number of shares and exercise price as shall be determined by the Board of Directors.

Eiry W. Roberts, M.D. has an employment contract that provides that: (i) Dr. Roberts will serve as the Company's Chief Medical Officer commencing on January 8, 2018 at an initial annual salary of $520,000, subject to annual adjustment by the Board of Directors (Dr. Roberts' annual base salary for 2019 is $538,200); (ii) the agreement terminates upon death, disability, termination by the Company with or without cause, constructive termination or voluntary resignation; (iii) Dr. Roberts is eligible for a discretionary annual bonus as determined by the Board of Directors, based upon achieving certain performance criteria; (iv) Dr. Roberts is eligible to receive stock option awards with the equity awards with the number of shares, vesting terms, and exercise price as shall be determined by the Board of Directors; (v) Dr. Roberts received a one-time cash inducement advance in the amount of $225,000, which will be deemed earned when Dr. Roberts completes two full years of employment with the Company; and (vi) Dr. Roberts received relocation benefits, including a one-time cash relocation advance in the amount of $220,000.

Outstanding Equity Awards at Fiscal Year-End. The following table sets forth the outstanding equity awards held by the NEOs at December 31, 2019.

	Option Awards									
Name	Award Grant and Commencement of Vesting Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)
Kevin C. Gorman, Ph.D.	1/12/2012	143,449	—	—	$ 8.66	1/12/2022(2)	—	—	—
	1/10/2013	164,801	—	—	$ 8.65	1/10/2023(2)	—	—	—
	1/16/2014	167,858	—	—	$ 19.59	1/16/2024(2)	—	—	—
	2/3/2015	146,105	—	—	$ 32.99	2/3/2025(2)	—	—	—
	2/5/2016	104,552	4,548	—	$ 35.99	2/5/2026(2)	41,500(3)	618,068	3,842,768
	2/6/2017	146,905	60,495	—	$ 43.24	2/6/2027(2)	16,500(4)	1,773,585	—
	2/5/2018	47,758	56,442	—	$ 81.49	2/5/2028(2)	32,200(5)	1,483,362	1,977,816
	2/7/2019	27,780	105,565	—	$ 81.05	2/7/2029(2)	24,677(4)	2,652,531	—
Matthew C. Abernethy	12/1/2017	30,004	29,996	—	$ 73.60	12/1/2027(1)	6,250(4)	671,813	—
	2/5/2018	—	—	—	—		24,500(5)	—	2,633,505
	2/7/2019	17,363	65,978	—	$ 81.05	2/7/2029(2)	15,423(4)	1,657,818	—
Eric Benevich.	6/1/2015	60,000	—	—	$ 41.78	6/1/2025(1)			
	2/5/2016	39,482	1,718	—	$ 35.99	2/5/2026(2)	22,675(3)	233,791	2,203,545
	2/6/2017	54,399	22,401	—	$ 43.24	2/6/2027(2)	5,300(4)	569,697	—
	2/5/2018	15,927	18,823	—	$ 81.49	2/5/2028(2)	16,863(5)	495,851	1,316,753
	2/7/2019	17,363	65,978	—	$ 81.05	2/7/2029(2)	15,423(4)	1,657,818	—
Haig P. Bozigian, Ph.D.	8/25/2011	20,283	—	—	$ 5.76	8/25/2021(2)	—	—	—
	1/12/2012	10,906	—	—	$ 8.66	1/12/2022(2)	—	—	—
	1/10/2013	8,830	—	—	$ 8.65	1/10/2023(2)	—	—	—
	1/16/2014	5,665	—	—	$ 19.59	1/16/2024(2)	—	—	—
	2/3/2015	4,812	—	—	$ 32.99	2/3/2025(2)	—	—	—
	2/5/2016	9,388	2,022	—	$ 35.99	2/5/2026(2)	23,050(3)	274,100	2,203,545
	2/6/2017	14,400	22,401	—	$ 43.24	2/6/2027(2)	5,300(4)	569,697	—
	2/5/2018	13,933	16,467	—	$ 81.49	2/5/2028(2)	16,263(5)	431,357	1,316,753
	2/7/2019	13,890	52,783	—	$ 81.05	2/7/2029(2)	12,339(4)	1,326,319	—
Eiry W. Roberts, M.D	1/8/2018	33,542	36,458	—	$ 77.81	1/8/2028(1)	15,000(4)	1,612,350	—
	2/5/2018	—	—	—	—		30,650(5)	—	3,294,569
	2/7/2019	13,890	52,783	—	$ 81.05	2/7/2029(2)	12,339(4)	1,326,319	—

(1) Vests monthly over four years, subject to an initial one-year "cliff."
(2) Vests monthly over four years.
(3) Consists of 35,750 Performance Restricted Stock Units (PRSUs) for Dr. Gorman and 20,500 PRSUs for each of Mr. Benevich and Dr. Bozigian. These PRSUs would have vested upon the date the Company achieved both (i) obtaining positive clinical trial data for the treatment of Tourette's syndrome with valbenazine and (ii) FDA acceptance of a NDA for the treatment of Tourette's syndrome with valbenazine. The PRSUs had a limited term of four years to obtain these goals, and they expired in February 2020. Additionally, Dr. Gorman has 5,750 restricted stock unit (RSU) awards, Mr. Benevich has 2,175 RSUs and Dr. Bozigian has 2,550 RSUs. These RSUs are time-based and vest annually, on a pro-rata basis over four years.
(4) Vests annually over four years.
(5) Consists of 18,400 Performance Restricted Stock Units (PRSUs) for Dr. Gorman and 12,250 PRSUs for each of Mr. Abernethy, Mr. Benevich, Dr. Bozigian and Dr. Roberts. A portion of this grant will vest upon FDA approval of opicapone within a specified time period, and the remaining portion of this grant will vest upon achievement of specified revenue milestones within a specified time period. These PRSUs have a limited term of 23 months to achieve the objectives. Mr. Abernethy and Dr. Roberts also had 12,250 PRSUs and 18,400 PRSUs, respectively, that were granted to align them with the PRSU grant that was made to the other executive officers in February 2016. These PRSUs would have vested upon the date the Company achieved both (i) obtaining positive clinical trial data for the treatment of Tourette's syndrome with valbenazine and (ii) FDA acceptance of a NDA for the treatment of Tourette's syndrome with valbenazine. These PRSUs expired in February 2020. Additionally, Dr. Gorman has 13,800 restricted stock unit (RSU) awards, Mr. Benevich has 4,613 RSUs and Dr. Bozigian has 4,013 RSUs. These RSUs are time-based and vest annually, on a pro-rata basis over four years.

Option Exercises and Stock Vested During the Year. The following table sets forth the options exercised and stock awards that vested during fiscal 2019 along with their respective values at December 31, 2019 for the NEOs:

Option Exercises and Stock Vested Table

Name	Option Awards (1)		Stock Awards (2)	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise ($) (3)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting ($) (4)
Kevin C. Gorman, Ph.D.	83,031	$ 7,121,642	24,850	$ 2,157,761
Matthew C. Abernethy	—	$ —	3,125	$ 364,875
Eric Benevich	—	$ —	6,362	$ 549,499
Haig P. Bozigian, Ph.D.	244,356	$ 14,744,525	9,287	$ 808,153
Eiry W. Roberts, M.D.	—	$ —	5,000	$ 422,100

(1) Information relates to stock option exercises during 2019.
(2) Information relates to restricted stock units and performance restricted stock units that vested during 2019.
(3) Calculated by multiplying the number of shares acquired upon exercise of stock options by the difference between the exercise price and the market price of the Company's common stock at the time of exercise.
(4) Calculated by multiplying the number of shares acquired upon vesting of restricted stock units by the average price of shares sold for purposes of satisfying federal and state income tax liabilities.

Potential Payments Upon Termination or Change-in-Control. The following tables set forth the potential severance benefits payable to the NEOs in the event of a termination prior to or following a change in control, assuming such event occurred on December 31, 2019:

Potential Payment Upon Termination Table*

Name	Salary (1)	Bonus (2)	Accrued Compensation (3)	Stock Awards (4)	Medical (5)	Total
Kevin C. Gorman, Ph.D.	$ 906,250	$ 725,000	$ 62,114	$10,867,177	$ 49,770	$ 12,610,311
Matthew C. Abernethy	$ 495,600	$ 247,800	$ 59,565	$ 1,809,440	$ 27,240	$ 2,639,645
Eric Benevich.	$ 467,200	$ 233,600	$ 52,558	$ 3,231,364	$ 34,620	$ 4,019,342
Haig P. Bozigian, Ph.D.	$ 461,500	$ 230,750	$ 47,104	$ 3,050,572	$ 37,788	$ 3,827,714
Eiry W. Roberts, M.D.	$ 538,200	$ 269,100	$ 25,915	$ 1,829,052	$ 37,788	$ 2,700,055

* Reflects a termination without cause or due to a constructive termination, or deemed termination, prior to a change in control.
(1) Based on salary as of December 31, 2019.
(2) Based on bonus targets established by the Board of Directors for 2019.
(3) Accrued compensation is comprised of vacation pay earned and unpaid as of December 31, 2019.
(4) The amounts in this column represent the intrinsic value of 'in-the money' unvested options and restricted stock units as of December 31, 2019 that would vest in accordance with the executive officers' employment agreements. Values were derived using the closing price of the Company's common stock on December 31, 2019 of $107.49.
(5) Medical is comprised primarily of health insurance premiums for the period specified in each executive officer's employment contract.

Potential Payment Upon Change-in-Control Table*

Name	Severance (1)	Bonus (2)	Accrued Compensation (3)	Stock Awards (4)	Medical (5)	Total
Kevin C. Gorman, Ph.D.	$ 1,450,000	$1,160,000	$ 62,114	$ 20,818,745	$ 79,632	$ 23,570,491
Matthew C. Abernethy	$ 743,400	$ 371,700	$ 59,565	$ 7,724,159	$ 40,860	$ 8,939,684
Eric Benevich.	$ 700,800	$ 350,400	$ 52,558	$ 8,516,203	$ 51,930	$ 9,671,891
Haig P. Bozigian, Ph.D.	$ 692,250	$ 346,125	$ 47,104	$ 9,529,332	$ 56,682	$ 10,671,493
Eiry W. Roberts, M.D.	$ 807,300	$ 403,650	$ 25,915	$ 8,710,894	$ 56,682	$ 10,004,441

* Reflects benefits to be provided upon a termination without cause, or due to a constructive termination, within a specified time following a change-in-control.
(1) Based on salary as of December 31, 2019.
(2) Based on bonus targets established by the Board of Directors for 2019.
(3) Accrued compensation is comprised of vacation pay earned and unpaid as of December 31, 2019.
(4) The amounts in this column represent the intrinsic value of 'in-the money' unvested options and restricted stock units as of December 31, 2019 that would vest in accordance with the executive officers' employment agreements. Values were derived using the closing price of the Company's common stock on December 31, 2019 of $107.49.
(5) Medical is comprised primarily of health insurance premiums for the period specified in each executive officer's employment contract.

Potential Payment Upon Termination by Disability Table*

Name	Salary (1)	Bonus (2)	Accrued Compensation (3)	Stock Awards (4)	Medical (5)	Total
Kevin C. Gorman, Ph.D.	$ 906,250	$ 725,000	$ 62,114	$10,867,177	$ 49,770	$ 12,610,311
Matthew C. Abernethy	$ 495,600	$ 247,800	$ 59,565	$ 1,809,440	$ 27,240	$ 2,639,645
Eric Benevich.	$ 467,200	$ 233,600	$ 52,558	$ 3,231,364	$ 34,620	$ 4,019,342
Haig P. Bozigian, Ph.D.	$ 461,500	$ 230,750	$ 47,104	$ 3,050,572	$ 37,788	$ 3,827,714
Eiry W. Roberts, M.D.	$ 538,200	$ 269,100	$ 25,915	$ 1,829,052	$ 37,788	$ 2,700,055

* Reflects a termination due to disability.
(1) Based on salary as of December 31, 2019.
(2) Based on bonus targets established by the Board of Directors for 2019.
(3) Accrued compensation is comprised of vacation pay earned and unpaid as of December 31, 2019.
(4) The amounts in this column represent the intrinsic value of 'in-the money' unvested options and restricted stock units as of December 31, 2019 that would vest in accordance with the executive officers' employment agreements. Values were derived using the closing price of the Company's common stock on December 31, 2019 of $107.49.
(5) Medical is comprised primarily of health insurance premiums for the period specified in each executive officer's employment contract.

Potential Payment Upon Termination by Death Table*

Name	Bonus (1)	Accrued Compensation (2)	Stock Awards (3)	Total
Kevin C. Gorman, Ph.D.	$ 580,000	$ 62,114	$10,867,177	$ 11,509,291
Matthew C. Abernethy	$ 247,800	$ 59,565	$ 1,809,440	$ 2,116,805
Eric Benevich.	$ 233,600	$ 52,558	$ 3,231,364	$ 3,517,522
Haig P. Bozigian, Ph.D.	$ 230,750	$ 47,104	$ 3,050,572	$ 3,328,426
Eiry W. Roberts, M.D.	$ 269,100	$ 25,915	$ 1,829,052	$ 2,124,067

* Reflects a termination due to death.
(1) Based on bonus targets established by the Board of Directors for 2019.
(2) Accrued compensation is comprised of vacation pay earned and unpaid as of December 31, 2019.
(3) The amounts in this column represent the intrinsic value of 'in-the money' unvested options and restricted stock units as of December 31, 2019 that would vest in accordance with the executive officers' employment agreements. Values were derived using the closing price of the Company's common stock on December 31, 2019 of $107.49.

The following is a description of the arrangements under which the NEOs may be entitled to potential payments upon a termination without cause or resignation due to a constructive termination (including following a change-in-control) or upon disability or death. Resignation due to constructive termination may include an executive's resignation following one or more of the following material adverse changes in the nature of such executive's employment, as specified in the agreement, which is not cured following notification:

- a significant reduction in the executive or the executive supervisor's duties or responsibilities,
- a material reduction in base salary,

- material relocation, or
- material breach of the executive's employment agreement.

Dr. Gorman is entitled to 1.25 times the amount of his annual base salary and target annual bonus to be paid equally over 15 months, an acceleration of unvested shares that would have vested over the 15 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 15 months following termination in the event that the Company terminates his employment without cause, or he resigns due to a constructive termination. In the event of such termination within six months after the consummation of a change of control, Dr. Gorman is entitled to 2 times the amount of his annual base salary and annual target bonus to be paid in one lump sum, a cash amount equal to the value of all unvested stock awards and all vested and outstanding stock awards, and payment of COBRA benefits to continue then-current coverage for a period of 24 months following termination. In addition, the Company has agreed to reimburse Dr. Gorman for the increase in federal and state income taxes payable by him by reason of the benefits provided in connection with such a termination in connection with a change in control if the total payment exceeds 2.99 times his base amount by more than 15%. In the event of termination due to disability, Dr. Gorman is entitled to 15 months of base salary paid semi-monthly over 15 months, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Dr. Gorman in the fiscal year and the denominator of which is 12, an acceleration of unvested shares that would have vested over the 15 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 15 months following termination. In the event of a termination due to Dr. Gorman's death, his beneficiaries or estate, would be entitled to an acceleration of unvested shares that would have vested over the 15 continuous months after the date of termination, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Dr. Gorman in the fiscal year and the denominator of which is 12 and any accrued and unpaid compensation on the date of termination.

Mr. Abernethy is entitled to 1.0 times the amount of his annual base salary and target annual bonus to be paid equally over 12 months, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination in the event that the Company terminates his employment without cause, or he resigns due to a constructive termination. In the event of such termination within six months after the consummation of a change of control, Mr. Abernethy is entitled to 1.5 times the amount of his annual base salary and annual target bonus to be paid in one lump sum, a cash amount equal to the value of all unvested stock awards and all vested and outstanding stock awards, and payment of COBRA benefits to continue then-current coverage for a period of 18 months following termination; provided, however, in the event such payment to Mr. Abernethy after a change of control is subject to a "best-after-tax" provision. The best-after-tax provision provides that if the change of control payment due to Mr. Abernethy would be subject to the excise tax provisions of Section 280G of the Internal Revenue Code, the Company may reduce the change of control payments to Mr. Abernethy if, after all applicable taxes, the final payments would be larger than if the change of control payments were not reduced and therefor subject to an excise tax. In the event of termination due to disability, Mr. Abernethy is entitled to 12 months of base salary paid semi-monthly over 12 months, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Mr. Abernethy in the fiscal year and the denominator of which is 12, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination. In the event of a termination due to Mr. Abernethy's death, his beneficiaries or estate, would be entitled to an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Mr. Abernethy in the fiscal year and the denominator of which is 12 and any accrued and unpaid compensation on the date of termination.

Mr. Benevich is entitled to 1.0 times the amount of his annual base salary and target annual bonus to be paid equally over 12 months, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination in the event that the Company terminates his employment without cause, or he resigns due to a constructive termination. In the event of such termination within six months after the consummation of a change of control, Mr. Benevich is entitled to 1.5 times the amount of his annual base salary and annual target bonus to be paid in one lump sum, a cash amount equal to the value of all unvested stock awards and all vested and outstanding stock awards, and payment of COBRA benefits to continue then-current coverage for a period of 18 months following termination; provided, however, in the event such payment to Mr. Benevich after a change of control is subject to a "best-after-tax" provision. The best-after-tax provision provides that if the change of control payment due to Mr. Benevich would be subject to the excise tax provisions of Section 280G of the Internal Revenue Code, the Company may reduce the change of control payments to Mr. Benevich if, after all applicable taxes, the final payments would be larger than if the change of control payments were not reduced and therefor subject to an excise tax. In the event of termination due to disability, Mr. Benevich is entitled to 12 months of base salary paid semi-monthly over 12 months, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Mr. Benevich in the fiscal year and the denominator of which is 12, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination. In the event of a termination due to Mr. Benevich's death, his beneficiaries or estate, would be entitled to an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Mr. Benevich in the fiscal year and the denominator of which is 12 and any accrued and unpaid compensation on the date of termination.

Dr. Bozigian is entitled to 1.0 times the amount of his annual base salary and target annual bonus to be paid equally over 12 months, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination in the event that the Company terminates his employment without cause, or he resigns due to a constructive termination. In the event of such termination within six months after the consummation of a change of control, Dr. Bozigian is entitled to 1.5 times the amount of his annual base salary and annual target bonus to be paid in one lump sum, a cash amount equal to the value of all unvested stock awards and all vested and outstanding stock awards, and payment of COBRA benefits to continue then-current coverage for a period of 18 months following termination. In addition, the Company has agreed to reimburse Dr. Bozigian for the increase in federal and state income taxes payable by him by reason of the benefits provided in connection with such a termination in connection with a change in control if the total payment exceeds 2.99 times his base amount by more than 15%. In the event of termination due to disability, Dr. Bozigian is entitled to 12 months of base salary paid semi-monthly over 12 months, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Dr. Bozigian in the fiscal year and the denominator of which is 12, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination. In the event of a termination due to Dr. Bozigian's death, his beneficiaries or estate, would be entitled to an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, a lump sum amount equal to his target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Dr. Bozigian in the fiscal year and the denominator of which is 12 and any accrued and unpaid compensation on the date of termination.

Dr. Roberts is entitled to 1.0 times the amount of her annual base salary and target annual bonus to be paid equally over 12 months, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination in the event that the Company terminates her employment without cause, or she resigns due to a constructive termination. In the event of such termination within six months after the consummation of a change of control, Dr. Roberts is entitled to 1.5 times the amount of her annual base salary and annual target bonus to be paid in one lump sum, a cash amount equal to the value of all unvested stock awards and all vested and outstanding stock awards, and payment of COBRA benefits to continue then-current coverage for a period of 18 months following termination; provided, however, in the event such payment to Dr. Roberts after a change of control is subject to a "best-after-tax" provision. The best-after-tax provision provides that if the change of control payment due to Dr. Roberts would be subject to the excise tax provisions of Section 280G of the Internal Revenue Code, the Company may reduce the change of control payments to Dr. Roberts if, after all applicable taxes, the final payments would be larger than if the change of control payments were not reduced and therefor subject to an excise tax. In the event of termination due to disability, Dr. Roberts is entitled to 12 months of base salary paid semi-monthly over 12 months, a lump sum amount equal to her target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Dr. Roberts in the fiscal year and the denominator of which is 12, an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, and payment of COBRA benefits to continue then-current coverage for a period of 12 months following termination. In the event of a termination due to Dr. Roberts's death, her beneficiaries or estate, would be entitled to an acceleration of unvested shares that would have vested over the 12 continuous months after the date of termination, a lump sum amount equal to her target annual bonus multiplied by a fraction the numerator of which is the number of full months of employment by Dr. Roberts in the fiscal year and the denominator of which is 12 and any accrued and unpaid compensation on the date of termination.

CEO PAY RATIO

Under SEC rules, we are required to calculate and disclose the annual total compensation of our median employee, as well as the ratio of the annual total compensation of our median employee as compared to the annual total compensation of our CEO, Kevin C. Gorman, Ph.D. ("CEO Pay Ratio"). To identify our median employee, we used the following methodology:

- To determine our total population of employees, we included all full-time and part-time as of December 31, 2019.
- To identify our median employee from our employee population, we calculated the aggregate amount of each employee's fiscal 2019 base salary (using a reasonable estimate of the hours worked and overtime actually paid during fiscal 2019 for hourly employees and actual salary paid for our remaining employees) and bonuses attributable to fiscal 2019 performance and the grant date fair value of equity awards granted in fiscal 2019 using the same methodology we use for estimating the value of the equity awards granted to our named executive officers and reported in our Summary Compensation Table.
- In making this determination, we annualized the base salary and target bonus compensation of employees who were employed by us for less than the entire fiscal year.

For fiscal 2019, the median of the annual total compensation of our employees (other than our CEO) was $257,209 and the annual total compensation of our CEO, as reported in the Summary Compensation Table included in this Proxy Statement, was $9,450,826. Based on this information, the ratio of the annual total compensation of our CEO to the median of the annual total compensation of all employees was approximately 37 to 1.

The CEO Pay Ratio above represents our reasonable estimate calculated in a manner consistent with SEC rules and applicable guidance. SEC rules and guidance provide significant flexibility in how companies identify the median employee, and each company may use a different methodology and make different assumptions particular to that company. As a result, and as explained by the SEC when it adopted these rules, in considering the pay ratio disclosure, stockholders should keep in mind that the rule was not designed to facilitate comparisons of pay ratios among different companies, even companies within the same industry, but rather to allow stockholders to better understand and assess each particular company's compensation practices and pay ratio disclosures. Neither the Compensation Committee nor our management used our CEO Pay Ratio measure in making compensation decisions.

In addition to the information above, in order to reflect our employee compensation practices, we have also calculated the annual base salary of our median employee while taking only annual base salary into account, as well as the ratio of the base salary of our CEO as compared to the annual base salary of such median employee. In calculating the annual base salary of our median employee we used the applicable methodology listed above. For fiscal 2019, the median of the annual base salary of our employees (other than our CEO) was $140,000, and the annual base salary of our CEO, as reported in the Summary Compensation Table included in this Proxy Statement, was $725,000. Based on this information, the ratio of the annual base salary of our CEO to the median of the annual base salary of all employees (other than the CEO) was approximately 5 to 1. Neither the Compensation Committee nor our management used this ratio to make compensation decisions.

DIRECTORS COMPENSATION SUMMARY

Non-Employee Director Compensation Philosophy

Our non-employee director compensation philosophy is based on the following guiding principles:

- Aligning the long-term interests of stockholders and directors; and
- Compensating directors appropriately and adequately for their time, effort and experience.

The elements of director compensation consist of annual cash retainers and equity awards, as well as customary and usual expense reimbursement in attending Board or Committee meetings. In an effort to align the long-term interests of our stockholders and non-employee directors, the mix of cash and equity compensation has historically been, and is currently, weighted more heavily to equity. The equity compensation has historically taken the form of stock options, which we believe motivates the non-employee directors to help us achieve our business objectives by tying incentives to the appreciation of our common stock over the long term.

The Board and the Company's stockholders approved certain annual limits on compensation to be paid to the Company's non-employee directors, beginning with our 2016 annual meeting of stockholders. The aggregate value of all compensation granted or paid, as applicable, to any individual for service as a non-employee director will not exceed $1,250,000 in total value during any year, measured from our annual meeting of stockholders for a particular year and ending on the date of our annual meeting of stockholders for the subsequent year. In addition, the aggregate value of the initial option grant or other similar stock awards granted under the 2011 Plan or otherwise to any individual for service as a non-employee director upon or in connection with his or her initial election or appointment to the Board will not exceed $2,000,000 in total value. These limits are further described in our 2011 Plan. Under our 2011 Plan, the Board has the authority to make exceptions to these limits in extraordinary circumstances, in its discretion, provided that any non-employee director who is granted or paid such additional compensation may not participate in the decision to grant or pay such additional compensation. No exceptions were made in 2019. The 2020 Plan includes similar limits and does not provide the Board the authority to make exceptions to these limits.

Our Compensation Committee regularly assesses, on at least an annual basis, our non-employee director compensation program in consultation with its independent compensation consultant, who provides analysis and input on prevailing market practices, and recommends any changes to the program to our Board, who ultimately approves non-employee director compensation. On at least an annual basis, qualified experts in the field of non-employee director compensation also deliver a presentation to the Compensation Committee about recent developments and best practices related to non-employee director compensation.

The 2019 compensation for the Company's non-employee directors was recommended by the Compensation Committee to the Board following the review of a report from Radford, its independent compensation consultant during 2019, which contained an analysis of prevailing market practices regarding levels and types of non-employee director compensation, including the non-employee director compensation practices of our peer group, which is described in the "Compensation Discussion and Analysis" section of this proxy statement, and a comparative assessment of our non-employee director compensation to such peers and market practices. In 2019, the Compensation Committee also received a presentation from Radford about recent developments and best practices related to non-employee directors to inform its analysis of, and recommendations regarding, non-employee director compensation. In 2019, the Board approved an adjustment to cash compensation of the Chair of the Audit Committee to align that position's cash compensation with the 50th percentile of the market data. In addition, the Board approved a decrease in the number of shares subject to the annual option granted to each non-employee director at the 2019 Annual Meeting of Stockholders and the initial option granted to each non-employee director upon his or her initial election or appointment to the Board.

In formulating its recommendations to the Board for 2019, the Compensation Committee did not engage in benchmarking or targeting compensation to a specific level of the peer group data provided by Radford, but rather used the peer data as a reference point in making non-employee director compensation recommendations. The Compensation Committee determined that the equity awards granted to non-employee directors should consist of stock options rather than time-vesting RSU grants. It is the Compensation Committee's view that stock options are inherently performance oriented and align the interests of the non-employee directors with those of our stockholders, as the non-employee director realizes no value from stock options unless and until the Company's stock price increases. Ultimately, the Board set 2019 non-employee director compensation in the forms and amounts it determined to be appropriate using its professional experience and judgment, after careful review of the Radford analysis and the Compensation Committee's recommendations. Our director compensation for fiscal 2019 is described below.

Non-Employee Director Compensation for Fiscal 2019

Non-employee directors are reimbursed for expenses incurred in connection with performing their duties as directors of the Company. For 2019, directors who are not employees of the Company earned a $50,000 annual cash retainer. The Company provided the Chair of the Board, William H. Rastetter, an additional $30,000, making his total annual cash retainer $87,500, which includes the additional annual cash retainer of $7,500 for Dr. Rastetter's membership on the Science and Medical Technology Committee. In addition to the cash compensation set forth above, the Chair of the Audit Committee earned an additional $25,000 annual cash retainer, and the Chair of the Compensation Committee earned an additional $20,000 annual cash retainer. The Chair of the Nominating/Corporate Governance Committee earned an

additional $10,000 annual cash retainer, and the Chair of the Science and Medical Technology Committee earned an additional $15,000 annual cash retainer. Each other director who was a member of the Audit Committee, the Compensation Committee, the Nominating/Corporate Governance Committee or the Science and Medical Technology Committee earned an additional annual cash retainer of $12,000, $12,000, $5,000 and $7,500, respectively, for each Committee on which she or he served.

Additionally, for 2019, each non-employee director received a grant of a nonstatutory stock option to purchase 10,000 shares of the Company's common stock (except that the Chair of the Board received a nonstatutory stock option to purchase 13,000 shares of the Company's common stock) on the date of the 2019 Annual Meeting of Stockholders. The options granted to non-employee directors have exercise prices equal to the closing price of the Company's common stock on the date of the grant, are subject to a ten-year term and vest monthly over the one-year period following the date of grant.

Upon her appointment to the board in September 2019, Leslie V. Norwalk received a grant of a nonstatutory stock option to purchase 15,000 shares of the Company's common stock. Such option had an exercise price equal to the closing price of the Company's common stock on the date of grant, a ten-year maximum term and vests monthly over the three-year period following the date of grant.

The following table sets forth the compensation earned for the fiscal year ended December 31, 2019 by the directors of the Company named below:

Director Compensation Table

Name	Fees Earned or Paid in Cash (1)	Option Awards (2)	Total
Kevin C. Gorman, Ph.D. (3)	$ —	$ —	$ —
William H. Rastetter, Ph.D. (4)	$ 87,500	$ 584,480	$ 671,980
Gary A. Lyons (5)	$ 57,500	$ 449,600	$ 507,100
George J. Morrow (6)	$ 79,000	$ 449,600	$ 528,600
Leslie V. Norwalk (7)	$ 15,495	$ 788,850	$ 804,345
Richard F. Pops (8)	$ 82,000	$ 449,600	$ 531,600
Alfred W. Sandrock, Jr., M.D. Ph.D. (9)	$ 80,997	$ 449,600	$ 530,597
Stephen A. Sherwin, M.D. (10)	$ 85,000	$ 449,600	$ 534,600

(1) Amounts in this column reflect compensation earned in 2019. During 2019, the Company transitioned from paying Board and Committee fees annually in May to quarterly in arrears, and therefore, the amount of cash paid to the Directors in 2019 is less than the amounts earned.

(2) The amounts shown represent the full grant date fair value of option awards granted in 2019 as determined pursuant to ASC 718. The assumptions used to calculate the value of such awards are set forth under Note 8 of the Notes to the Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. The grant date fair values of all option awards are based on a per share Black-Scholes value of $44.96 (other than Ms. Norwalk's grant, for which it was $52.59).

(3) During 2019, Dr. Gorman was an employee of the Company, and as such, did not receive any compensation for service on the Board of Directors. As of December 31, 2019, Dr. Gorman had outstanding options to purchase 1,176,258 shares of common stock, and 114,877 outstanding restricted stock units.

(4) As of December 31, 2019, Dr. Rastetter had outstanding options to purchase 154,000 shares of common stock.

(5) As of December 31, 2019, Mr. Lyons had outstanding options to purchase 122,500 shares of common stock.

(6) As of December 31, 2019, Mr. Morrow had outstanding options to purchase 92,500 shares of common stock.

(7) Ms. Norwalk was appointed to the board in September 2019. As of December 31, 2019, Ms. Norwalk had outstanding options to purchase 15,000 shares of common stock.

(8) As of December 31, 2019, Mr. Pops had outstanding options to purchase 122,500 shares of common stock.

(9) As of December 31, 2019, Dr. Sandrock had outstanding options to acquire 92,500 shares of common stock.

(10) As of December 31, 2019, Dr. Sherwin had outstanding options to purchase 122,500 shares of common stock.

Equity Ownership Guidelines

In August 2018, the Board of Directors implemented equity ownership guidelines for our non-employee directors. The equity ownership guidelines are designed to further align the interests of the non-employee directors with those of our stockholders by ensuring that our non-employee directors have a significant financial stake in the Company's long-term success. The equity ownership guidelines establish a minimum equity ownership equal to three times the cash retainer paid to the non-employee director, with such values determined based on the value of our common stock owned by such persons as of certain measurement dates. All shares directly or beneficially owned by the non-employee director, including the net exercisable value of outstanding vested stock options (where the market price of our common stock exceeds the strike price of such option) are included in determining the value of equity owned under our equity ownership guidelines. New non-employee directors are granted a five-year period to reach the equity ownership requirements set forth in the guidelines and are expected to make annual progress toward the equity ownership requirements during this five-year period. When a non-employee director does not meet the equity ownership requirements set forth in the guidelines, he/she is restricted from selling any held shares until such requirements are met. Additionally, should non-employee director who does not meet the equity ownership requirements choose to exercise a stock option or vest in any RSUs, he or she is required to retain all shares acquired through those transactions, aside from any shares necessary to fulfill such transaction related tax obligations, until full compliance with the equity ownership guidelines is attained.

Annual compliance with the equity ownership guidelines is assessed during the first quarter of each year. As of March 1, 2020, each of our non-employee directors is in compliance with the equity ownership guidelines.

Additional Information

Executive officers of the Company serve at the discretion of the Board of Directors. There are no family relationships among any of the directors, executive officers or key employees of the Company. None of our directors or executive officers has been involved in any of the legal proceedings specified in Item 401(f) of Regulation S-K in the past 10 years.

RELATED PERSON TRANSACTIONS

Review, Approval or Ratification of Related Person Transactions

In accordance with the Company's Audit Committee Charter, the Company's Audit Committee is responsible for reviewing and approving the terms and conditions of all related person transactions. In connection with its review, approval or ratification of related person transactions, the Company's Audit Committee takes into account all relevant available facts and circumstances in determining whether such transaction is in the best interests of the Company and its stockholders. Any transaction that would disqualify a director from meeting the "independent director" standard as defined under the Nasdaq Stock Market rules requires review by the Company's Audit Committee prior to entering into such transaction. For all other related person transactions, the Company reviews all agreements and payments for related person transactions and based on this review, a report is made to the Company's Audit Committee quarterly disclosing all related person transactions during that quarter, if any. All related person transactions shall be disclosed in the Company's applicable filings with the SEC as required under SEC rules.

Related Person Transactions During Fiscal 2019

There were no related person transactions during fiscal 2019.

OTHER MATTERS

As of the date of this proxy statement, the Company knows of no other matters to be submitted to the stockholders at the Annual Meeting. If any other matters properly come before the Annual Meeting, it is the intention of the persons named in the proxy to vote the shares they represent as the Board of Directors may recommend.

ADDITIONAL INFORMATION

"Householding" of Proxy Materials. The SEC has adopted rules that permit companies and intermediaries such as brokers to satisfy delivery requirements for proxy statements with respect to two or more stockholders sharing the same address by delivering a single set of proxy materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially provides extra convenience for stockholders and cost savings for companies. The Company, as well as certain brokers, household proxy materials, unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker or us that they or we will be householding materials to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate set of proxy materials, please notify your broker if your shares are held in a brokerage account or us if you hold registered shares. If you hold registered shares, you may direct your written request to the Company's Corporate Secretary at 12780 El Camino Real, San Diego, California 92130 or contact the Company's Corporate Secretary at 858-617-7600.

Advance Notice Procedures. To be considered for inclusion in next year's proxy materials, a stockholder must submit his, her or its proposal in writing by December 10, 2020 which is the date that is 120 days prior to the first anniversary of the mailing date of this proxy statement, to the Company's Corporate Secretary at 12780 El Camino Real, San Diego, California 92130. Any proposal must comply with the requirements as to form and substance established by the SEC for such proposal to be included in our proxy statement. Stockholders are also advised to review our bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This proxy statement and other materials we are sending you or that are available on our website in connection with the Annual Meeting contain "forward-looking statements" as defined under federal securities laws. Many of these statements can be identified by the use of terminology such as "believes," "expects," "intends," "anticipates," "plans," "may," "will," "projects," "continues," "estimates," "potential," "opportunity" or the negative versions of these terms and other similar expressions. These forward-looking statements may be found in the sections of this proxy statement titled "Proxy Overview," "Compensation Discussion and Analysis," and other sections of this proxy statement. These forward-looking statements are based on our current expectations and assumptions, and are subject to risks and uncertainties that could cause our actual results or experience and the timing of events to differ significantly from the forward-looking statements. Factors that could cause or contribute to these differences include those discussed in the Company's Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on February 7, 2020 under "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in the Annual Report. You should carefully consider that information before voting.

You should not place undue reliance on these statements, which speak only as of the date that they were made. These cautionary statements should be considered in connection with any written or oral forward-looking statements that we may make in the future. We do not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect later events or circumstances or to reflect the occurrence of unanticipated events.

Appendix A

NEUROCRINE BIOSCIENCES, INC.
2020 EQUITY INCENTIVE PLAN

ADOPTED BY THE COMPENSATION COMMITTEE: MARCH 16, 2020
APPROVED BY THE STOCKHOLDERS: , 2020
TERMINATION DATE: MARCH 15, 2030

1. GENERAL.

(a) Successor to and Continuation of Prior Plan. The Plan is the successor to and continuation of the Prior Plan. As of the day immediately following the Effective Date: (i) no additional awards may be granted under the Prior Plan; (ii) the Prior Plan's Available Reserve, plus any Prior Plan's Returning Shares (as such shares become available from time to time), will become available for issuance pursuant to Awards granted under this Plan; and (iii) all Prior Plan Awards will remain subject to the terms of the Prior Plan (except that any Prior Plan's Returning Shares will become available for issuance pursuant to Awards granted under this Plan). All Awards granted under this Plan will be subject to the terms of this Plan.

(b) Plan Purpose. The Company, by means of the Plan, seeks to secure and retain the services of Employees, Directors and Consultants, to provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate, and to provide a means by which such persons may be given an opportunity to benefit from increases in value of the Common Stock through the granting of Awards.

(c) Available Awards. The Plan provides for the grant of the following Awards: (i) Incentive Stock Options; (ii) Nonstatutory Stock Options; (iii) SARs; (iv) Restricted Stock Awards; (v) RSU Awards; (vi) Performance Awards; and (vii) Other Awards.

(d) Adoption Date. The Plan will come into existence on the Adoption Date. No Award may be granted under the Plan prior to the Adoption Date. Any Award granted prior to the Effective Date is contingent upon timely receipt of stockholder approval to the extent required under applicable tax, securities and regulatory rules, and satisfaction of any other compliance requirements.

2. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve. Subject to adjustment in accordance with Section 2(b), any adjustment as necessary to implement any Capitalization Adjustment, and Section 3(d), the aggregate number of shares of Common Stock that may be issued pursuant to Awards will not exceed the sum of: (i) the Prior Plan's Available Reserve; (ii) 3,300,000 new shares; and (iii) the number of Prior Plan's Returning Shares, if any, as such shares become available from time to time.

(b) Share Reserve Operation.

(i) Limit Applies to Shares Issued Pursuant to Awards. For clarity, the Share Reserve is a limit on the number of shares of Common Stock that may be issued pursuant to Awards and does not limit the granting of Awards, except that the Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy its obligations to issue shares pursuant to such Awards. Shares may be issued in connection with a merger or acquisition as permitted by, as applicable, Nasdaq Listing Rule 5635(c), NYSE Listed Company Manual Section 303A.08, NYSE American Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(ii) Actions that Will Not Constitute Issuance of Shares and Will Not Reduce Share Reserve. The following actions will not result in an issuance of shares of Common Stock under the Plan and accordingly will not reduce the number of shares of Common Stock subject to the Share Reserve and available for issuance under the Plan: (1) the expiration or termination of any portion of an Award without the shares covered by such portion of the Award having been issued; and (2) the settlement of any portion of an Award in cash (*i.e.*, the Participant receives cash rather than shares of Common Stock).

(iii) Reversion of Shares to the Share Reserve.

(1) Shares Available for Subsequent Issuance. If any shares of Common Stock issued pursuant to an Award are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required for the vesting of such shares, then such shares will revert to the Share Reserve and become available again for issuance under the Plan.

(2) Shares Not Available for Subsequent Issuance. The following shares of Common Stock will not become available again for issuance under the Plan: (i) any shares that are reacquired or withheld (or not issued) by the Company to satisfy the exercise, strike or purchase price of an Award or a Prior Plan Award (including any shares subject to such award that are not delivered because such award is exercised through a reduction of shares subject to such award (*i.e.*, "net exercised")); (ii) any shares that are reacquired or withheld (or not issued) by the Company to satisfy a tax withholding obligation in connection with an Award or a Prior Plan Award; (iii) any shares repurchased by the Company on the open market with the proceeds of the exercise, strike or purchase price of an Award or a Prior Plan Award; and (iv) in the event that a Stock Appreciation Right granted under the Plan or a stock appreciation right granted under the Prior Plan is settled in shares of Common Stock, the gross number of shares of Common Stock subject to such award.

3. ELIGIBILITY AND LIMITATIONS.

(a) Eligible Award Recipients. Subject to the terms of the Plan, Employees, Directors and Consultants are eligible to receive Awards.

(b) Specific Award Limitations.

(i) Limitations on Incentive Stock Option Recipients. Incentive Stock Options may be granted only to Employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and (f) of the Code).

(ii) Incentive Stock Option $100,000 Limitation. To the extent that the aggregate Fair Market Value (determined at the time of grant) with respect to which Incentive Stock Options are exercisable for the first time by any Participant during any calendar year (under all plans of the Company and any Affiliates) exceeds $100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(iii) Limitations on Incentive Stock Options Granted to Ten Percent Stockholders. A Ten Percent Stockholder may not be granted an Incentive Stock Option unless (1) the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant of such Option and (2) such Option is not exercisable after the expiration of five years from the date of grant of such Option.

(iv) Limitations on Nonstatutory Stock Options and SARs. Nonstatutory Stock Options and SARs may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company (as such term is defined in Rule 405) unless the stock underlying such Awards is treated as "service recipient stock" under Section 409A because such Awards are granted pursuant to a corporate transaction (such as a spin off transaction) or unless such Awards otherwise comply with the distribution requirements of Section 409A.

(c) Aggregate Incentive Stock Option Limit. Notwithstanding anything to the contrary in Section 2(a) and subject to any adjustment as necessary to implement any Capitalization Adjustment, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is 18,000,000 shares.

(d) Limitation on Full Value Awards. Subject to adjustment in accordance with Section 2(b) and any adjustment as necessary to implement any Capitalization Adjustment, the aggregate number of shares of Common Stock that may be issued pursuant to Full Value Awards will not exceed 50% of the Share Reserve.

(e) Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid, as applicable, by the Company to any individual for service as a Non-Employee Director with respect to any period commencing on the date of the Annual Meeting for a particular year and ending on the date of the Annual Meeting for the next subsequent year (the "***Annual Period***"), including Awards granted and cash fees paid by the Company to such Non-Employee Director, will not exceed $1,250,000 in total value. In addition, the aggregate value of any equity award(s) granted under the Plan or otherwise by the Company to any individual for service as a Non-Employee Director upon or in connection with his or her initial election or appointment to the Board will not exceed $2,000,000 in total value; for the avoidance of doubt, the aggregate compensation granted or paid, as applicable, by the Company to any individual for service as a Non-Employee Director with respect to an Annual Period in which such individual is first appointed or elected to the Board will not exceed the sum of the two preceding limitations in this Section 3(e). The value of any equity awards, for purposes of the limitations described in this Section 3(e), will be calculated based on the grant date fair value of such equity awards for financial reporting purposes. The limitations in this Section 3(e) will apply beginning with the Annual Period in which the Annual Meeting in 2020 occurs.

4. OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option and SAR will have such terms and conditions as determined by the Board. Each Option will be designated in writing as an Incentive Stock Option or Nonstatutory Stock Option at the time of grant; *provided, however*, that if an Option is not so designated, then such Option will be a Nonstatutory Stock Option, and the shares purchased upon exercise of each type of Option will be separately accounted for. Each SAR will be denominated in shares of Common Stock equivalents. The terms and conditions of separate Options and SARs need not be

identical; *provided, however*, that each Option Agreement and SAR Agreement will conform (through incorporation of the provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(a) Term. Subject to Section **Error! Reference source not found.** regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten years from the date of grant of such Award or such shorter period specified in the Award Agreement.

(b) Exercise or Strike Price. Subject to Section **Error! Reference source not found.** regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will not be less than 100% of the Fair Market Value on the date of grant of such Award. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value on the date of grant of such Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Transaction and in a manner consistent with the provisions of Sections 409A and, if applicable, 424(a) of the Code.

(c) Exercise Procedure and Payment of Exercise Price for Options. In order to exercise an Option, the Participant must provide notice of exercise to the Plan Administrator in accordance with the procedures specified in the Option Agreement or otherwise provided by the Company. The Board has the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to utilize a particular method of payment. The exercise price of an Option may be paid, to the extent permitted by Applicable Law and as determined by the Board, by one or more of the following methods of payment to the extent set forth in the Option Agreement:

(i) by cash or check, bank draft or money order payable to the Company;

(ii) pursuant to a "cashless exercise" program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the Common Stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock that are already owned by the Participant free and clear of any liens, claims, encumbrances or security interests, with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) the Common Stock is publicly traded at the time of exercise, (2) any remaining balance of the exercise price not satisfied by such delivery is paid by the Participant in cash or other permitted form of payment, (3) such delivery would not violate any Applicable Law or agreement restricting the redemption of the Common Stock, (4) any certificated shares are endorsed or accompanied by an executed assignment separate from certificate, and (5) such shares have been held by the Participant for any minimum period necessary to avoid adverse accounting treatment as a result of such delivery;

(iv) if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) such shares used to pay the exercise price will not be exercisable thereafter and (2) any remaining balance of the exercise price not satisfied by such net exercise is paid by the Participant in cash or other permitted form of payment; or

(v) in any other form of consideration that may be acceptable to the Board and permissible under Applicable Law.

(d) Exercise Procedure and Payment of Appreciation Distribution for SARs. In order to exercise a SAR, the Participant must provide notice of exercise to the Plan Administrator in accordance with the procedures specified in the SAR Agreement or otherwise provided by the Company. The appreciation distribution payable to a Participant upon the exercise of a SAR will not be greater than an amount equal to the excess of (i) the aggregate Fair Market Value on the date of exercise of a number of shares of Common Stock equal to the number of Common Stock equivalents that are vested and being exercised under such SAR, over (ii) the strike price of such SAR. Such appreciation distribution may be paid to the Participant in the form of Common Stock or cash (or any combination of Common Stock and cash) or in any other form of payment, as determined by the Board and specified in the SAR Agreement.

(e) Transferability. Options and SARs may not be transferred to third party financial institutions for value. The Board may impose such additional limitations on the transferability of an Option or SAR as it determines. In the absence of any such determination by the Board, the following restrictions on the transferability of Options and SARs will apply, provided that except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration and *provided, further*, that if an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer:

(i) Restrictions on Transfer. An Option or SAR will not be transferable, except by will or by the laws of descent and distribution, and will be exercisable during the lifetime of the Participant only by the Participant; *provided, however*, that the Board may permit transfer of an Option or SAR in a manner that is not prohibited by applicable tax and securities laws upon the Participant's request, including to a trust if the Participant is considered to be the sole beneficial owner of such trust (as determined under Section 671 of the Code and applicable state law) while such Option or SAR is held in such trust, provided that the Participant and the trustee enter into a transfer and other agreements required by the Company.

(ii) Domestic Relations Orders. Notwithstanding the foregoing, subject to the execution of transfer documentation in a format acceptable to the Company and subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to a domestic relations order.

(f) Vesting. The Board may impose such restrictions on or conditions to the vesting and/or exercisability of an Option or SAR as determined by the Board. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Options and SARs will cease upon termination of the Participant's Continuous Service.

(g) Termination of Continuous Service for Cause. Except as explicitly otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service is terminated for Cause, the Participant's Options and SARs will terminate and be forfeited immediately upon such termination of Continuous Service, the Participant will be prohibited from exercising any portion (including any vested portion) of such Awards on and after the date of such termination of Continuous Service, and the Participant will have no further right, title or interest in the forfeited Award, the shares of Common Stock subject to the forfeited Award, or any consideration in respect of the forfeited Award.

(h) Post-Termination Exercise Period Following Termination of Continuous Service for Reasons Other than for Cause. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, subject to Section 4(i), if a Participant's Continuous Service terminates for any reason other than for Cause, the Participant may exercise his or her Option or SAR to the extent vested, but only within the following period of time or, if applicable, such other period of time provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate; *provided, however*, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)):

(i) three months following the date of such termination if such termination is a termination without Cause (other than any termination due to the Participant's Disability or death);

(ii) 12 months following the date of such termination if such termination is due to the Participant's Disability;

(iii) 18 months following the date of such termination if such termination is due to the Participant's death; or

(iv) 18 months following the date of the Participant's death if such death occurs following the date of such termination but during the period such Award is otherwise exercisable (as provided in (i) or (ii) above).

Following the date of such termination or death, as applicable, to the extent the Participant does not exercise such Award within the applicable Post-Termination Exercise Period (or, if earlier, prior to the expiration of the maximum term of such Award), such unexercised portion of the Award will terminate, and the Participant will have no further right, title or interest in the terminated Award, the shares of Common Stock subject to the terminated Award, or any consideration in respect of the terminated Award.

(i) Restrictions on Exercise; Extension of Exercisability. A Participant may not exercise an Option or SAR at any time that the issuance of shares of Common Stock upon such exercise would violate Applicable Law. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason other than for Cause and, at any time during the applicable Post-Termination Exercise Period: (i) the exercise of the Participant's Option or SAR would be prohibited solely because the issuance of shares of Common Stock upon such exercise would violate Applicable Law; or (ii) the immediate sale of any shares of Common Stock issued upon such exercise would violate the Company's Trading Policy, then the applicable Post-Termination Exercise Period will be extended to the last day of the calendar month that commences following the date the Award would otherwise expire, with an additional extension of the exercise period to the last day of the next calendar month to apply if any of the foregoing restrictions apply at any time during such extended exercise period, generally without limitation as to the maximum permitted number of extensions; *provided, however*, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)).

(j) Non-Exempt Employees. No Option or SAR, whether or not vested, granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, will be first exercisable for any shares of Common Stock until at least six months following the date of grant of such Award. Notwithstanding the foregoing, in accordance with the provisions of the Worker Economic Opportunity Act, any vested portion of such Award may be exercised earlier than six months following the date of grant of such Award in the event of (i) such Participant's death or Disability, (ii) a Transaction in which such Award is not assumed, continued or substituted, (iii) a Change in Control, or (iv) such Participant's retirement (as such term may be defined in the Award Agreement or another applicable agreement or, in the absence of any such definition, in accordance with the Company's then current employment policies and guidelines). This Section 4(j) is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay.

(k) Whole Shares. Options and SARs may be exercised only with respect to whole shares of Common Stock or their equivalents.

5. AWARDS OTHER THAN OPTIONS AND STOCK APPRECIATION RIGHTS.

(a) Restricted Stock Awards and RSU Awards. Each Restricted Stock Award and RSU Award will have such terms and conditions as determined by the Board. The terms and conditions of separate Restricted Stock Awards and RSU Awards need not be identical; *provided, however*, that each Restricted Stock Award Agreement and RSU Award Agreement will conform (through incorporation of the provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(i) Form of Award.

(1) Restricted Stock Awards. To the extent consistent with the Company's Bylaws, at the Board's election, shares of Common Stock subject to a Restricted Stock Award may be (i) held in book entry form subject to the Company's instructions until such shares become vested or any other restrictions lapse, or (ii) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. Unless otherwise determined by the Board, a Participant will have voting and other rights as a stockholder of the Company with respect to any shares subject to a Restricted Stock Award.

(2) RSU Awards. A RSU Award represents a Participant's right to be issued on a future date the number of shares of Common Stock that is equal to the number of restricted stock units subject to the RSU Award. As a holder of a RSU Award, a Participant is an unsecured creditor of the Company with respect to the Company's unfunded obligation, if any, to issue shares of Common Stock in settlement of such Award and nothing contained in the Plan or any RSU Award Agreement, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between a Participant and the Company or an Affiliate or any other person. A Participant will not have voting or any other rights as a stockholder of the Company with respect to a RSU Award (unless and until shares are actually issued in settlement of a vested RSU Award).

(ii) Consideration.

(1) Restricted Stock Awards. A Restricted Stock Award may be granted in consideration for (A) cash or check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of consideration (including future services) as the Board may determine and permissible under Applicable Law.

(2) RSU Awards. Unless otherwise determined by the Board at the time of grant, a RSU Award will be granted in consideration for the Participant's services to the Company or an Affiliate, such that the Participant will not be required to make any payment to the Company (other than such services) with respect to the grant or vesting of the RSU Award, or the issuance of any shares of Common Stock pursuant to the RSU Award. If, at the time of grant, the Board determines that any consideration must be paid by the Participant (in a form other than the Participant's services to the Company or an Affiliate) upon the issuance of any shares of Common Stock in settlement of the RSU Award, such consideration may be paid in any form of consideration as the Board may determine and permissible under Applicable Law.

(iii) Vesting. The Board may impose such restrictions on or conditions to the vesting of a Restricted Stock Award or RSU Award as determined by the Board. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Restricted Stock Awards and RSU Awards will cease upon termination of the Participant's Continuous Service.

(iv) Termination of Continuous Service. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason, (1) the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant under his or her Restricted Stock Award that have not vested as of the date of such termination as set forth in the Restricted Stock Award Agreement, and (2) any portion of the Participant's RSU Award that has not vested will be forfeited upon such termination and the Participant will have no further right, title or interest in the RSU Award, the shares of Common Stock issuable pursuant to the RSU Award, or any consideration in respect of the RSU Award.

(v) Settlement of RSU Awards. A RSU Award may be settled by the issuance of shares of Common Stock or cash (or any combination thereof) or in any other form of payment, as determined by the Board and specified in the RSU Award Agreement. At the time of grant, the Board may determine to impose such restrictions or conditions that delay such delivery to a date following the vesting of the RSU Award.

(b) Performance Awards. With respect to any Performance Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, the other terms and conditions of such Award, and the measure of whether and to what degree such Performance Goals have been attained will be determined by the Board. In addition, to the extent permitted by Applicable Law and set forth in the applicable Award Agreement, the Board may determine that cash or other property may be used in payment of Performance Awards. Performance Awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, the Common Stock.

(c) Other Awards. Other forms of Awards valued in whole or in part by reference to, or otherwise based on, Common Stock may be granted either alone or in addition to Awards provided for under Section 4 and the preceding provisions of this Section 5. Subject to the

provisions of the Plan, the Board will have sole and complete discretion to determine the persons to whom and the time or times at which such Other Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Awards, and all other terms and conditions of such Other Awards.

6. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of shares of Common Stock subject to the Plan pursuant to Section 2(a); (ii) the class(es) and maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(c); and (iii) the class(es) and number of shares of Common Stock and the exercise, strike or purchase price of Common Stock subject to outstanding Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive. Notwithstanding the foregoing, no fractional shares or rights for fractional shares of Common Stock will be created in order to implement any Capitalization Adjustment. The Board will determine an appropriate equivalent benefit, if any, for any fractional shares or rights to fractional shares that may be created by the adjustments referred to in the preceding provisions of this Section 6(a).

(b) Dissolution or Liquidation. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, in the event of a dissolution or liquidation of the Company, all outstanding Awards (other than Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to a forfeiture condition or the Company's right of repurchase may be reacquired or repurchased by the Company notwithstanding the fact that the holder of such Award is providing Continuous Service.

(c) Transaction. In the event of a Transaction, the provisions of this Section 6(c) will apply to each outstanding Award unless otherwise provided in the instrument evidencing the Award, in any other written agreement between a Participant and the Company or an Affiliate, or in any director compensation policy of the Company.

(i) Awards May Be Assumed. In the event of a Transaction, the Acquiring Entity may assume or continue any or all outstanding Awards or may substitute similar awards for any or all outstanding Awards (including but not limited to, awards to acquire the same consideration paid to the stockholders of the Company pursuant to the Transaction), and any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to outstanding Awards may be assigned by the Company to the Acquiring Entity. For clarity, in the event of a Transaction, the Acquiring Entity may choose to assume or continue only a portion of an outstanding Award, to substitute a similar award for only a portion of an outstanding Award, or to assume or continue, or substitute similar awards for, the outstanding Awards held by some, but not all, Participants. The terms of any assumption, continuation or substitution will be set by the Board.

(ii) Awards Held by Current Employee and Director Participants. In the event of a Transaction in which the Acquiring Entity does not assume or continue outstanding Awards or substitute similar awards for outstanding Awards, then with respect to any such Awards that have not been assumed, continued or substituted and that are held by Participants who are Employees or Directors and, in each case, whose Continuous Service has not terminated prior to the effective time of the Transaction (referred to as the "***Current Employee and Director Participants***"), the vesting (and exercisability, if applicable) of such Awards will be accelerated in full (and with respect to any such Awards that are subject to performance-based vesting conditions or requirements, vesting will be deemed to be satisfied at the greater of (x) the target level of performance or (y) the actual level of performance measured in accordance with the applicable performance goals as of the date of the Transaction) to a date prior to the effective time of such Transaction (contingent upon the effectiveness of the Transaction) as the Board determines (or, if the Board does not determine such a date, to the date that is 15 days prior to the effective time of the Transaction), and such Awards will terminate if not exercised (if applicable) at or prior to the effective time of the Transaction, and any reacquisition or repurchase rights held by the Company with respect to such Awards will lapse (contingent upon the effectiveness of the Transaction). With respect to the vesting of Awards that will accelerate upon the occurrence of a Transaction pursuant to this Section 6(c)(ii) and are settled in the form of a cash payment, such cash payment will be made no later than 30 days following the occurrence of the Transaction.

(iii) Awards Held by Persons other than Current Participants. In the event of a Transaction in which the Acquiring Entity does not assume or continue outstanding Awards or substitute similar awards for outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by persons other than Current Employee and Director Participants, such Awards will terminate if not exercised (if applicable) at or prior to the effective time of the Transaction; *provided, however*, that any reacquisition or repurchase rights held by the Company with respect to such Awards will not terminate and may continue to be exercised notwithstanding the Transaction.

(iv) Payment for Awards in Lieu of Exercise. Notwithstanding the foregoing, in the event an Award will terminate if not exercised at or prior to the effective time of a Transaction, the Board may provide that the holder of such Award may not exercise such Award but will receive a payment, in such form as may be determined by the Board, equal in value, at the effective time, to the excess, if any, of (1) the value of the property the Participant would have received upon the exercise of the Award, over (2) any exercise price payable by such holder in connection with such exercise.

(d) Involuntary Termination Upon or Following a Transaction. Except as otherwise provided in the Award Agreement, in any other written agreement between a Participant and the Company or an Affiliate, or in any director compensation policy of the Company, in

the event that an Employee or Director's Continuous Service is involuntarily terminated without Cause (including any such termination due to such Employee or Director's death or Disability) upon or within 12 months following the effective time of a Transaction, the vesting (and exercisability, if applicable) of any Assumed Awards (as defined in this Section 6(d)) held by such Employee or Director as of the date of such termination will be accelerated in full (and with respect to any such Awards that are subject to performance-based vesting conditions or requirements, vesting will be deemed to be satisfied at the greater of (x) the target level of performance or (y) the actual level of performance measured in accordance with the applicable performance goals as of the date of such termination), effective as of the date of such termination. For purposes of this Section 6(d), an "***Assumed Award***" means any outstanding Award that was assumed or continued, or any outstanding similar award that was granted in substitution for an Award, in each case by the Acquiring Entity in connection with the applicable Transaction.

(e) Appointment of Stockholder Representative. As a condition to the receipt of an Award, a Participant will be deemed to have agreed that the Award will be subject to the terms of any agreement governing a Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on the Participant's behalf with respect to any escrow, indemnities and any contingent consideration.

(f) No Restriction on Right to Undertake Transactions. The grant of any Award and the issuance of shares of Common Stock pursuant to any Award does not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, rights or options to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Common Stock or the rights thereof or which are convertible into or exchangeable for Common Stock, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

7. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in Section 7(c).

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine from time to time: (1) which of the persons eligible under the Plan will be granted Awards; (2) when and how each Award will be granted; (3) what type or combination of types of Award will be granted; (4) the provisions of each Award (which need not be identical), including the time or times when a person will be permitted to receive an issuance of Common Stock or other payment pursuant to an Award; (5) the number of shares of Common Stock or cash equivalent with respect to which an Award will be granted to each such person; and (6) the Fair Market Value applicable to an Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement, in a manner and to the extent it deems necessary or expedient to make the Plan or Awards fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest, notwithstanding the provisions in the Award Agreement stating the time at which it may first be exercised or the time during which it will vest.

(v) To prohibit the exercise of any Option, SAR or other exercisable Award during a period of up to 30 days prior to the consummation of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock, including any Transaction, for reasons of administrative convenience.

(vi) To suspend or terminate the Plan at any time. Suspension or termination of the Plan will not Materially Impair a Participant's rights under any Award granted while the Plan is in effect unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(vii) To amend the Plan in any respect the Board deems necessary or advisable; *provided, however,* that stockholder approval will be required for any such amendment to the extent required by Applicable Law. Except as provided above, a Participant's rights under any Award granted before any amendment of the Plan will not be Materially Impaired by any such amendment unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(viii) To submit any amendment to the Plan for stockholder approval.

(ix) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement,

subject to any specified limits in the Plan that are not subject to Board discretion; *provided, however*, that a Participant's rights under any Award will not be Materially Impaired by any such amendment unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(x) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(xi) To adopt such procedures and sub-plans as are necessary or appropriate to permit and facilitate participation in the Plan by, or take advantage of specific tax treatment for Awards granted to, Employees, Directors or Consultants who are foreign nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement to ensure or facilitate compliance with the laws of the relevant foreign jurisdiction).

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to another Committee or a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee, as applicable), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. Each Committee may retain the authority to concurrently administer the Plan with any Committee or subcommittee to which it has delegated its authority hereunder and may, at any time, revest in such Committee some or all of the powers previously delegated. The Board may retain the authority to concurrently administer the Plan with any Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Rule 16b-3 Compliance. To the extent an Award is intended to qualify for the exemption from Section 16(b) of the Exchange Act that is available under Rule 16b-3 of the Exchange Act, the Award will be granted by the Board or a Committee that consists solely of two or more Non-Employee Directors, as determined under Rule 16b-3(b)(3) of the Exchange Act, and thereafter any action establishing or modifying the terms of the Award will be approved by the Board or a Committee meeting such requirements to the extent necessary for such exemption to remain available.

(d) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board or any Committee in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

(e) Cancellation and Re-Grant of Awards. Except in connection with a Transaction, as provided in Section 6(a) relating to Capitalization Adjustments, or unless the stockholders of the Company have approved such an action within 12 months prior to such an event, neither the Board nor any Committee will have the authority to: (i) reduce the exercise or strike price of any outstanding Option or SAR; or (ii) cancel any outstanding Option or SAR that has an exercise or strike price greater than the then-current Fair Market Value in exchange for cash or other Awards under the Plan.

(f) Delegation to an Officer. The Board or any Committee may delegate to one or more Officers the authority to do one or both of the following: (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by Applicable Law, other types of Awards) and, to the extent permitted by Applicable Law, the terms thereof; and (ii) determine the number of shares of Common Stock to be subject to such Awards granted to such Employees; *provided, however*, that the resolutions or charter adopted by the Board or any Committee evidencing such delegation will specify the total number of shares of Common Stock that may be subject to the Awards granted by such Officer and that such Officer may not grant an Award to himself or herself. Any such Awards will be granted on the applicable form of Award Agreement most recently approved for use by the Board or the Committee, unless otherwise provided in the resolutions approving the delegation authority. Notwithstanding anything to the contrary herein, neither the Board nor any Committee may delegate to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) the authority to determine the Fair Market Value.

8. TAX WITHHOLDING.

(a) Withholding Authorization. As a condition to acceptance of any Award, a Participant authorizes withholding from payroll and any other amounts payable to such Participant, and otherwise agrees to make adequate provision for, any sums required to satisfy any U.S. federal, state, local and/or foreign tax or social insurance contribution withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise, vesting or settlement of such Award, as applicable. Accordingly, a Participant may not be able to exercise an Award even though the Award is vested, and the Company will have no obligation to issue shares of Common Stock subject to an Award, unless and until such withholding obligations are satisfied.

(b) Satisfaction of Withholding Obligations. To the extent permitted by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any U.S. federal, state, local and/or foreign tax or social insurance contribution withholding obligations relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award; (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; (v) by allowing

a Participant to effectuate a "cashless exercise" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board; or (vi) by such other method as may be set forth in the Award Agreement.

(c) No Obligation to Notify or Minimize Taxes; No Liability to Claims. Except as required by Applicable Law, the Company has no duty or obligation to any Participant to advise such Participant as to the time or manner of exercising an Award. Furthermore, the Company has no duty or obligation to warn or otherwise advise such Participant of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to any Participant and will not be liable to any Participant for any adverse tax consequences to such Participant in connection with an Award. As a condition to accepting an Award, each Participant (i) agrees to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from such Award or other Company compensation and (ii) acknowledges that such Participant was advised to consult with his or her own personal tax, financial and other legal advisors regarding the tax consequences of the Award and has either done so or knowingly and voluntarily declined to do so. Additionally, each Participant acknowledges that any Option or SAR is exempt from Section 409A only if the exercise or strike price of such Option or SAR is at least equal to the "fair market value" of the Common Stock on the date of grant of such Option or SAR as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Award. Additionally, as a condition to accepting an Option or SAR, each Participant agrees to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that the exercise or strike price of such Option or SAR is less than the "fair market value" of the Common Stock on the date of grant of such Option or SAR as subsequently determined by the Internal Revenue Service.

(d) Withholding Indemnification. As a condition to accepting an Award, in the event that the amount of the Company's and/or its Affiliate's withholding obligations in connection with such Award was greater than the amount actually withheld by the Company and/or its Affiliates, each Participant agrees to indemnify and hold the Company and/or its Affiliates harmless from any failure by the Company and/or its Affiliates to withhold the proper amount.

9. MISCELLANEOUS.

(a) Dividends and Dividend Equivalents. Dividends or dividend equivalents may not be paid or credited to any Awards.

(b) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

(c) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Awards will constitute general funds of the Company.

(d) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (*e.g.*, Board consents, resolutions or minutes) documenting the corporate action approving the grant contain terms (*e.g.*, exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(e) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to an Award unless and until (i) such Participant has satisfied all requirements for exercise of the Award pursuant to its terms, if applicable, and (ii) the issuance of the Common Stock subject to such Award is reflected in the records of the Company.

(f) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or affect the right of the Company or an Affiliate to terminate at will and without regard to any future vesting opportunity that a Participant may have with respect to any Award (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the Bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state or foreign jurisdiction in which the Company or the Affiliate is incorporated, as the case may be. Further, nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award will constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or service or confer any right or benefit under the Award or the Plan unless such right or benefit has specifically accrued under the terms of the Award Agreement and/or Plan.

(g) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company or any Affiliate is reduced (for example, and without limitation, if the Participant is an Employee and has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board may determine, to the extent permitted by Applicable Law, to (i) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment,

and (ii) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(h) Execution of Additional Documents. As a condition to accepting an Award, the Participant agrees to execute any additional documents or instruments necessary or desirable, as determined in the Plan Administrator's sole discretion, to carry out the purposes or intent of the Award, or facilitate compliance with securities and/or other regulatory requirements, in each case at the Plan Administrator's request.

(i) Electronic Delivery and Participation. Any reference herein or in an Award Agreement to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access). By accepting any Award, the Participant consents to receive documents by electronic delivery and to participate in the Plan through any on-line electronic system established and maintained by the Plan Administrator or another third party selected by the Plan Administrator. The form of delivery of any Common Stock (*e.g.*, a stock certificate or electronic entry evidencing such shares) will be determined by the Company.

(j) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other Applicable Law, and any other clawback policy that the Company adopts. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a Participant's right to voluntary terminate employment upon a "resignation for good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

(k) Securities Law Compliance. A Participant will not be issued any shares in respect of an Award unless either (i) the shares are registered under the Securities Act or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Each Award also must comply with other Applicable Law governing the Award, and a Participant will not receive such shares if the Company determines that such receipt would not be in material compliance with Applicable Law.

(l) Transfer or Assignment of Awards; Issued Shares. Except as expressly provided in the Plan or an Award Agreement, Awards may not be transferred or assigned by the Participant. After the vested shares subject to an Award have been issued, or in the case of Restricted Stock and similar awards, after the issued shares have vested, the holder of such shares is free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such shares provided that any such actions are in compliance with the provisions herein, the terms of the Trading Policy and Applicable Law.

(m) Effect on Other Employee Benefit Plans. The value of any Award, as determined upon grant, vesting or settlement, will not be included as compensation, earnings, salaries, or other similar terms used when calculating any Participant's benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

(n) Deferrals. To the extent permitted by Applicable Law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may also establish programs and procedures for deferral elections to be made by Participants. Deferrals by will be made in accordance with the requirements of Section 409A.

(o) Section 409A. Unless otherwise expressly provided for in an Award Agreement, the Plan and each Award Agreement will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A, and, to the extent not so exempt, in compliance with the requirements of Section 409A. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A is a "specified employee" for purposes of Section 409A, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A without regard to alternative definitions thereunder) will be issued or paid before the date that is six months and one day following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment may be made in a manner that complies with Section 409A, and any amounts so deferred will be paid in a lump sum on the day after such six month period elapses, with the balance paid thereafter on the original schedule.

(p) Choice of Law. This Plan and any controversy arising out of or relating to this Plan will be governed by, and construed in accordance with, the internal laws of the State of California, without regard to conflict of law principles that would result in any application of any law other than the law of the State of California.

10. COVENANTS OF THE COMPANY.

(a) Compliance with Law. The Company will seek to obtain from each regulatory commission or agency, as may be deemed to be necessary, having jurisdiction over the Plan such authority as may be required to grant Awards and to issue and sell shares of Common Stock upon exercise or vesting of the Awards; *provided, however*, that this undertaking will not require the Company to register under the Securities Act the Plan, any Award or any Common Stock issued or issuable pursuant to any such Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary or advisable for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise or vesting of such Awards unless and until such authority is obtained. A Participant is not eligible for the grant of an Award or the subsequent issuance of Common Stock pursuant to the Award if such grant or issuance would be in violation of any Applicable Law.

11. ADDITIONAL RULES FOR AWARDS SUBJECT TO SECTION 409A.

(a) Application. Unless the provisions of this Section 11 are expressly superseded by the provisions in an Award Agreement, the provisions of this Section 11 will apply and will supersede anything to the contrary set forth in the Award Agreement for a Non-Exempt Award.

(b) Non-Exempt Awards Subject to Non-Exempt Severance Arrangements. To the extent a Non-Exempt Award is subject to Section 409A due to application of a Non-Exempt Severance Arrangement, the following provisions of this Section 11(b) will apply.

(i) If the Non-Exempt Award vests in the ordinary course during the Participant's Continuous Service in accordance with the vesting schedule set forth in the Award Agreement, and does not accelerate vesting under the terms of a Non-Exempt Severance Arrangement, in no event will the shares be issued in respect of such Non-Exempt Award any later than the later of: (i) December 31st of the calendar year that includes the applicable vesting date; or (ii) the 60th day that follows the applicable vesting date.

(ii) If vesting of the Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with the Participant's Separation from Service, and such vesting acceleration provisions were in effect as of the date of grant of the Non-Exempt Award and, therefore, are part of the terms of such Non-Exempt Award as of the date of grant, then the shares will be earlier issued in settlement of such Non-Exempt Award upon the Participant's Separation from Service in accordance with the terms of the Non-Exempt Severance Arrangement, but in no event later than the 60th day that follows the date of the Participant's Separation from Service. However, if at the time the shares would otherwise be issued the Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares will not be issued before the date that is six months following the date of such Participant's Separation from Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iii) If vesting of a Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with a Participant's Separation from Service, and such vesting acceleration provisions were not in effect as of the date of grant of the Non-Exempt Award and, therefore, are not a part of the terms of such Non-Exempt Award on the date of grant, then such acceleration of vesting of the Non-Exempt Award will not accelerate the issuance date of the shares, but the shares will instead be issued on the same schedule as set forth in the Grant Notice as if they had vested in the ordinary course during the Participant's Continuous Service, notwithstanding the vesting acceleration of the Non-Exempt Award. Such issuance schedule is intended to satisfy the requirements of payment on a specified date or pursuant to a fixed schedule, as provided under Treasury Regulations Section 1.409A-3(a)(4).

(c) Treatment of Non-Exempt Awards Upon a Transaction for Employees and Consultants. The provisions of this Section 11(c) will apply and will supersede anything to the contrary set forth in the Plan with respect to the permitted treatment of any Non-Exempt Award in connection with a Transaction if the Participant was either an Employee or Consultant upon the applicable date of grant of the Non-Exempt Award.

(i) Vested Non-Exempt Awards. The following provisions will apply to any Vested Non-Exempt Award in connection with a Transaction:

(1) If the Transaction is also a Section 409A Change in Control, then the Acquiring Entity may not assume, continue or substitute the Vested Non-Exempt Award. Upon the Section 409A Change in Control, the settlement of the Vested Non-Exempt Award will automatically be accelerated and the shares will be immediately issued in respect of the Vested Non-Exempt Award. Alternatively, the Company may instead provide that the Participant will receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change in Control.

(2) If the Transaction is not also a Section 409A Change in Control, then the Acquiring Entity must either assume, continue or substitute each Vested Non-Exempt Award. The shares to be issued in respect of the Vested Non-Exempt Award will be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of the Fair Market Value of the shares made on the date of the Transaction.

(ii) Unvested Non-Exempt Awards. The following provisions will apply to any Unvested Non-Exempt Award unless otherwise determined by the Board pursuant to Section 11(e).

(1) In the event of a Transaction, the Acquiring Entity will assume, continue or substitute any Unvested Non-Exempt Award. Unless otherwise determined by the Board, any Unvested Non-Exempt Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Transaction. The shares to be issued in respect of any Unvested Non-Exempt Award will be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value of the shares made on the date of the Transaction.

(2) If the Acquiring Entity will not assume, substitute or continue any Unvested Non-Exempt Award in connection with a Transaction, then such Award will automatically terminate and be forfeited upon the Transaction with no consideration payable to any Participant in respect of such forfeited Unvested Non-Exempt Award. Notwithstanding the foregoing, to the extent permitted and in compliance with the requirements of Section 409A, the Board may in its discretion determine to elect to accelerate the vesting and settlement of the Unvested Non-Exempt Award upon the Transaction, or instead substitute a cash payment equal to the Fair Market Value of such shares that would otherwise be issued to the Participant, as further provided in Section 11(e)(ii). In the absence of such discretionary election by the Board, any Unvested Non-Exempt Award will be forfeited without payment of any consideration to the affected Participants if the Acquiring Entity will not assume, substitute or continue the Unvested Non-Exempt Awards in connection with the Transaction.

(3) The foregoing treatment will apply with respect to all Unvested Non-Exempt Awards upon any Transaction, and regardless of whether or not such Transaction is also a Section 409A Change in Control.

(d) Treatment of Non-Exempt Awards Upon a Transaction for Non-Employee Directors. The following provisions of this Section 11(d) will apply and will supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of a Non-Exempt Director Award in connection with a Transaction.

(i) If the Transaction is also a Section 409A Change in Control, then the Acquiring Entity may not assume, continue or substitute the Non-Exempt Director Award. Upon the Section 409A Change in Control, the vesting and settlement of any Non-Exempt Director Award will automatically be accelerated and the shares will be immediately issued to the Participant in respect of the Non-Exempt Director Award. Alternatively, the Company may provide that the Participant will instead receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change in Control pursuant to the preceding provision.

(ii) If the Transaction is not also a Section 409A Change in Control, then the Acquiring Entity must either assume, continue or substitute the Non-Exempt Director Award. Unless otherwise determined by the Board, the Non-Exempt Director Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Transaction. The shares to be issued in respect of the Non-Exempt Director Award will be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value made on the date of the Transaction.

(e) If the RSU Award is a Non-Exempt Award, then the provisions in this Section 11(e) will apply and supersede anything to the contrary that may be set forth in the Plan or the Award Agreement with respect to the permitted treatment of such Non-Exempt Award:

(i) Any exercise by the Board of discretion to accelerate the vesting of a Non-Exempt Award will not result in any acceleration of the scheduled issuance dates for the shares in respect of the Non-Exempt Award unless earlier issuance of the shares upon the applicable vesting dates would be in compliance with the requirements of Section 409A.

(ii) The Company explicitly reserves the right to earlier settle any Non-Exempt Award to the extent permitted and in compliance with the requirements of Section 409A, including pursuant to any of the exemptions available in Treasury Regulations Section 1.409A-3(j)(4)(ix).

(iii) To the extent the terms of any Non-Exempt Award provide that it will be settled upon a Transaction, to the extent it is required for compliance with the requirements of Section 409A, the Transaction event triggering settlement must also constitute a Section 409A Change in Control. To the extent the terms of a Non-Exempt Award provide that it will be settled upon a termination of employment or termination of Continuous Service, to the extent it is required for compliance with the requirements of Section 409A, the termination event triggering settlement must also constitute a Separation from Service. However, if at the time the shares would otherwise be issued to a Participant in connection with a "separation from service" such Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares will not be issued before the date that is six months following the date of the Participant's Separation from Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iv) The provisions in this Section 11(e) for delivery of the shares in respect of the settlement of a RSU Award that is a Non-Exempt Award are intended to comply with the requirements of Section 409A so that the delivery of the shares to the Participant in respect of such Non-Exempt Award will not trigger the additional tax imposed under Section 409A, and any ambiguities herein will be so interpreted.

12. SEVERABILITY.

If all or any part of the Plan or any Award Agreement is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of the Plan or such Award Agreement not declared to be unlawful or invalid. Any Section of the Plan or any Award Agreement (or part of such a Section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

13. TERMINATION OF THE PLAN.

The Board may suspend or terminate the Plan at any time. Unless terminated sooner by the Board, the Plan will automatically terminate on the day before the tenth anniversary of the earlier of: (i) the Adoption Date; or (ii) the Effective Date. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

14. DEFINITIONS.

As used in the Plan, the following definitions apply to the capitalized terms indicated below:

(a) "***Acquiring Entity***" means the surviving or acquiring corporation (or the surviving or acquiring corporation's parent company) in connection with a Transaction.

(b) "***Adoption Date***" means the date the Plan is first approved by the Compensation Committee.

(c) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 promulgated under the Securities Act. The Board may determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(d) "***Annual Meeting***" means the first meeting of the Company's stockholders held each calendar year at which Directors are selected.

(e) "***Applicable Law***" means any applicable securities, federal, state, foreign, material local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, listing rule, regulation, judicial decision, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body (including under the authority of any applicable self-regulating organization such as the Nasdaq Stock Market, New York Stock Exchange, or the Financial Industry Regulatory Authority).

(f) "***Award***" means any right to receive Common Stock, cash or other property granted under the Plan (including an Incentive Stock Option, a Nonstatutory Stock Option, a SAR, a Restricted Stock Award, a RSU Award, a Performance Award or any Other Award).

(g) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award. The Award Agreement generally consists of the Grant Notice and the agreement containing the written summary of the general terms and conditions applicable to the Award and which is provided to a Participant along with the Grant Notice.

(h) "***Board***" means the Board of Directors of the Company (or its designee). Any decision or determination made by the Board will be a decision or determination that is made in the sole discretion of the Board (or its designee), and such decision or determination will be final and binding on all Participants.

(i) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Award after the Adoption Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(j) "***Cause***" has the meaning ascribed to such term in any written agreement between the Participant and the Company or an Affiliate defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any crime involving fraud, dishonesty or moral turpitude; (ii) such Participant's attempted commission of, or participation in, a fraud or act of dishonesty against the Company or an Affiliate that results in (or might have reasonably

resulted in) material harm to the business of the Company or an Affiliate; (iii) such Participant's intentional, material violation of any contract or agreement between such Participant and the Company or an Affiliate, or of any statutory duty such Participant owes to the Company or an Affiliate; or (iv) such Participant's conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or might have reasonably resulted in) material harm to the business of the Company or an Affiliate; *provided, however*, that the action or conduct described in clauses (iii) and (iv) above will constitute "***Cause***" only if such action or conduct continues after the Company has provided such Participant with written notice thereof and not less than five business days to cure the same. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause will be made by the Board with respect to Participants who are Officers and by the Chief Executive Officer of the Company with respect to Participants who are not Officers. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant will have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

(k) "***Change in Control***" or "***Change of Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events; *provided, however*, to the extent necessary to avoid adverse personal income tax consequences to the Participant in connection with an Award, such transaction also constitutes a Section 409A Change in Control:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, or (C) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) the stockholders of the Company approve or the Board approves a plan of complete dissolution or liquidation of the Company, or a complete dissolution or liquidation of the Company shall otherwise occur, except for a liquidation into a parent corporation;

(iv) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(v) individuals who, on the date the Plan is adopted by the Compensation Committee, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; *provided, however*, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member will, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing or any other provision of this Plan, (A) the term Change in Control will not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant will supersede the foregoing definition with respect to Awards subject to such agreement; *provided, however*, that (1) if no definition of Change in Control (or any analogous term) is set forth in such an individual written agreement, the foregoing definition will apply; and (2) no Change in Control (or any analogous term) will be deemed to occur with respect to Awards subject to such an individual written agreement without a requirement that the Change in Control (or any analogous term) actually occur.

(l) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(m) "***Committee***" means the Compensation Committee and any other committee of Directors to whom authority has been delegated by the Board or Compensation Committee in accordance with the Plan.

(n) "***Common Stock***" means the common stock of the Company.

(o) "***Company***" means Neurocrine Biosciences, Inc., a Delaware corporation.

(p) "***Compensation Committee***" means the Compensation Committee of the Board.

(q) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(r) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Director or Consultant or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; *provided, however,* that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the Chief Executive Officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or Chief Executive Officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law. In addition, to the extent required for exemption from or compliance with Section 409A, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of "separation from service" as defined under Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder).

(s) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of at least 90% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(t) "***determine***" ***or*** "***determined***" means as determined by the Board or the Committee (or its designee) in its sole discretion.

(u) "***Director***" means a member of the Board of Directors of the Company.

(v) "***Disability***" means, with respect to a Participant, such Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Section 22(e)(3) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(w) "***Effective Date***" means the date of the Annual Meeting in 2020, provided this Plan is approved by the Company's stockholders at such meeting.

(x) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(y) "***Employer***" means the Company or the Affiliate of the Company that employs the Participant.

(z) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(aa) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(bb) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary, (ii) any employee benefit plan of the Company or any Subsidiary or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company, or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(cc) "***Fair Market Value***" means, as of any date, unless otherwise determined by the Board, the value of the Common Stock (as determined on a per share or aggregate basis, as applicable) determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value will be the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) If there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing sales price on the last preceding date for which such quotation exists.

(iii) In the absence of such exchange or market for the Common Stock, or if otherwise determined by the Board, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(dd) "***Full Value Award***" means any Award other than an Option or SAR with respect to which the exercise or strike price is at least 100% of the Fair Market Value on the date of grant of such Option or SAR.

(ee) "***Governmental Body***" means any: (i) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (ii) federal, state, local, municipal, foreign or other government; (iii) governmental or regulatory body, or quasi-governmental body of any nature (including any governmental division, department, administrative agency or bureau, commission, authority, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal, and for the avoidance of doubt, any tax authority) or other body exercising similar powers or authority; or (iv) self-regulatory organization (including the Nasdaq Stock Market, New York Stock Exchange, and the Financial Industry Regulatory Authority).

(ff) "***Grant Notice***" means the notice provided to a Participant that he or she has been granted an Award and which includes the name of the Participant, the type of Award, the date of grant of the Award, number of shares of Common Stock subject to the Award or potential cash payment right, (if any), the vesting schedule for the Award (if any) and other key terms applicable to the Award.

(gg) "***Incentive Stock Option***" means an option granted pursuant to Section 4 that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(hh) "***Materially Impair***" means that a Participant's rights under an Award will be materially adversely affected by a suspension or termination of the Plan, an amendment of the Plan, or an amendment to the terms of the Award, as applicable. For purposes of the Plan, a Participant's rights under an Award will not be deemed to have been Materially Impaired by any of the foregoing actions if the Board, in its sole discretion, determines that such action, taken as a whole, does not materially impair the Participant's rights under the Award. For example, an amendment to the terms of an Award in order to do any of the following, or that results in any of the following, will not be deemed to Materially Impair the Participant's rights under the Award: (i) an imposition of reasonable restrictions on the minimum number of shares subject to an Option that may be exercised; (ii) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iii) a change in the terms of an Incentive Stock Option in a manner that disqualifies, impairs or otherwise affects the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iv) to clarify the manner of exemption from, or to bring the Award into compliance with or qualify it for an exemption from, Section 409A; or (v) to comply with other Applicable Laws.

(ii) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K, or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(jj) "***Non-Exempt Award***" means any Award that is subject to, and not exempt from, Section 409A, including as the result of (i) a deferral of the issuance of the shares subject to the Award which is elected by the Participant or imposed by the Company, or (ii) the terms of any Non-Exempt Severance Agreement.

(kk) "***Non-Exempt Director Award***" means a Non-Exempt Award granted to a Participant who was a Director but not an Employee on the applicable grant date.

(ll) "***Non-Exempt Severance Arrangement***" means a severance arrangement or other agreement between the Participant and the Company or an Affiliate that provides for acceleration of vesting of an Award and issuance of the shares in respect of such Award upon the Participant's termination of employment or separation from service (as such term is defined in Section 409A(a)(2)(A)(i) of the Code (and without regard to any alternative definition thereunder) ("***Separation from Service***") and such severance benefit does not satisfy the requirements for an exemption from application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(4), 1.409A-1(b)(9) or otherwise.

(mm) "***Nonstatutory Stock Option***" means any option granted pursuant to Section 4 that does not qualify as an Incentive Stock Option.

(nn) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(oo) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock which is granted pursuant to the terms and conditions of Section 4.

(pp) "***Option Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Option grant. The Option Agreement includes the Grant Notice for the Option and the agreement containing the written summary of the general terms and conditions applicable to the Option and which is provided to a Participant along with the Grant Notice. Each Option Agreement will be subject to the terms and conditions of the Plan.

(qq) "***Other Award***" means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 5(c).

(rr) "***Other Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Other Award grant. Each Other Award Agreement will be subject to the terms and conditions of the Plan.

(ss) "***Own***," "***Owned***," "***Owner***," or "***Ownership***" means that a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(tt) "***Participant***" means an Employee, Director or Consultant to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

(uu) "***Performance Award***" means an Award that may vest or may be exercised, or that may become earned and paid, contingent upon the attainment during a Performance Period of certain Performance Goals and which is granted pursuant to the terms and conditions of Section 5(b) and such terms as approved by the Board.

(vv) "***Performance Criteria***" means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any one of, or combination of, the following, as determined by the Board: (1) earnings (including earnings per share and net earnings, in either case before or after any or all of: interest, taxes, depreciation and amortization, legal settlements or other income (expense), or stock-based compensation, other non-cash expenses and changes in deferred revenue); (2) total stockholder return; (3) return on equity or average stockholder's equity; (4) return on assets, investment, or capital employed; (5) stock price; (6) margin (including gross margin); (7) income (before or after taxes); (8) operating income; (9) operating income after taxes; (10) pre-tax profit; (11) operating cash flow; (12) sales, prescriptions, or revenue targets; (13) increases in revenue or product revenue; (14) expenses and cost reduction goals; (15) improvement in or attainment of working capital levels; (16) economic value added (or an equivalent metric); (17) market share; (18) cash flow; (19) cash flow per share; (20) cash burn; (21) share price performance; (22) debt reduction; (23) implementation or completion of projects or processes (including, without limitation, discovery of a pre-clinical drug candidate, recommendation of a drug candidate to enter a clinical trial, clinical trial initiation, clinical trial enrollment and dates, clinical trial results, regulatory filing submissions, regulatory filing acceptances, regulatory or advisory committee interactions, regulatory approvals, presentation of studies and launch of commercial plans, compliance programs or education campaigns); (24) customer satisfaction; (25) stockholders' equity; (26) capital expenditures; (27) debt levels; (28) financings; (29) operating profit or net operating profit; (30) workforce diversity; (31) growth of net income or operating income; (32) billings; (33) employee hiring; (34) funds from operations; (35) budget management; (36) strategic partnerships or transactions (including acquisitions, joint ventures or licensing transactions); (37) engagement of thought leaders and patient advocacy groups; (38) enhancement of intellectual property portfolio, filing of patent applications and granting of patents; (39) litigation preparation and management; and (40) any other measure of performance selected by the Board.

(ww) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award

is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of the Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated Performance Goals; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of common stock of the Company by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under the Company's bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (12) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the U.S. Food and Drug Administration or any other regulatory body. In addition, the Board retains the discretion to define the manner of calculating the Performance Criteria it selects to use for a Performance Period and to reduce or eliminate the compensation or economic benefit due upon the attainment of any Performance Goal. Partial attainment of any Performance Goal may result in payment or vesting corresponding to the degree of attainment as specified in the applicable Award Agreement or the written terms of a Performance Award.

(xx) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to vesting or exercise of, or any payment under, an Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(yy) "***Plan***" means this Neurocrine Biosciences, Inc. 2020 Equity Incentive Plan.

(zz) "***Plan Administrator***" means the person, persons, and/or third-party administrator designated by the Company to administer the day to day operations of the Plan and the Company's other equity incentive programs.

(aaa) "***Post-Termination Exercise Period***" means the period following termination of a Participant's Continuous Service within which an Option or SAR is exercisable, as specified in Section 4(h).

(bbb) "***Prior Plan***" means the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan.

(ccc) "***Prior Plan Award***" means an award granted under the Prior Plan that is outstanding as of the Effective Date.

(ddd) "***Prior Plan's Available Reserve***" means the number of shares available for the grant of new awards under the Prior Plan as of immediately following the Effective Date.

(eee) "***Prior Plan's Returning Shares***" means shares of Common Stock subject to a Prior Plan Award that following the Effective Date: (i) are not issued because such Prior Plan Award or any portion thereof expires or otherwise terminates without all of the shares covered by such Prior Plan Award having been issued; (ii) are not issued because such Prior Plan Award or any portion thereof is settled in cash; or (iii) are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required for the vesting of such shares.

(fff) "***Prospectus***" means the document containing the Plan information specified in Section 10(a) of the Securities Act.

(ggg) "***Restricted Stock Award***" means an Award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(hhh) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a Restricted Stock Award grant. The Restricted Stock Award Agreement includes the Grant Notice for the Restricted Stock Award and the agreement containing the written summary of the general terms and conditions applicable to the Restricted Stock Award and which is provided to a Participant along with the Grant Notice. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(iii) "***RSU Award***" means an Award of restricted stock units representing the right to receive an issuance of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(jjj) "***RSU Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a RSU Award grant. The RSU Award Agreement includes the Grant Notice for the RSU Award and the agreement containing the written summary of the general terms and conditions applicable to the RSU Award and which is provided to a Participant along with the Grant Notice. Each RSU Award Agreement will be subject to the terms and conditions of the Plan.

(kkk) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(lll) "***Rule 405***" means Rule 405 promulgated under the Securities Act.

(mmm) "***Section 409A***" means Section 409A of the Code and the regulations and other guidance thereunder.

(nnn) "***Section 409A Change in Control***" means a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company's assets, as provided in Section 409A(a)(2)(A)(v) of the Code and Treasury Regulations Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(ooo) "***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

(ppp) "***Share Reserve***" means the number of shares of Common Stock available for issuance under the Plan as set forth in Section 2(a).

(qqq) "***SAR***" or "***Stock Appreciation Right***" means a right to receive the appreciation on Common Stock which is granted pursuant to the terms and conditions of Section 4.

(rrr) "***SAR Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a SAR grant. The SAR Agreement includes the Grant Notice for the SAR and the agreement containing the written summary of the general terms and conditions applicable to the SAR and which is provided to a Participant along with the Grant Notice. Each SAR Agreement will be subject to the terms and conditions of the Plan.

(sss) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(ttt) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

(uuu) "***Trading Policy***" means the Company's policy permitting certain individuals to sell Company shares only during certain "window" periods and/or otherwise restricts the ability of certain individuals to transfer or encumber Company shares, as in effect from time to time.

(vvv) "***Transaction***" means a Corporate Transaction or a Change in Control.

(www) "***Unvested Non-Exempt Award***" means the portion of any Non-Exempt Award that had not vested in accordance with its terms upon or prior to the date of any Transaction.

(xxx) "***Vested Non-Exempt Award***" means the portion of any Non-Exempt Award that had vested in accordance with its terms upon or prior to the date of a Transaction.

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☑ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2019

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____to_____

Commission file number **0-22705**

NEUROCRINE BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**33-0525145**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
12780 El Camino Real, San Diego, California	**92130**
(Address of principal executive offices)	(Zip Code)

(858) 617-7600
(Registrant's telephone number, including area code)

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

Common Stock, $0.001 par value	**NBIX**	**Nasdaq Global Select Market**
(Title of each class)	(Trading Symbol)	(Name of each exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act:

None

(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of registrant's common stock held by non-affiliates of the registrant, computed by reference to the closing price as of the last business day of the registrant's most recently completed second fiscal quarter, June 30, 2019, was approximately $5,752,910,928.

As of January 31, 2020, 92,292,392 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement relating to the registrant's annual meeting of stockholders to be filed pursuant to Regulation 14A within 120 days following the end of the registrant's fiscal year ended December 31, 2019 are incorporated by reference into Part III of this Form 10-K.

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K and the information incorporated herein by reference contain forward-looking statements that involve a number of risks and uncertainties. Although our forward-looking statements reflect the good faith judgment of our management, these statements can only be based on facts and factors currently known by us. Consequently, these forward-looking statements are inherently subject to risks and uncertainties, and actual results and outcomes may differ materially from results and outcomes discussed in the forward-looking statements.

Forward-looking statements can be identified by the use of forward-looking words such as "believes," "expects," "hopes," "may," "will," "plan," "intends," "estimates," "could," "should," "would," "continue," "seeks," "pro forma," or "anticipates," or other similar words (including their use in the negative), or by discussions of future matters such as the development of new products, technology enhancements, possible changes in legislation and other statements that are not historical. These statements include but are not limited to statements under the captions "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business," as well as other sections in this report. You should be aware that the occurrence of any of the events discussed under the heading in Part II titled "Item 1A. Risk Factors" and elsewhere in this report could substantially harm our business, results of operations and financial condition and that if any of these events occurs, the trading price of our common stock could decline and you could lose all or a part of the value of your shares of our common stock.

The cautionary statements made in this report are intended to be applicable to all related forward-looking statements wherever they may appear in this report. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date of this report. Except as required by law, we assume no obligation to update our forward-looking statements, even if new information becomes available in the future.

Item 1. Business

Overview

We are a commercial-stage biopharmaceutical company focused on discovering and developing innovative and life-changing treatments for patients with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. We specialize in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. Currently, we are primarily focused on the commercialization of INGREZZA® (valbenazine) in the United States, or U.S., our first U.S. Food and Drug Administration, or FDA, approved product.

In April 2017, we received FDA approval of our first product, INGREZZA, for the treatment of adults with tardive dyskinesia, or TD. Shortly after receiving FDA approval, we began commercializing INGREZZA in the U.S. using a specialty sales force primarily focused on educating physicians who treat patients with TD, including psychiatrists and neurologists.

In addition to our first marketed product, our collaboration partner AbbVie Inc., or AbbVie, received approval of ORILISSA® (elagolix) for the management of moderate to severe endometriosis pain in women from the FDA in July 2018 and Health Canada in October 2018. We receive royalties at tiered percentage rates on any net sales of ORILISSA.

Our late-stage pipeline includes opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients, elagolix for the treatment of heavy menstrual bleeding, or HMB, associated with uterine fibroids in women, valbenazine for the treatment of chorea in adult patients with Huntington's disease, or HD, and NBIb-1817 (VY-AADC) for the treatment of advanced Parkinson's disease patients with motor fluctuations that are refractory to medical management. Our product candidates for uterine fibroids and advanced Parkinson's disease are partnered with AbbVie and Voyager Therapeutics, Inc., or Voyager, respectively.

In the third quarter of 2019, the FDA accepted our new drug application, or NDA, for opicapone for the treatment of Parkinson's disease with a Prescription Drug User Fee Act, or PDUFA, target action date of April 26, 2020. Also, in the third quarter of 2019, the FDA accepted AbbVie's NDA for elagolix for the treatment of uterine fibroids with a PDUFA target action date in the second quarter of 2020.

Our early-stage clinical pipeline includes crinecerfont (NBI-74788) for the treatment of congenital adrenal hyperplasia, or CAH, elagolix for the treatment of polycystic ovary syndrome, or PCOS, in women and a vesicular monoamine transporter 2, or VMAT2, inhibitor with potential use in the treatment of neurologic and psychiatric disorders. Our product candidate for PCOS is partnered with AbbVie.

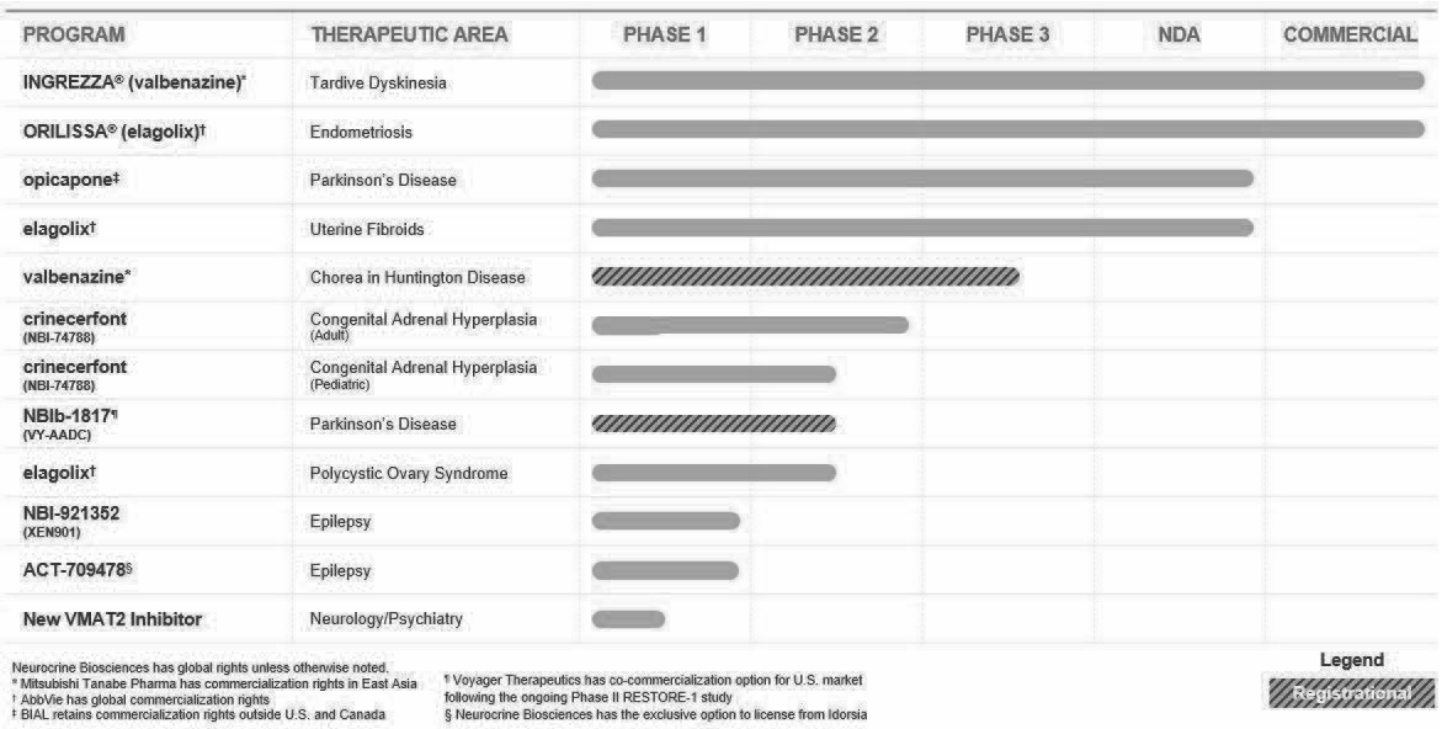
In December 2019, we entered into a license and collaboration agreement with Xenon Pharmaceuticals Inc, or Xenon, a clinical-stage biopharmaceutical company. Pursuant to the terms of the agreement, we acquired an exclusive license to NBI-921352 (XEN901), a clinical-stage candidate with potential in epilepsy.

In January 2020, we announced a collaboration and optional licensing agreement with Idorsia Pharmaceuticals Ltd, or Idorsia, granting us an option to license ACT-709478, a potent, selective, orally active and brain penetrating T-type calcium channel blocker, in clinical development for the treatment of a rare pediatric epilepsy. The option also includes a research collaboration to discover, identify and develop additional novel T-type calcium channel blockers.

Going forward, we expect to augment our product pipeline by acquiring, through license or otherwise, additional drug candidates for research and development, or R&D, and potential commercialization.

Product Pipeline

The following table summarizes our approved products and our most advanced product candidates currently in clinical development and is followed by detailed descriptions of each program:



INGREZZA (valbenazine) – VMAT2 Inhibitor

VMAT2 is a protein concentrated in the human brain that is essential for the transmission of nerve impulses between neurons. VMAT2 is primarily responsible for packaging and transporting monoamines (dopamine, norepinephrine, serotonin and histamine) in neurons. Specifically, dopamine enables neurotransmission among nerve cells that are involved in voluntary and involuntary motor control. Disease states such as TD, Tourette syndrome, Huntington's chorea, schizophrenia, and tardive dystonia are characterized in part by a hyperdopaminergic state in the brain, and modulation of neuronal dopamine levels may provide symptomatic benefits for patients with these conditions, among others.

INGREZZA as a treatment for tardive dyskinesia. TD is defined by hyperkinetic involuntary movements which arise after months or years of treatment with dopamine receptor blocking agents, e.g. antipsychotics used for treating schizophrenia, bipolar disorder, and depression, and Reglan® (metoclopramide) for nausea and vomiting and gastric emptying in patients with gastroparesis. Features of TD may include grimacing, tongue protrusion, lip smacking, puckering and pursing of the lips, and rapid eye blinking. Rapid movements of the extremities may also occur. The impact on daily function and the quality of life for individuals suffering from TD can be substantial. While the prevalence rates of TD can vary greatly in accordance with the population being studied, it is estimated that approximately 500,000 individuals are affected by TD in the U.S. alone (Kantar Health).

On April 11, 2017, INGREZZA became the first FDA-approved drug for the treatment of TD. INGREZZA provides a once-daily dosing treatment option for TD causing reversible reduction of dopamine release at the nerve terminal by selectively inhibiting the pre-synaptic VMAT2. In vitro, INGREZZA is a highly selective inhibitor of human VMAT2 showing little or no affinity for VMAT1, other receptors, such as dopamine D2 receptors, other transporters or ion channels. INGREZZA for TD has two dosing options (40 mg and 80 mg) with 40 mg taken for the first seven days of treatment with an option of 40 mg or 80 mg thereafter depending on a patient's dosing needs. INGREZZA was generally well tolerated during our clinical trials with no apparent drug-drug interactions with the most common emergent adverse event being mild and transient somnolence.

Valbenazine as an investigational treatment for chorea associated with Huntington disease. HD is a hereditary progressive neurodegenerative disorder, in which neurons within the brain break down, resulting in motor, cognitive and psychiatric symptoms. Symptoms generally appear between the ages of 30 to 50 and worsen over a 10 to 25-year period. Many patients with HD experience chorea, a troublesome involuntary movement disorder, in which patients develop abnormal, abrupt or irregular movements. Chorea can affect various body parts, and interfere with speech, swallowing, posture and gait. HD is estimated to affect approximately 30,000 adults in the U.S., with more than 200,000 at risk of inheriting the disease (NORD).

We are currently conducting KINECT-HD, a multi-center randomized, double-blind, placebo-controlled Phase III study to evaluate the efficacy, safety and tolerability of valbenazine for the treatment of chorea in patients with HD.

elagolix – GnRH Antagonist

GnRH is the endogenous peptide that binds to the GnRH receptor and stimulates the secretion of the pituitary hormones that are responsible for sex steroid production and normal reproductive function. Researchers have found that chronic administration of GnRH

agonists, after initial stimulation, reversibly shuts down this transmitter pathway and is clinically useful in treating hormone-dependent diseases such as endometriosis and uterine fibroids.

Orally active, nonpeptide GnRH antagonists potentially offer several advantages over injectable GnRH peptide drugs, including rapid onset of hormone suppression without hormonal flare. Also, injection site reactions commonly observed in peptide depots are avoided and dosing can be rapidly discontinued if necessary – a clinical management option not available with long-acting depot injections. Additionally, by using GnRH antagonists, it may be possible to alter the level of pituitary GnRH suppression thereby titrating circulating hormone levels.

In the second quarter of 2010, we entered into an exclusive worldwide collaboration with AbbVie to develop and commercialize GnRH compounds for women's and men's health indications. Under the terms of the agreement, AbbVie is responsible for all development, marketing and commercialization costs and has responsibility for all regulatory interactions with the FDA related to elagolix and other GnRH compounds covered by the collaboration. Following our entry into the collaboration, AbbVie undertook the development of elagolix in uterine fibroids.

Endometriosis. Endometriosis is associated with a multitude of symptoms, some of the most common of which include pain related both to menstruation (dysmenorrhea) and sexual intercourse (dyspareunia) as well as chronic pelvic pain throughout the menstrual cycle, infertility, and menorrhagia, among many others. The wide range of symptoms associated with endometriosis serves to complicate and delay diagnosis due to the significant overlap of symptoms with the disease profiles of other conditions. The World Endometriosis Research Foundation estimates that there are over 170 million women worldwide who suffer from endometriosis, including approximately 7.5 million women in the U.S. alone. We believe that the availability of an oral treatment lacking the side effect profile of the currently available peptide GnRH agonists may be a desirable alternative to current pharmaceutical therapies and ultimately encourage a significantly higher treatment rate.

In the second and third quarter of 2018, respectively, AbbVie announced FDA and Health Canada approval of ORILISSA for the management of endometriosis with associated moderate to severe pain in women. AbbVie began commercialization of ORILISSA in the U.S. in the third quarter of 2018.

Uterine Fibroids. Uterine fibroids are benign hormonally responsive tumors that form in the wall of the uterus. They are the most common solid tumor in women with a prevalence rate of at least 25% (American College of Obstetricians and Gynecologists). While many women do not have symptoms, depending on the size, location and number, uterine fibroids can cause symptoms such as: longer, more frequent or heavy menstrual bleeding, menstrual pain, vaginal bleeding at time other than menstruation, pain in the abdomen or lower back, pain during sex, difficulty urinating, frequent urination, constipation or rectal pain. Due to the severity of symptoms, treatment sometimes requires surgery, including the removal of the uterus. In fact, uterine fibroids is a leading indication for hysterectomy in the U.S., with approximately 250,000 hysterectomies performed each year related to uterine fibroids (Whiteman *et al AJOG* 2008, *198,* e1). We believe that a safe and effective oral therapy would be a preferred treatment regimen rather than surgical intervention.

In the third quarter of 2019, the FDA accepted AbbVie's NDA for elagolix for the treatment of HMB associated with uterine fibroids in women with a PDUFA target action date in the second quarter of 2020.

Polycystic Ovary Syndrome. PCOS is one of the most common hormonal disorders among women of reproductive age, affecting approximately 3.5 million women in the U.S. PCOS occurs when the ovaries or adrenal glands produce more male hormones (androgens) than normal. Women with PCOS experience irregular menstrual periods, infertility, pelvic pain, weight gain, acne and excess hair growth on the face, chest, stomach and thighs. There is no cure for PCOS, and treatment options are limited. If left untreated, PCOS can lead to certain cancers, diabetes and coronary artery disease. AbbVie initiated a Phase II study of elagolix in patients with polycystic ovary syndrome in mid-2019. The study is designed to evaluate whether there is a potential impact on disordered hormonal dynamics in women with PCOS.

opicapone – Catechol-O-methyltransferase Inhibitor

Catechol-O-methyltransferase, or COMT, inhibitors are utilized to prolong the duration of effect of levodopa, the primary treatment option for Parkinson's disease patients. Administration of levodopa often results in adequate control of Parkinson's symptoms, also referred to as "on-time," however, there are periods of the day where the effects of levodopa wear off and motor symptoms worsen. These periods are considered "off-time." Opicapone is a novel, once-daily, peripherally acting, highly selective COMT inhibitor utilized as adjunct therapy to levodopa/carbidopa in patients with Parkinson's disease experiencing motor fluctuations. Opicapone works through decreasing the conversion rate of levodopa into 3-O-methyldopa, thereby reducing the off-time period in patients with Parkinson's disease and extending the on-time period.

In the first quarter of 2017, we entered into an exclusive license agreement with BIAL – Portela & Ca, S.A., or BIAL, for the development and commercialization of opicapone for the treatment of human diseases and conditions, including Parkinson's disease, in the U.S. and Canada. Under the terms of the agreement, we will be responsible for the development and commercialization of opicapone in the U.S. and Canada.

Parkinson's Disease. Parkinson's disease is a chronic and progressive movement disorder that affects approximately one million people in the U.S. The disease is characterized by a loss of neurons in the substantia nigra, the area of the brain where dopamine is produced. Dopamine production and synthesis is necessary for coordination and movement. As Parkinson's disease progresses, dopamine production steadily decreases resulting in tremor, slowed movement (bradykinesia), impaired posture and balance, and speech and writing problems. There is no present cure for Parkinson's disease and management consists of controlling the motor symptoms primarily through administration of levodopa therapies. While this improves the control of Parkinson's disease symptoms,

as the disease progresses the beneficial effects of levodopa begin to wear off, symptoms worsen, and patients experience motor fluctuations. These motor fluctuations are improved with the addition of a COMT inhibitor to levodopa.

In the third quarter of 2016, BIAL announced the European Medicines Agency's, or EMA's, approval of ONGENTYS® (opicapone) as an adjunct therapy to preparations of levodopa/DOPA decarboxylase inhibitors in adult patients with Parkinson's disease and end-of-dose motor fluctuations who cannot be stabilized on those combinations.

In the third quarter of 2019, the FDA accepted our NDA for opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients with a PDUFA target action date of April 26, 2020. FDA approval of opicapone for Parkinson's disease would trigger a milestone payment of $20.0 million, payable by us to BIAL.

crinecerfont (NBI-74788) – Corticotropin-Releasing Factor Receptor$_1$ Antagonist

Corticotropin-releasing factor$_1$, or CRF$_1$, is a hypothalamic hormone released directly into the hypophyseal portal vasculature which acts on the CRF$_1$ receptor, a G protein-coupled receptor, or GPCR, in the anterior pituitary to stimulate the release of adrenocorticotropin hormone, or ACTH. The primary role of ACTH is the stimulation of the synthesis and release of adrenal steroids including cortisol. Cortisol from the adrenals have a negative feedback role at the level of the hypothalamus that decreases CRF$_1$ release as well as at the level of the pituitary to inhibit the release of ACTH. This tight control loop is known as the hypothalamic-pituitary-adrenal axis. Blockade of CRF$_1$ receptors at the pituitary has been shown to decrease the release of ACTH and subsequently attenuate the production and release of adrenal steroids.

Classic Congenital Adrenal Hyperplasia. Classic CAH is a group of autosomal recessive genetic disorders that affects approximately 20,000-30,000 people in the U.S. and results in an enzyme deficiency altering the production of adrenal steroids. Because of this deficiency, the adrenal glands have little to no cortisol biosynthesis resulting in a potentially life-threatening condition. If left untreated, classic CAH can result in salt wasting, dehydration, and eventually death. Even with cortisol replacement, persistent elevation of ACTH from the pituitary gland results in excessive androgen levels leading to virilization of females including precocious puberty, menstrual irregularity, short stature, hirsutism, acne and fertility problems.

Corticosteroids are the current standard of care for classic CAH and are used chronically to both correct the endogenous cortisol deficiency and to reduce the excessive ACTH levels and androgen excess. However, the dose and duration of steroid use required to suppress ACTH is well above the normal physiological level of cortisol; resulting in metabolic syndrome, bone loss, growth impairment, and Cushing's syndrome as common and serious side effects.

Crinecerfont is a potent, selective, orally active, CRF$_1$ receptor antagonist as demonstrated in a range of in vitro and in vivo assays. Blockade of CRF$_1$ receptors at the pituitary has been shown to decrease the release of ACTH, which in turn decreases the production of adrenal steroids including androgens, and potentially the symptoms associated with classic CAH. Lower ACTH levels would also reduce the amount of exogenous corticosteroid necessary for classic CAH patients to thrive avoiding the side-effects currently associated with excessive steroid therapy.

We conducted a Phase I single ascending dose study of crinecerfont in healthy volunteers in 2017. Based on the positive results of the Phase I study, we initiated a Phase II clinical study of crinecerfont in adult patients with classic CAH, which was designed to be an open-label, pharmacokinetic/pharmacodynamic study assessing key pharmacodynamic biomarkers including ACTH, 17-hydroxyprogesterone (17-OHP), androgen, and cortisol levels collected the morning following bedtime dosing on Day 1 and Day 14.

In the first quarter of 2019, positive interim results from the ongoing Phase II study demonstrated a reduction of at least 50% from baseline in 17-hydroxyprogesterone (17-OHP) and ACTH levels in more than 50% of CAH patients treated with crinecerfont for 14 days. Meaningful reductions were also observed in other biomarkers, including androstenedione. Crinecerfont was shown to be well tolerated with no serious adverse events reported to date. We plan to start a global registration study in mid-2020 for crinecerfont in adult patients with CAH.

In the third quarter of 2019, we initiated an adaptive, Phase II proof-of-concept study to evaluate the safety, tolerability, pharmacokinetics and pharmacodynamics of crinecerfont in pediatric patients with classic CAH.

We have been granted orphan drug designation for crinecerfont in the treatment of classic CAH in the U.S. and the EU Orphan drug designation is granted by the FDA to medicines intended for the treatment, diagnosis or prevention of rare diseases or disorders that affect fewer than 200,000 people in the U.S. and provides sponsors with development and commercial incentives for such designated compounds and medicines.

NBIb-1817 – AADC Gene Replacement Therapy

NBIb-1817 is an investigational gene therapy designed to deliver the AADC gene directly into neurons of the putamen where dopamine receptors are located, bypassing the substantia nigra neurons and enabling the neurons of the putamen to produce the AADC enzyme to convert levodopa into dopamine. With this approach, NBIb-1817 has the potential to durably enhance the conversion of levodopa to dopamine and provide clinically meaningful improvements by restoring motor function in patients and improving symptoms following a single administration.

NBIb-1817 is currently being evaluated in the Phase II RESTORE-1 study in patients who have been diagnosed with Parkinson's disease for at least four years, are not responding adequately to oral medications, and have at least three hours of OFF-time during the day, as measured by a validated self-reported patient diary. Based upon feedback received from the FDA, we plan to implement an amended protocol for the RESTORE-1 study by mid-2020. Further, we plan to start the RESTORE-II registration study in the second half of 2020.

We are developing NBIb-1817 with Voyager as part of a strategic collaboration announced in January 2019.

NBI-921352 – Nav1.6 Sodium Channel Inhibitor

NBI-921352 is a potent, highly selective Nav1.6 sodium channel inhibitor being developed to treat pediatric patients with SCN8A-DEE and other potential indications, including adult focal epilepsy.

SCN8A-DEE is a rare, extremely severe, single-gene epilepsy caused by mutations in the SCN8A gene that activates Nav1.6, the most highly expressed sodium channel in the excitatory pathways of the central nervous system, or CNS. Children born with SCN8A-DEE typically start experiencing seizures between birth and 18 months of age, and most have multiple seizures per day. Other symptoms include learning difficulties, muscle spasms, low or high muscle tone, poor coordination, developmental delay, and features similar to autism. An estimated 10% of people with SCN8A are reported to have experienced sudden unexpected death in epilepsy. The prevalence of SCN8A-DEE is estimated to be 1% of all developmental and epileptic encephalopathies (Larsen et al, Neurology 2015, 84, 480). As SCN8A mutations were discovered only recently (i.e., in 2012), the number of SCN8A-DEE cases is expected to increase as awareness of and access to genetic surveillance increases. SCN8A-DEE is generally refractory to anti-epilepsy treatments.

The safety, tolerability and pharmacokinetics of NBI-921352 have been evaluated in a randomized, double-blind, placebo-controlled Phase I study using a powder-in-capsule formulation of NBI-921352 in healthy adult subjects. Xenon has developed a pediatric-specific, granule formulation of NBI-921352, and completed juvenile toxicology studies to support pediatric development activities. We plan to file an investigational new drug application, or IND, in mid-2020 to initiate a Phase II clinical study for NBI-921352 in pediatric patients with SCN8A-DEE.

We are developing NBI-921352 with Xenon as part of a strategic collaboration announced in December 2019.

ACT-709478 – T-type Calcium Channel Blocker

ACT-709478 is a potent, selective, orally active and brain penetrating T-type calcium channel blocker for potential use in certain forms of generalized epilepsy.

In January 2020, we announced a collaboration and optional licensing agreement with Idorsia, granting us an option to license ACT-709478, in clinical development for the treatment of a rare pediatric epilepsy. The option also includes a research collaboration to discover, identify and develop additional novel T-type calcium channel blockers.

New VMAT2 Inhibitor

We have filed an IND and completed dosing in the single ascending dose and multiple ascending dose portion of a Phase I study designed to assess initial safety, tolerability, and pharmacokinetics of a novel, internally discovered VMAT2 inhibitor. This compound has the potential to be used in the treatment of several neurology and/or psychiatry disorders. Studies assessing the initial safety, tolerability, and pharmacokinetics of this compound are ongoing.

Research Programs

Our R&D focus is on addressing diseases and disorders of the central nervous and endocrine systems, which include therapeutic categories ranging from hypothalamic-pituitary-adrenal disorders to stress-related disorders and neurological/neuropsychiatric diseases. CNS and endocrinology drug therapies are among the largest therapeutic categories, accounting for over $110 billion in drug sales in the U.S. alone according to IQVIA (2018).

CNS and Neuroendocrine Disorders (Targeted by GPCRs, Solute Carrier Proteins, and Ion Channels)

GPCRs are the largest known gene superfamily of the human genome. Greater than 30% of all marketed prescription drugs act on GPCRs; which makes this class of proteins historically the most successful therapeutic target family. However, only a small fraction of the GPCR gene superfamily has been exploited. Ion channels appear to be represented by approximately 400 genes in the human genome and are currently the targets for approximately 8% (MAbs. 2019 Feb-Mar; 11(2): 265–296) of the current marketed drugs. We believe that next-generation therapies derived from targeting GPCRs and ion channels will be discovered through the understanding of the complex relationships of drug/receptor interactions and their subsequent impact on efficacy, downstream signaling networks and regulation.

Our GPCR research platform integrates drug discovery research efforts with a suite of assays and assay systems and automated analytical techniques. This process, now also applied to solute carrier proteins and ion channels, provides an unbiased profile of pharmacological protein/ligand interactions coupled with *in vivo* efficacy using discrete animal models allowing for rapid discovery of initial leads and advancement into preclinical and clinical development. Importantly, this design cycle is not limited to GPCRs, solute carrier proteins, or ion channel targets, but can be utilized for other recently identified proteins that play a role in human disease where current treatments or therapies are either inadequate or nonexistent.

Business Strategy

Our mission is to improve the lives of patients living with serious and under-addressed neurological and endocrine-related diseases and disorders. The following are the key elements of our business strategy:

Commercializing Our Product Portfolio. In April 2017, we received approval from the FDA for INGREZZA for the treatment of TD. We market INGREZZA for TD in the U.S. The commercial launch of INGREZZA occurred on May 1, 2017. We have built a

specialty sales force in the U.S. of approximately 250 experienced sales professionals. This specialty sales force focuses on promotion to physicians who treat TD patients, primarily neurologists and psychiatrists. Our commercial team is comprised of experienced professionals in marketing, access and reimbursement, managed markets, market research, commercial operations, and sales force planning and management. In addition, our commercial infrastructure includes capabilities in manufacturing, medical affairs, quality control and compliance. We intend to retain commercial rights to certain products, including INGREZZA, that we can effectively and efficiently develop, secure regulatory approval and commercialize, which includes products with a concentrated prescriber base and well-defined patient population that can be accessed with an efficient patient and prescriber outreach program.

Advancing Life-Changing Discoveries in Neurology, Neuro-Endocrinology and Psychiatry. We believe that by continuing to advance and extend our product pipeline, we can mitigate some of the clinical development risks associated with drug development. We currently have multiple programs in various stages of research and development, including symptomatic disease modifying and curative treatments. We take a portfolio approach to managing our pipeline that balances the size of the market opportunities with clear and defined clinical and regulatory paths to approval. By doing so, we focus our internal development resources on innovative therapies with improved probabilities of technical and commercial success.

Discovering Novel Medicines to Address Unmet Patient Needs. We seek to identify and validate new medicines on novel targets for internal development or collaboration. We believe the creativity and productivity of our discovery research group will continue to be a critical component for our continued success.

Acquiring Rights to Commercial Products, Drug Development Candidates and Technologies. We plan to continue to selectively acquire rights to programs at all stages of development and commercial products to take advantage of our drug development and commercial capabilities.

Corporate Collaborations and Strategic Alliances

One of our business strategies is to utilize strategic alliances to enhance our development and commercialization capabilities. The following is a summary of our significant collaborations/alliances:

AbbVie. In June 2010, we announced an exclusive worldwide collaboration with AbbVie to develop and commercialize GnRH Compounds for women's and men's health. Under the terms of the agreement, AbbVie is responsible for all development, marketing and commercialization costs. We are entitled to a percentage of worldwide sales of GnRH Compounds for the longer of ten years or the life of the related patent rights. AbbVie may terminate the collaboration at its discretion upon 180 days written notice to us.

BIAL. In February 2017, we entered into an exclusive license agreement with BIAL for the development and commercialization of opicapone for the treatment of human diseases and conditions, including Parkinson's disease, in the U.S. and Canada. Under the terms of the agreement, we are responsible for the management and cost of all opicapone development and commercialization activities in the U.S. and Canada. BIAL will be entitled to a percentage of net sales (with a floor minimum) in exchange for the manufacture and supply of opicapone drug product. Either party may terminate the agreement earlier if the other party materially breaches the agreement and does not cure the breach within a specified notice period, or upon the other party's insolvency. BIAL may terminate the agreement if we fail to use commercially reasonable efforts or fail to file an NDA for a licensed product by a specified date or under certain circumstances involving a change of control.

Voyager. We entered into a collaboration and license agreement with Voyager, a clinical-stage gene therapy company, which became effective in March 2019. The agreement is focused on the development and commercialization of four programs using Voyager's proprietary gene therapy platform. The four programs consist of the following: NBIb-1817 for Parkinson's disease, the Friedreich's ataxia program and two undisclosed programs.

Pursuant to development plans agreed to by us and Voyager, unless Voyager exercises its co-development and co-commercialization rights as provided for in the agreement, we will be responsible for all development costs. Further, upon the occurrence of a specified event for each program, we will assume responsibility for the development, manufacturing, and commercialization activities of such program.

In June 2019, we entered into an amendment to the collaboration and license agreement with Voyager. Under the terms of the amendment, we obtained rights outside the U.S. to the Friedreich's ataxia program in connection with the early return of those rights to Voyager pursuant to a restructuring of Voyager's gene therapy relationship with Sanofi Genzyme.

We may terminate the collaboration and license agreement with Voyager upon 180 days written notice to Voyager prior to the first commercial sale of any collaboration product or upon 1 year after the date of notice if such notice is provided after the first commercial sale of any collaboration product. Unless terminated earlier, the agreement will continue in effect until the expiration of the last to expire royalty term with respect to any collaboration product or the last expiration or termination of any exercised co-development and co-commercialization rights by Voyager as provided for in the agreement.

Xenon. In December 2019, we entered into a license and collaboration agreement with Xenon, a clinical-stage biopharmaceutical company. Pursuant to the terms of the agreement, we acquired an exclusive license to NBI-921352, a clinical stage selective Nav1.6 sodium channel inhibitor with potential in SCN8A-DEE and other forms of epilepsy. We also acquired an exclusive license to pre-clinical compounds for development, including selective Nav1.6 and dual Nav1.2/1.6 inhibitors. The agreement also includes a multi-year research collaboration to discover, identify and develop additional Nav1.6 and Nav1.2/1.6 inhibitors. Unless earlier terminated, the term of the license and collaboration agreement will continue on a product-by-product and country-by-country basis until expiration of the royalty term for such product in such country. Upon the expiration of the royalty term for a particular product and country, the exclusive license granted by Xenon to us with respect to such product and country will become fully paid, royalty free, perpetual and irrevocable. We may terminate the license and collaboration agreement by providing at least 90 days' written notice, provided that such unilateral termination will not be effective for certain products until we have used commercially reasonable efforts

to complete certain specified clinical studies. Either party may terminate the agreement in the event of a material breach in whole or in part, subject to specified conditions.

Mitsubishi Tanabe Pharma Corporation. In March 2015, we entered into a collaboration and license agreement with Mitsubishi Tanabe Pharma Corporation , or MTPC, for the development and commercialization of INGREZZA for movement disorders in Japan and other select Asian markets. Under the terms of the agreement, MTPC is responsible for all development, marketing and commercialization costs in Japan and other select Asian markets, with the exception of a single Huntington's chorea study to be performed by us. We will be entitled to a percentage of sales of INGREZZA in Japan and other select Asian markets for the longer of ten years or the life of the related patent rights. MTPC may terminate the agreement at its discretion upon 180 days' written notice to us. In such event, all INGREZZA product rights for Japan and other select Asian markets would revert to us.

In November 2019, we initiated the KINECT-HD study, a placebo-controlled Phase III study of valbenazine in adult Huntington's disease patients with chorea.

Idorsia. In January 2020, we announced a collaboration and optional licensing agreement with Idorsia, granting us an option to license ACT-709478, a potent, selective, orally active and brain penetrating T-type calcium channel blocker, in clinical development for the treatment of a rare pediatric epilepsy. The option also includes a research collaboration to discover, identify and develop additional novel T-type calcium channel blockers.

Intellectual Property

We actively seek to protect our products and product candidates and related inventions and improvements that we consider important to our business. We own a portfolio of U.S and non-U.S. patents and patent applications and have licensed rights to a number of U.S. and non-U.S. patents and patent applications. Our owned and licensed patents and patent applications cover or relate to our products and product candidates, including certain formulations, used to treat particular conditions and methods of administration, drug delivery technologies and delivery profiles and methods of manufacturing.

We own or have licensed rights to the following U.S. patents relating to INGREZZA and our other products and product candidates in our pipeline (in addition to non-U.S. patents and certain patents covering our early-stage product candidates):

- INGREZZA, our highly selective VMAT2 inhibitor for the treatment of TD, is covered by three issued U.S. patents that are listed in the FDA's Orange Book: U.S. Patent No. 8,039,627, which expires in 2029 (not including a potential patent term extension of up to an additional two years), U.S. Patent No. 8,357,697, which expires in 2027, and U.S. Patent No. 10,065,952, which expires in 2036.
- ORILISSA, our small molecule GnRH antagonist for the treatment of endometriosis, is covered by six issued U.S. patents that are listed in the FDA's Orange Book: U.S. Patent Nos. 6,872,728, 7,179,815 and 7,462,625 expire in 2021 (not including potential patent term extensions of up to an additional five years) while U.S. Patent Nos. 7,056,927, 7,176,211 and 7,419,983 expire in 2024 (not including potential patent term extensions of up to an additional five years).
- Opicapone, a highly selective COMT inhibitor for Parkinson's disease, is covered by U.S. Patent No. 8,168,793, among others, which expires in 2029 (not including a potential patent term extension of up to an additional five years).
- Crinecerfont, our CRF1 antagonist for the treatment of CAH, is covered by U.S. Patent No. 6,586,456, which expires in 2020, and U.S. Patent No. 8,420,679, which expires in 2022 (both patents are expected to expire prior to marketing approval for crinecerfont and thus be ineligible for patent term extension).
- NBIb-1817, our AADC gene therapy for the treatment of Parkinson's disease, is covered by patent applications that have an earliest priority date in 2017. The terms of any patents that may issue from these patent applications should be capable of continuing until 2038 in most jurisdictions without taking into account any patent term adjustment or extension regime.
- NBI-921352, an inhibitor of the Nav1.6 voltage-gated sodium channel for the treatment of epilepsy, is covered by U.S. Patent No. US 10,246,453 which expires in 2037 (not including a potential patent term extension of up to an additional five years).
- ACT-709478, an inhibitor of T-type calcium channels for the treatment of epilepsy, is covered by U.S. Patent No. US 9,932,314 which expires in 2035 (not including a potential patent term extension of up to an additional five years).
- Our new VMAT2 inhibitor for the treatment of neurological and psychiatry disorders is covered by a patent application that has an earliest priority date in 2017. The terms of any patent that may issue from this patent application should be capable of continuing until 2038 in most jurisdictions without taking into account any patent term adjustment or extension regime.

In addition to the potential patent term extensions referenced above, the products and product candidates in our pipeline may be subject to additional terms of exclusivity that we might obtain by virtue of later filed patent applications.

Separately, the U.S., the European Union, or EU, and Japan all provide data and marketing exclusivity for new medicinal compounds. If this protection is available, no competitor may use the original applicant's data as the basis of a generic marketing application during the period of data and marketing exclusivity, which is measured from the date of marketing approval by the FDA or corresponding foreign regulatory authority. This period of exclusivity is generally five years in the U.S., six years in Japan and ten years in the EU, except that for biologics such as NBIb-1817, this period of exclusivity in the U.S. is twelve years under the Biologics Price Competition and Innovation Act. In addition, if granted orphan drug designation, certain of our product candidates, including crinecerfont, may also be eligible for market exclusivity in the U.S. and EU for seven years and ten years, respectively.

Manufacturing and Supply

We currently rely on, and intend to continue to rely on, third-party manufacturers for the production of INGREZZA and our product candidates. In addition, we rely on third-party service providers to perform a variety of functions related to the packaging, storage and distribution of INGREZZA. We believe our outsource manufacturing strategy enables us to direct our financial resources to the maximization of our opportunity with INGREZZA, investment in our internal R&D programs and expansion of our clinical pipeline through business development opportunities.

Raw materials, active pharmaceutical ingredients, or API, and other supplies required for the production of INGREZZA and our product candidates are procured from various third-party manufacturers and suppliers in quantities adequate to meet our needs. Continuing adequate supply of such raw materials and API is assured through our long-term commercial supply and manufacturing agreements with multiple manufacturers and our continued focus on the expansion and diversification of our third-party manufacturing relationships. Our third-party manufacturers, suppliers and service providers may be subject to routine current Good Manufacturing Practice, or cGMP, inspections by the FDA or comparable agencies in other jurisdictions. We depend on our third-party partners for continued compliance with cGMP requirements and applicable foreign standards.

Marketing, Sales and Distribution

Our specialty sales force for INGREZZA in the U.S. consists of approximately 250 experienced sales professionals primarily focused on educating health care professionals who treat patients with TD, including psychiatrists, neurologists, physician's assistants and nurse practitioners.

Our customers in the U.S. consist of a limited network of specialty pharmacy providers, which delivers INGREZZA to patients by mail, and a specialty distributor, which distributes INGREZZA primarily to closed-door pharmacies and government facilities. For 2019, our two largest customers accounted for approximately 86% of our gross product sales.

Government Regulation

Our business activities are subject to extensive regulation by the U.S. and other countries. Regulation by government authorities in the U.S. and foreign countries is a significant factor in the development, manufacture, distribution, tracking, marketing and sale of our proposed products and in our ongoing research and product development activities. All of our products in development will require regulatory approval by government agencies prior to commercialization. The process of obtaining these approvals and the subsequent compliance with appropriate federal and state statutes and regulations require the expenditure of substantial time and financial resources.

In addition, federal and state healthcare laws restrict business practices in the pharmaceutical industry. These laws include, without limitation, federal and state fraud and abuse laws, false claims laws, data privacy and security laws, as well as transparency laws regarding payments or other items of value provided to healthcare providers. We have a comprehensive compliance program designed to ensure our business practices remain compliant.

The federal Anti-Kickback Statute makes it illegal for any person or entity to knowingly and willfully, directly or indirectly, solicit, receive, offer, or pay any remuneration that is intended to induce the referral of business, including the purchase, order, lease of any good, facility, item or service for which payment may be made under a federal healthcare program, such as Medicare or Medicaid.

Federal civil and criminal false claims laws and the federal civil monetary penalties law, which prohibit among other things, any person or entity from knowingly presenting, or causing to be presented, for payment to, or approval by, federal programs, including Medicare and Medicaid, claims for items or services, including drugs, that are false or fraudulent or not provided as claimed and knowingly making, or causing to be made, a false record or to avoid or decrease an obligation to pay money to the federal government.

The Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

In addition, we may be subject to HIPPA privacy and security regulations, which require the adoption of administrative, physical and technical safeguards to protect individually identifiable health information.

The federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies to report annually to the Centers for Medicare and Medicaid Services, or CMS, information related to payments or other transfers of value made to physicians, as defined by such law, and teaching hospitals, and applicable entities to report ownership and investment interests held by the physicians and their immediate family members.

Also, many states have similar healthcare statutes or regulations that may be broader in scope and may apply regardless of payor. Additionally, to the extent that our product is sold in a foreign country, we may be subject to similar foreign laws.

Failure to comply with these laws, where applicable, can result in significant penalties, including the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgement, imprisonment, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, and additional reporting requirements and regulatory oversight, any of which could adversely affect our ability to operate our business and our results of operations.

Development and Marketing Approval for Products

Preclinical studies generally are conducted in laboratory animals to evaluate the potential safety and efficacy of a product. Drug developers submit the results of preclinical studies to the FDA as a part of an IND application before clinical trials can begin in humans. Typically, clinical evaluation involves a time consuming and costly three-phase process.

Phase I Clinical trials are conducted with a small number of subjects to determine the early safety profile, maximum tolerated dose and pharmacokinetic properties of the product in human volunteers and for certain products, such as gene therapies, in patients with the target disease.

Phase II Clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine preliminary efficacy, optimal dosages and expanded evidence of safety.

Phase III Larger, multi-center, comparative clinical trials are conducted with patients afflicted with a specific disease in order to determine safety and efficacy as primary support for regulatory approval by the FDA to market a product candidate for a specific disease.

The FDA closely monitors the progress of each of the three phases of clinical trials that are conducted in the U.S. and may, at its discretion, re-evaluate, alter, suspend or terminate the testing based upon the data accumulated to that point and the FDA's assessment of the risk/benefit ratio to the patient. Institutional Review Boards, Institutional Ethics Committees, and Data Safety Monitoring Boards may also place holds on our clinical trials or recommend that we voluntarily do so. Clinical trials conducted in foreign countries are also subject to oversight by regulatory authorities in those countries.

Once Phase III trials are completed, drug developers submit the results of preclinical studies and clinical trials to the FDA in the form of an NDA or a biologics license application, or BLA, for approval to commence commercial sales. In most cases, the submission of an NDA or BLA is subject to a substantial application user fee. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has a goal of ten months from the date of filing of a standard NDA for a new molecular entity to review and act on the submission.

In addition, under the Pediatric Research Equity Act of 2003 as amended and reauthorized, certain applications or supplements to an application must contain data that are adequate to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults or full or partial waivers from the pediatric data requirements.

The FDA also may require submission of a risk evaluation and mitigation strategy plan to ensure that the benefits of the drug outweigh its risks. The risk evaluation and mitigation strategy plan could include medication guides, physician communication plans, assessment plans, and/or elements to assure safe use, such as restricted distribution methods, patient registries, or other risk minimization tools.

The FDA conducts a preliminary review of all NDAs and BLAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an application for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews an NDA or BLA to determine, among other things, whether the drug is safe and effective and whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA or BLA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with current Good Manufacturing Practice requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA or BLA, the FDA may inspect one or more clinical trial sites to assure compliance with Good Clinical Practice requirements.

After evaluating the NDA or BLA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the application and may require additional clinical or preclinical testing in order for FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, require that post-approval studies, including Phase IV clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a risk evaluation and mitigation strategy, which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After

approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

We will also have to complete an approval process similar to that in the U.S. in order to commercialize our product candidates in each foreign country. The approval procedure and the time required for approval vary from country to country and may involve additional testing. Foreign approvals may not be granted on a timely basis, or at all. In addition, regulatory approval of prices is required in most countries other than the U.S. The resulting prices may not be sufficient to generate an acceptable return to us or our corporate collaborators.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the U.S., or if it affects more than 200,000, there is no reasonable expectation that sales of the drug in the U.S. will be sufficient to offset the costs of developing and making the drug available in the U.S. Orphan drug designation must be requested before submitting an NDA or BLA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If the FDA approves a sponsor's marketing application for a designated orphan drug for use in the rare disease or condition for which it was designated, the sponsor is eligible for a seven-year period of marketing exclusivity, during which the FDA may not approve another sponsor's marketing application for a drug with the same active moiety and intended for the same use or indication as the approved orphan drug, except in limited circumstances, such as if a subsequent sponsor demonstrates its product is clinically superior. During a sponsor's orphan drug exclusivity period, competitors, however, may receive approval for drugs with different active moieties for the same indication as the approved orphan drug, or for drugs with the same active moiety as the approved orphan drug, but for different indications. Orphan drug exclusivity could block the approval of one of our products for seven years if a competitor obtains approval for a drug with the same active moiety intended for the same indication before we do, unless we are able to demonstrate that grounds for withdrawal of the orphan drug exclusivity exist, or that our product is clinically superior. Further, if a designated orphan drug receives marketing approval for an indication broader than the rare disease or condition for which it received orphan drug designation, it may not be entitled to exclusivity.

Legislation similar to the Orphan Drug Act has been enacted in other countries outside of the United States, including the EU. The orphan legislation in the EU is available for therapies addressing conditions that affect five or fewer out of 10,000 persons, are life-threatening or chronically debilitating conditions and for which no satisfactory treatment is authorized. The market exclusivity period is for ten years, although that period can be reduced to six years if, at the end of the fifth year, available evidence establishes that the product does not justify maintenance of market exclusivity.

Post-Approval Requirements

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

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA or BLA. For example, the FDA may require post-marketing testing, including Phase IV clinical trials, and surveillance to further assess and monitor the product's safety and effectiveness after commercialization.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with current Good Manufacturing Practices, or cGMP, requirements. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a risk evaluation and mitigation strategies program. Other potential consequences include, among other things:

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

- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. The FDA does not regulate behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Additional Regulation for Gene Therapy Products

In addition to the regulations discussed above, there are a number of standards that apply to gene therapy. FDA has issued various guidance documents regarding gene therapies, which outline factors that FDA will consider at each of the stages of development and relate to, among other things: the proper preclinical assessment of gene therapies; the chemistry, manufacturing and controls information that should be included in an IND application; the proper design of tests to measure product potency in support of an IND or BLA; and measures to observe delayed adverse effects in subjects who have been exposed to investigational gene therapies when the risk of such effects is high. For instance, FDA usually recommends that sponsors observe all surviving subjects who receive treatment using gene therapies that are based on adeno-associated virus vectors in clinical trials for potential gene therapy-related delayed adverse events for a minimum five-year period, followed by 10 years of annual queries, either in person or by questionnaire. FDA does not require the long-term tracking to be complete prior to its review of the BLA.

In addition to FDA oversight and oversight by institutional review boards, gene therapy clinical trials are also subject to review and oversight by an institutional biosafety committee, or IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment.

Reimbursement

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

In the U.S., third-party payors include federal and state healthcare programs, government authorities, private managed care providers, private health insurers and other organizations. No uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our drug products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical drug products and medical services, in addition to questioning their safety and efficacy. Such payors may limit coverage to specific drug products on an approved list, also known as a formulary, which might not include all of the FDA-approved drugs for a particular indication. We may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals. Nonetheless, our products or product candidates, including INGREZZA, may not be considered medically necessary or cost-effective.

Moreover, the process for determining whether a third-party payor will provide coverage for a drug product may be separate from the process for setting the price of a drug product or for establishing the reimbursement rate that such a payor will pay for the drug product. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage for the drug product. Adequate third-party payor reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

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

Healthcare Reform

The U.S. and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payors in the U.S. and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the U.S., the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

By way of example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, collectively the ACA, was signed into law, which intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add transparency requirements for the healthcare and health insurance industries, impose taxes and fees on the health industry and impose additional health policy reforms.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private third-party payor.

Some of the provisions of the ACA have yet to be fully implemented, and there have been legal and political challenges to certain aspects of the ACA. Since January 2017, the current presidential administration has signed two executive orders and other directives designed to delay, circumvent, or loosen certain requirements mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. Legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". In addition, the 2020 federal spending package permanently eliminates, effective January 1, 2020, the ACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Cuts and Jobs Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit ruled that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. It is unclear how this decision, future decisions, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA.

Other legislative changes have been proposed and adopted since the ACA was enacted. These changes include, among others, aggregate reductions to Medicare payments to providers of up to 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and will remain in effect through 2029 unless additional Congressional action is taken.

Also, there has been heightened governmental scrutiny recently over pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, the current presidential administration's budget proposal for fiscal year 2020 contains further drug price control measures that could be enacted during the 2020 budget process or in other future legislation. Additionally, the current presidential administration released a "Blueprint" to lower drug prices and reduce out-of-pocket costs of drugs. The U.S. Department of Health and Human Services has solicited feedback on some of these measures and, at the same, has implemented others under its existing authority. Although a number of these, and other measures may require additional authorization to become effective, Congress and the current presidential administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Competition

The biotechnology and pharmaceutical industries are subject to rapid and intense technological change. We face, and will continue to face, competition in the development and marketing of our products and product candidates from academic institutions, government agencies, research institutions and biotechnology and pharmaceutical companies. Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approval and marketing than we do.

Competition may also arise from, among other things, new drug development technologies, new or improved treatment options for preventing or reducing the incidence of disease in diseases our products treat and new small molecule or other classes of therapeutic agents. Such developments by competitors could reduce or eliminate the use of our products or may limit the utility and application of ongoing clinical trials for our product candidates.

Additional information about the competition that our marketed products face is set forth below.

Tardive Dyskinesia

INGREZZA competes with AUSTEDO (deutetrabenazine), which was approved by the FDA for the treatment of TD in adults in August 2017 and is marketed by Teva Pharmaceutical Industries, and a number of commercially available medicines used to treat TD off-label, such as tetrabenazine (Xenazine® and generic equivalents), botulinum toxin, and various antipsychotic medications, benzodiazepines and anticholinergics. We are also aware of several clinical development-stage programs that, if successfully developed and approved, may compete with INGREZZA in the TD market.

Endometriosis

ORILISSA competes with several FDA-approved products for the treatment of endometriosis, uterine fibroids, infertility, and central precocious puberty. Additionally, there is also competition from surgical interventions. Over 100,000 hysterectomies are performed in

the U.S. annually as a direct result of endometriosis, as well as a significant number of laparoscopic procedures to ablate endometrial explants. Separate from these options, there are many programs in clinical development which serve as potential future competition. Lastly, there are numerous medicines used to treat the symptoms of disease (vs endometriosis directly) which may also serve as competition: oral contraceptives, nonsteroidal anti-inflammatory drugs, or NSAIDs and other pain medications including opioids.

Parkinson's Disease

Opicapone would currently compete directly with two FDA-approved COMT inhibitors and their generic equivalents. In addition, there are a number of alternative adjunctive treatment options (FDA-approved and in clinical development) for Parkinson's disease patients which would compete with opicapone, including but not limited to various L-dopa preparations, dopamine agonists, MAO-B inhibitors. We are also aware of several programs in late-stage clinical development that may compete with opicapone.

Congenital Adrenal Hyperplasia

For CAH, high doses of corticosteroids are the current standard of care to both correct the endogenous cortisol deficiency as well as reduce the excessive ACTH levels. In the U.S. alone, there are more than two dozen companies manufacturing steroid-based products. In addition, there are several companies developing medicinal treatments for CAH.

Epilepsy

Our investigational therapies may in the future compete with numerous approved products and development-stage programs being pursued by several companies.

Gene Therapy

Our investigational gene therapies may in the future compete with numerous approved products and development-stage programs being pursued by several companies.

Employees

As of December 31, 2019, we had approximately 700 full-time employees. None of our employees are represented by a collective bargaining arrangement, and we believe our relationship with our employees is good.

Insurance

We maintain product liability insurance coverage for INGREZZA and our clinical trials in amounts consistent with industry standards. However, insurance coverage is becoming increasingly expensive, and we may not be able to obtain or maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability.

Corporate Information

We were originally incorporated in California in January 1992 and reincorporated in Delaware in May 1996. Our principal executive offices are located at 12780 El Camino Real, San Diego, California 92130. Our telephone number is (858) 617-7600.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on our website at *www.neurocrine.com*, as soon as reasonably practicable after such reports are available on the Securities and Exchange Commission, or SEC, website at *www.sec.gov*. Additionally, copies of our Annual Report will be made available, free of charge, upon written request. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this Annual Report on Form 10-K.

Item 1A. *Risk Factors*

The following information sets forth risk factors that could cause our actual results to differ materially from those contained in forward-looking statements we have made in this Annual Report on Form 10-K and those we may make from time to time. If any of the following risks actually occur, our business, operating results, prospects or financial condition could be harmed. Additional risks not presently known to us, or that we currently deem immaterial, may also affect our business operations.

Risks Related to Our Company

We may not be able to continue to successfully commercialize INGREZZA, or any of our product candidates if they are approved in the future.

Our ability to produce INGREZZA revenues consistent with expectations ultimately depends on our ability to sell our products and secure adequate third-party reimbursement if and when they are approved by the FDA. Our experience in marketing and selling pharmaceutical products began with INGREZZA's approval in 2017, when we hired our sales force and established our distribution and reimbursement capabilities, all of which are necessary to successfully commercialize INGREZZA. We have continued to invest in our commercial infrastructure and distribution capabilities in the past three years, including our sales force expansion in late 2018. While our team members and consultants have experience marketing and selling pharmaceutical products, we may face difficulties related to managing the rapid growth of our personnel and infrastructure, and there can be no guarantee that we will be able to maintain the personnel, systems, arrangements and capabilities necessary to successfully commercialize INGREZZA or any product

candidate approved by the FDA in the future. If we fail to maintain successful marketing, sales and reimbursement capabilities or fail to enter into successful marketing arrangements with third parties, our product revenues may suffer.

If physicians and patients do not continue to accept INGREZZA or do not accept any of our other products, or our sales and marketing efforts are not effective, we may not generate sufficient revenue.

The commercial success of INGREZZA or any of our other products, if approved for marketing, will depend upon the acceptance of those products as safe and effective by the medical community and patients.

The market acceptance of INGREZZA or any of our other products could be affected by a number of factors, including:

- the timing of receipt of marketing approvals for indications;
- the safety and efficacy of the products;
- the pricing of our products;
- the availability of healthcare payor coverage and adequate reimbursement for the products;
- public perception regarding any gene therapy products we may develop;
- the success of existing competitor products addressing our target markets or the emergence of equivalent or superior products; and
- the cost-effectiveness of the products.

If the medical community and patients do not ultimately accept our products as being safe, effective, superior and/or cost-effective, we may not generate sufficient revenue.

Governmental and third-party payors may impose sales and pharmaceutical pricing controls on our products or limit coverage and/or reimbursement for our products that could limit our product revenues and delay sustained profitability.

Our ability to commercialize any products successfully, including INGREZZA, will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available. The continuing efforts of government and third-party payors to contain or reduce the costs of health care through various means may reduce our potential revenues. These payors' efforts could decrease the price that we receive for any products we may develop and sell in the future.

Assuming we obtain coverage for a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover all or a significant portion of the cost of our products. Coverage decisions may depend upon clinical and economic standards that disfavor new drug products when more established or lower cost therapeutic alternatives are already available or subsequently become available regardless of whether they are approved by the FDA for that particular use.

Government authorities and other third-party payors are developing increasingly sophisticated methods of controlling healthcare costs, such as by limiting coverage and the amount of reimbursement for particular medications. Further, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payors in the U.S. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. In addition, communications from government officials regarding health care costs and pharmaceutical pricing could have a negative impact on our stock price, even if such communications do not ultimately impact coverage or reimbursement decisions for our products.

There may also be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize INGREZZA or any other product candidate for which we obtain marketing approval. Our inability to promptly obtain coverage and profitable reimbursement rates from both government-funded and private payors for any approved products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

Because the development of our product candidates is subject to a substantial degree of technological uncertainty, we may not succeed in developing any of our product candidates.

All of our product candidates are currently in research or clinical development with the exceptions of INGREZZA, which has been approved by the FDA for TD, and ORILISSA (partnered with AbbVie), which has been approved by the FDA for the management of moderate to severe endometriosis pain in women. Only a small number of research and development programs ultimately result in commercially successful drugs. In addition, to date the FDA has granted regulatory approval for only a very limited number of gene therapy products. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons. These reasons include the possibilities that the potential products may:

- be found ineffective or cause harmful side effects during preclinical studies or clinical trials;
- fail to receive necessary regulatory approvals on a timely basis or at all;

- be precluded from commercialization by proprietary rights of third parties;
- be difficult to manufacture on a large scale; or
- be uneconomical to commercialize or fail to achieve market acceptance.

If any of our product candidates encounters any of these potential problems, we may never successfully market that product candidate.

Our clinical trials may be delayed or fail to demonstrate the safety and efficacy of our product candidates, which could prevent or significantly delay their regulatory approval.

Before obtaining regulatory approval for the sale of any of our potential products, we must subject these product candidates to extensive preclinical and clinical testing to demonstrate their safety and efficacy for humans. Clinical trials are expensive, time-consuming and may take years to complete.

In connection with the clinical trials of our product candidates, we face the risks that:

- the FDA or similar foreign regulatory authority may not allow an IND application or foreign equivalent filings required to initiate human clinical studies for our drug candidates or the FDA may require additional preclinical studies as a condition of the initiation of Phase I clinical studies, or additional clinical studies for progression from Phase I to Phase II, or Phase II to Phase III, or for NDA approval;
- the product candidate may not prove to be effective or as effective as other competing product candidates;
- we may discover that a product candidate may cause harmful side effects or results of required toxicology studies may not be acceptable to the FDA;
- the results may not replicate the results of earlier, smaller trials;
- the FDA or similar foreign regulatory authorities may require use of new or experimental endpoints that may prove insensitive to treatment effects;
- we or the FDA or similar foreign regulatory authorities may suspend the trials;
- the results may not be statistically significant;
- patient recruitment may be slower than expected;
- the FDA may not accept the data from any trial or trial site outside of the U.S.;
- patients may drop out of the trials; and
- regulatory requirements may change.

These risks and uncertainties impact all of our clinical programs. For example, any of the clinical, regulatory or operational events described above could change our planned clinical and regulatory activities for the opicapone program in Parkinson's disease and/or our crinecerfont (NBI-74788) program for the treatment of congenital adrenal hyperplasia, or CAH. Additionally, any of these events described above could result in suspension of a program and/or obviate any filings for necessary regulatory approvals.

In addition, late-stage clinical trials are often conducted with patients having the most advanced stages of disease. During the course of treatment, these patients can die or suffer other adverse medical effects for reasons that may not be related to the pharmaceutical agent being tested but which can nevertheless adversely affect clinical trial results. Any failure or substantial delay in completing clinical trials for our product candidates may severely harm our business.

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

We depend on our current collaborators for the development and commercialization of several of our products and product candidates and may need to enter into future collaborations to develop and commercialize certain of our product candidates.

Our strategy for fully developing and commercializing ORILISSA is dependent upon maintaining our current collaboration agreement with AbbVie. This collaboration agreement provides for significant future payments should certain development, regulatory and commercial milestones be achieved, and royalties on future sales of elagolix. Under this agreement, AbbVie is responsible for, among other things, conducting clinical trials and obtaining required regulatory approvals for elagolix; as well as manufacturing and commercialization of ORILISSA.

Because of our reliance on AbbVie, the commercialization and continued development of ORILISSA could be substantially delayed, and our ability to receive future funding could be substantially impaired, if AbbVie:

- does not successfully commercialize ORILISSA for endometriosis;
- fails to gain regulatory approval of elagolix for uterine fibroids, and if applicable, successfully launch and commercialize elagolix for that indication;
- does not conduct its collaborative activities in a timely manner;
- does not devote sufficient time and resources to our partnered program;
- terminates its agreement with us;

- develops, either alone or with others, products that may compete with elagolix;
- disputes our respective allocations of rights to any products or technology developed during our collaboration; or
- merges with a third party that wants to terminate our agreement.

In March 2015, we entered into a collaboration and license agreement with MTPC to develop and commercialize INGREZZA in Japan and other select Asian markets. We will rely on MTPC to achieve certain development, regulatory and commercial milestones which, if achieved, could generate significant future revenue for us. Our collaboration with MTPC is subject to risks and uncertainties similar to those described above. In addition, we may need to enter into other out-licensing collaborations to assist in the development and commercialization of other product candidates we are developing now or may develop in the future, and any such future collaborations would be subject to similar risks and uncertainties.

Effective in March 2019, we entered into a collaboration and license agreement with Voyager for the research, development and commercialization of four programs, including NBIb-1817 (VY-AADC) for Parkinson's disease, the Friedreich's ataxia program and two undisclosed programs. In December 2019, we entered into a license and collaboration agreement with Xenon, pursuant to which we acquired an exclusive license to NBI-921352 (XEN901), a clinical-stage selective Nav1.6 sodium channel inhibitor with potential in SCN8A development and epileptic encephalopathy, or SCN8A-DEE, and other forms of epilepsy. We also acquired an exclusive license to pre-clinical compounds for development, including selective Nav1.6 and Nav1.2/1.6 inhibitors. Voyager and Xenon could take actions that may be adverse to us, or they could halt, slow, or deprioritize their development and commercialization efforts under the collaborations. We could also experience disagreements or delays involving the determination of additional programs. In any such instances, our ability to commercialize any product candidate related to the Voyager and Xenon collaborations could be delayed or prohibited.

In 2019, we acquired an option from Idorsia to license ACT-709478, a potent, selective, orally-active, and brain penetrating T-type calcium channel blocker. The option is exercisable by us following the acceptance by the FDA of the IND for ACT-709478 for the treatment of a rare pediatric epilepsy. Idorsia is solely responsible for the development and filing of the IND for ACT-709478, and we cannot predict if the FDA will accept the NDA, or if the FDA does accept the NDA, if we will exercise our option to license ACT-709478.

These issues and possible disagreements with our current or any future corporate collaborators could lead to delays in the collaborative research, development or commercialization of our product candidates. Furthermore, disagreements with these parties could require or result in litigation or arbitration, which would be time-consuming and expensive. If any of these issues arise, it may delay the development and commercialization of drug candidates and, ultimately, our generation of product revenues.

We are substantially dependent on BIAL for the development and commercialization of opicapone, including the receipt of regulatory approval for opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients.

In February 2017, we entered into a license agreement with BIAL for the development and commercialization of opicapone for the treatment of human diseases and conditions, including Parkinson's disease, in the U.S. and Canada. In June 2019, we submitted an NDA with the FDA for opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients. The FDA has indicated that the Prescription Drug User Fee Act target action date, on which the FDA is expected to complete its review of the opicapone NDA for Parkinson's disease, is April 26, 2020. Our strategy for developing and commercializing opicapone, including the receipt of regulatory approval for opicapone, is dependent upon maintaining our current collaboration with BIAL. Under the terms of our agreement with BIAL, although we are responsible for the management of all opicapone development and commercialization activities, we depend on BIAL and its suppliers to supply all drug product and investigation medicinal product for the development and commercialization of opicapone. BIAL relies on third-party contract manufacturers to produce opicapone. These contract manufacturers may encounter difficulties in achieving volume production, quality control, or quality assurance. As a result, these contract manufacturers may not be able to adequately produce opicapone in commercial quantities when required, which may impact our ability to deliver opicapone on a timely basis. In addition, we and BIAL have established a joint steering committee with overall coordination and strategic oversight over activities under the agreement and to provide a forum for regular exchange of information, and BIAL has the right to co-promote licensed products during certain periods of time and to engage in certain marketing-related activities in cooperation with us. Because of our substantial reliance on BIAL, any failure by BIAL to timely or fully comply with its obligations under our agreement, any disagreement with BIAL, or any decision by BIAL to not devote sufficient time and resources to our collaboration, could substantially delay and/or prohibit our ability to develop and commercialize opicapone.

Use of our approved products or those of our collaborators, including INGREZZA and ORILISSA, could be associated with side effects or adverse events.

As with most pharmaceutical products, use of our approved products or those of our collaborators, including INGREZZA and ORILISSA, could be associated with side effects or adverse events which can vary in severity (from minor adverse reactions to death) and frequency (infrequent or prevalent). Side effects or adverse events associated with the use of our products or those of our collaborators may be observed at any time, including after a product is commercialized, and reports of any such side effects or adverse events may negatively impact demand for our or our collaborators' products or affect our or our collaborators' ability to maintain regulatory approval for such products. Side effects or other safety issues associated with the use of our approved products or those of our collaborators could require us or our collaborators to modify or halt commercialization of these products or expose us to product liability lawsuits which will harm our business. We or our collaborators may be required by regulatory agencies to conduct additional studies regarding the safety and efficacy of our products which we have not planned or anticipated. Furthermore, there can be no assurance that we or our collaborators will resolve any issues related to any product related adverse events to the satisfaction of the FDA or any regulatory agency in a timely manner or ever, which could harm our business, prospects and financial condition.

Gene therapy treatments, which we are developing pursuant to our collaboration and license agreement with Voyager, may be perceived as unsafe or may result in unforeseen adverse events. Negative public opinion and increased regulatory scrutiny of gene therapy may adversely affect our ability to initiate or continue clinical development or obtain regulatory approvals for gene therapy product candidates or the commercialization of gene therapy products.

Gene therapy remains a novel technology, with few gene therapy products approved to date in the U.S. Public perception may be influenced by claims that gene therapy is unsafe, and gene therapy may not gain the acceptance of the public or the medical community. As part of our collaboration and license agreement with Voyager, a Phase II clinical trial of NBIb-1817 is being conducted. There is no guarantee that this program or other collaboration gene therapy product candidates will not be placed on clinical hold by the FDA, as has been the case for many gene therapy clinical programs. Even if we are able to successfully complete clinical development of a gene therapy product and obtain commercial approval, the success of our collaboration with Voyager will depend upon physicians who specialize in the treatment of genetic diseases targeted by gene therapy product candidates, prescribing treatments that involve the use of our product candidates in lieu of, or in addition to, existing treatments with which they are familiar and for which greater clinical data may be available. More restrictive government regulations or negative public opinion related to gene therapy products may delay or impair the development and commercialization of our gene therapy product candidates or demand for any gene therapy products we develop.

The limited precedent for gene therapy approvals makes it difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for the product candidates we are developing through our collaboration with Voyager.

The FDA has limited experience in the review and approval of gene therapy products. The limited precedent for gene therapy approvals makes it difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for the product candidates we are developing through our collaboration with Voyager.

Regulatory requirements governing gene therapy products have changed frequently and may continue to change in the future. As a result, the regulatory review process may take longer or cost more than we anticipate, including requirements for additional preclinical studies or clinical trials, and delay or prevent approval and commercialization of our gene therapy product candidates we are developing through our collaboration with Voyager. While the FDA has issued draft guidance for the development of gene therapies and proposed rules that would streamline certain requirements to which gene therapies are currently subject, it remains to be seen as to whether such initiatives will ultimately increase the speed of drug development in gene therapies such as the product candidates we are developing through our collaboration with Voyager.

Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a potential product to market could decrease our ability to generate sufficient product revenue, and our business, financial condition, results of operations and prospects would be harmed.

We face intense competition, and if we are unable to compete effectively, the demand for our products may be reduced.

The biotechnology and pharmaceutical industries are subject to rapid and intense technological change. We face, and will continue to face, competition in the development and marketing of our products and product candidates from academic institutions, government agencies, research institutions and biotechnology and pharmaceutical companies.

Competition may also arise from, among other things:

- other drug development technologies;
- methods of preventing or reducing the incidence of disease, including vaccines; and
- new small molecule or other classes of therapeutic agents.

Developments by others may render our product candidates or technologies obsolete or noncompetitive.

We are commercializing and performing research on or developing products for the treatment of several disorders including endometriosis, TD, uterine fibroids, essential tremor, classic congenital adrenal hyperplasia, pain, Parkinson's disease, Friedreich's ataxia, and other neurological and endocrine-related diseases and disorders, and there are a number of competitors to our products and product candidates. If one or more of our competitors' products or programs are successful, the market for our products may be reduced or eliminated.

- With respect to INGREZZA for TD, we compete with Teva Pharmaceutical Industries, which received FDA approval for AUSTEDO to treat TD in August 2017, and several clinical development-stage programs targeting TD and related movement disorders. Additionally, there are a number of commercially available medicines used to treat TD off-label, such as Xenazine (tetrabenazine) and generic equivalents, and various antipsychotic medications (e.g., clozapine), anticholinergics, benzodiazepines (off-label), and botulinum toxin.
- In endometriosis, ORILISSA competes with several FDA-approved products for the treatment of endometriosis, uterine fibroids, infertility, and central precocious puberty. Additionally, there is also competition from surgical interventions. Approximately 130,000 hysterectomies are performed in the U.S. annually as a direct result of endometriosis, as well as a significant number of laparoscopic procedures to ablate endometrial explants. Separate from these options, there are many programs in clinical development which serve as potential future competition. Lastly, there are numerous medicines used to treat the symptoms of disease (vs. endometriosis directly) which may also serve as competition: oral contraceptives, NSAIDs and other pain medications including opioids.

- With respect to opicapone for Parkinson's disease, there are currently two FDA-approved COMT inhibitors. Opicapone would compete directly with these two drugs and their generic equivalents. Additionally, there are a number of alternative adjunctive treatment options (FDA-approved and in clinical development) for Parkinson's patients which would compete with opicapone, including various L-dopa preparations, dopamine agonists, MAO-B inhibitors and others. In terms of potential future competition, there are several programs in late-stage clinical development.
- As for congenital adrenal hyperplasia, or CAH, high doses of corticosteroids are the current standard of care to both correct the endogenous cortisol deficiency as well as reduce the excessive ACTH levels. In the U.S. alone, there are more than two dozen companies manufacturing steroid-based products. Additionally, there are several companies developing medicinal treatments for CAH.
- Our investigational therapies for potential use in epilepsy may in the future compete with numerous approved products and development-stage programs being pursued by several companies.
- Our development programs using Voyager's proprietary gene therapy platform (NBIb-1817 for Parkinson's disease and the Friedreich's ataxia program) may in the future compete with development-stage programs being pursued by numerous companies.

Compared to us, many of our competitors and potential competitors have substantially greater:

- capital resources;
- research and development resources, including personnel and technology;
- regulatory experience;
- preclinical study and clinical testing experience;
- manufacturing, marketing and distribution experience; and
- production facilities.

We currently have no manufacturing capabilities. If third-party manufacturers of INGREZZA or any of our product candidates fail to devote sufficient time and resources to our concerns, or if their performance is substandard, our clinical trials and product introductions may be delayed, and our costs may rise.

We have in the past utilized, and intend to continue to utilize, third-party manufacturers to produce the drug compounds we use in our clinical trials and for the commercialization of our products. We have limited experience in manufacturing products for commercial purposes and do not currently have any manufacturing facilities. Consequently, we depend on, and will continue to depend on, several contract manufacturers for all production of products for development and commercial purposes, including INGREZZA and opicapone. If we are unable to obtain or retain third-party manufacturers, we will not be able to develop or commercialize our products, including INGREZZA and opicapone. The manufacture of our products for clinical trials and commercial purposes is subject to specific FDA regulations, including current Good Manufacturing Practice regulations. Our third-party manufacturers, including BIAL and its suppliers, might not comply with FDA regulations relating to manufacturing our products for clinical trials and commercial purposes or other regulatory requirements now or in the future. In addition, the manufacture of gene therapy products, which will be necessary under our collaboration and license agreement with Voyager, is technically complex and necessitates substantial expertise and capital investment. Our reliance on contract manufacturers also exposes us to the following risks:

- contract manufacturers may encounter difficulties in achieving volume production, quality control or quality assurance, and also may experience shortages in qualified personnel. As a result, our contract manufacturers might not be able to meet our clinical schedules or adequately manufacture our products in commercial quantities when required;
- switching manufacturers may be difficult because the number of potential manufacturers is limited. It may be difficult or impossible for us to find a replacement manufacturer quickly on acceptable terms, or at all;
- our contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to successfully produce, store or distribute our products; and
- drug manufacturers are subject to ongoing periodic unannounced inspection by the FDA, the U.S. Drug Enforcement Administration, and other agencies to ensure strict compliance with cGMP and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers' compliance with these regulations and standards.

Our current dependence upon third parties for the manufacture of our products may reduce our profit margin, if any, on the sale of INGREZZA, opicapone, or our future products and our ability to develop and deliver products on a timely and competitive basis.

We currently depend on a limited number of third-party suppliers. The loss of these suppliers, or delays or problems in the supply of INGREZZA, could materially and adversely affect our ability to successfully commercialize INGREZZA.

The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of process controls required to consistently produce the active pharmaceutical ingredients, or API, and the finished product in sufficient quantities while meeting detailed product specifications on a repeated basis. Manufacturers of pharmaceutical products may encounter difficulties in production, such as difficulties with production costs and yields, process controls, quality control and quality assurance, including testing of stability, impurities and impurity levels and other product specifications by validated test methods, and compliance with strictly enforced U.S., state, and non-U.S. regulations. We depend on a limited number of suppliers for the production of INGREZZA and its API. If our third-party suppliers for INGREZZA encounter these or any other manufacturing, quality or compliance difficulties, we may be unable to meet commercial demand for INGREZZA, which could materially and

adversely affect our ability to successfully commercialize INGREZZA. We also depend on BIAL, and its suppliers, for the production of opicapone drug substance and drug product.

In addition, if our suppliers fail or refuse to supply us with INGREZZA or its API for any reason, it would take a significant amount of time and expense to qualify a new supplier. The FDA and similar international regulatory bodies must approve manufacturers of the active and inactive pharmaceutical ingredients and certain packaging materials used in pharmaceutical products. The loss of a supplier could require us to obtain regulatory clearance and to incur validation and other costs associated with the transfer of the API or product manufacturing processes. If there are delays in qualifying new suppliers or facilities or a new supplier is unable to meet FDA or a similar international regulatory body's requirements for approval, there could be a shortage of INGREZZA, which could materially and adversely affect our ability to successfully commercialize INGREZZA. If BIAL is unable or refuses to supply us with opicapone drug product for any reason, or does not meet FDA or international regulators' requirements for approval, we have limited opportunity to qualify a new supplier. This could materially and adversely affect our ability to obtain regulatory approval for opicapone or successfully commercialize opicapone.

The independent clinical investigators and contract research organizations that we rely upon to conduct our clinical trials may not be diligent, careful or timely, and may make mistakes, in the conduct of our trials.

We depend on independent clinical investigators and contract research organizations, or CROs, to conduct our clinical trials under their agreements with us. The investigators are not our employees, and we cannot control the amount or timing of resources that they devote to our programs. If our independent investigators fail to devote sufficient time and resources to our drug development programs, or if their performance is substandard, or not in compliance with Good Clinical Practices, it may delay or prevent the approval of our FDA applications and our introduction of new drugs. The CROs we contract with for execution of our clinical trials play a significant role in the conduct of the trials and the subsequent collection and analysis of data. Failure of the CROs to meet their obligations could adversely affect clinical development of our products. Moreover, these independent investigators and CROs may also have relationships with other commercial entities, some of which may compete with us. If independent investigators and CROs assist our competitors at our expense, it could harm our competitive position.

We do not and will not have access to all information regarding the products and product candidates we licensed to AbbVie.

We do not and will not have access to all information regarding elagolix, including potentially material information about commercialization plans, medical information strategies, clinical trial design and execution, safety reports from clinical trials, safety reports, regulatory affairs, process development, manufacturing and other areas known by AbbVie. In addition, we have confidentiality obligations under our agreement with AbbVie. Thus, our ability to keep our shareholders informed about the status of elagolix will be limited by the degree to which AbbVie keeps us informed and allows us to disclose such information to the public. If AbbVie fails to keep us informed about commercialization efforts related to elagolix, or the status of the clinical development or regulatory approval pathway of other product candidates licensed to it, we may make operational and/or investment decisions that we would not have made had we been fully informed, which may materially and adversely affect our business and operations.

We are subject to ongoing obligations and continued regulatory review for INGREZZA, which may result in significant additional expense and market withdrawal. Additionally, our other product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

We received FDA regulatory approval for INGREZZA in April 2017. This approval and other regulatory approvals for any of our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase IV clinical trials, and surveillance to monitor the safety and efficacy of the product candidate. With respect to the FDA's approval of INGREZZA for TD, we are subject to certain post-marketing requirements and commitments. Failure to comply with these post-marketing requirements and commitments could result in withdrawal of our marketing approval for INGREZZA. In addition, with respect to INGREZZA, and any product candidate that the FDA or a comparable foreign regulatory authority approves, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with current Good Manufacturing Practices for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, changes in the product's label, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; and
- product injunctions or the imposition of civil or criminal penalties.

The FDA's policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of any of our product candidates or future indications for currently approved products. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory

compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability on a sustained basis.

If we are unable to retain and recruit qualified scientists or if any of our key senior executives discontinues his or her employment with us, it may delay our development efforts or impact our commercialization of INGREZZA or any product candidate approved by the FDA.

We are highly dependent on the principal members of our management and scientific staff. The loss of any of these people could impede the achievement of our objectives, including the successful commercialization of INGREZZA or any product candidate approved by the FDA. Furthermore, recruiting and retaining qualified scientific personnel to perform research and development work in the future, along with personnel with experience marketing and selling pharmaceutical products, is critical to our success. We may be unable to attract and retain personnel on acceptable terms given the competition among biotechnology, pharmaceutical and health care companies, universities and non-profit research institutions for experienced scientists and individuals with experience marketing and selling pharmaceutical products. We may face particular retention challenges in light of the recent rapid growth in our personnel and infrastructure and the perceived impact of those changes upon our corporate culture. In addition, we rely on a significant number of consultants to assist us in formulating our research and development strategy and our commercialization strategy. Our consultants may have commitments to, or advisory or consulting agreements with, other entities that may limit their availability to us.

If the market opportunities for our products and product candidates are smaller than we believe they are, our revenues may be adversely affected, and our business may suffer.

Certain of the diseases that INGREZZA and our product candidates are being developed to address are in underserved and underdiagnosed populations. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who will seek treatment utilizing our products or product candidates, may not be accurate. If our estimates of the prevalence or number of patients potentially on therapy prove to be inaccurate, the market opportunities for INGREZZA and our product candidates may be smaller than we believe they are, our prospects for generating expected revenue may be adversely affected and our business may suffer.

We license some of our core technologies and drug candidates from third parties. If we default on any of our obligations under those licenses, or violate the terms of these licenses, we could lose our rights to those technologies and drug candidates or be forced to pay damages.

We are dependent on licenses from third parties for some of our key technologies. These licenses typically subject us to various commercialization, reporting and other obligations. If we fail to comply with these obligations, we could lose important rights. If we were to default on our obligations under any of our licenses, we could lose some or all of our rights to develop, market and sell products covered by these licenses. For example, BIAL may terminate our license agreement, pursuant to which we have rights to develop and commercialize opicapone, if we fail to use commercially reasonable efforts, fail to submit an NDA for a licensed product by a specified date, or otherwise breach the license agreement. Pursuant to our collaboration and license agreement with Voyager, Voyager can terminate the agreement if we challenge the validity or enforceability of certain Voyager intellectual property rights or if we commit a material breach in whole or in part of the agreement and do not cure such breach within the agreed upon cure period. Pursuant to our collaboration and license agreement with Xenon, Xenon can terminate the agreement if we commit a material breach in whole or in part or the agreement and do not cure such breach within the agreed upon cure period. In addition, if we were to violate any of the terms of our licenses, we could become subject to damages. Likewise, if we were to lose our rights under a license to use proprietary research tools, it could adversely affect our existing collaborations or adversely affect our ability to form new collaborations. We also face the risk that our licensors could, for a number of reasons, lose patent protection or lose their rights to the technologies we have licensed, thereby impairing or extinguishing our rights under our licenses with them.

Our indebtedness and liabilities could limit the cash flow available for our operations, expose us to risks that could adversely affect our business, financial condition and results of operations.

To date, we have sold $517.5 million aggregate principal amount of 2.25% convertible senior notes due May 15, 2024, or the 2024 Notes. We may also incur additional indebtedness to meet future financing needs. Our indebtedness could have significant negative consequences for our security holders and our business, results of operations and financial condition by, among other things:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, which will reduce the amount of cash available for other purposes;
- limiting our flexibility to plan for, or react to, changes in our business;
- diluting the interests of our existing stockholders as a result of issuing shares of our common stock upon conversion of the 2024 Notes; and
- placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital.

Our business may not generate sufficient funds, and we may otherwise be unable to maintain sufficient cash reserves, to pay amounts due under the 2024 Notes and any additional indebtedness that we may incur. In addition, our cash needs may increase in the future. In addition, any future indebtedness that we may incur may contain financial and other restrictive covenants that limit our ability to operate our business, raise capital or make payments under our other indebtedness. If we fail to comply with these covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that and our other indebtedness becoming immediately payable in full.

The conditional conversion feature of the 2024 Notes, if triggered, may adversely affect our financial condition and liquidity.

As of December 31, 2019, the conditional conversion feature of the 2024 Notes had been triggered, allowing holders of 2024 Notes to convert their 2024 Notes at any time during the period beginning on January 2, 2020 and ending at the close of business on March 31, 2020. The future conditional convertibility of the 2024 Notes will be monitored at each quarterly reporting date and analyzed dependent upon market prices of our common stock during the prescribed measurement periods, and as a result, it is possible that holders of 2024 Notes will continue to be entitled to convert their 2024 Notes at any time during specified periods at their option. If one or more of the holders of the 2024 Notes elects to convert their 2024 Notes, unless we satisfy our conversion obligation by delivering only shares of our common stock, we would be required to settle all or a portion of our conversion obligation through the payment of cash, which could adversely affect our liquidity.

We have a history of losses and expect to increase our expenses for the foreseeable future, and we may never achieve sustained profitability.

Since our inception, we have incurred significant net losses and negative cash flow from operations. At December 31, 2019, we had an accumulated deficit of $1.1 billion as a result of historical operating losses.

In April 2017, we received FDA approval of INGREZZA for TD, and in July 2018, our partner AbbVie received FDA approval for ORILISSA for management of moderate to severe endometriosis pain in women. However, we have not yet obtained regulatory approvals for any other product candidates. Even if we continue to succeed in commercializing INGREZZA, or developing and commercializing any of our other product candidates, we may not be profitable. We also expect to continue to incur significant operating and capital expenditures as we:

- commercialize INGREZZA for TD;
- seek regulatory approvals for our product candidates;
- develop, formulate, manufacture and commercialize our product candidates;
- in-license or acquire new product development opportunities;
- implement additional internal systems and infrastructure; and
- hire additional clinical, scientific, sales and marketing personnel.

We expect to increase our expenses and other investments in the coming years as we fund our operations, in-licensing or acquisition opportunities, and capital expenditures. While we were profitable for the year ended December 31, 2019, our future operating results and profitability may fluctuate from period to period due to the factors described above, and we will need to generate significant revenues to achieve and maintain profitability and positive cash flow on a sustained basis. We may not be able to generate these revenues, and we may never achieve profitability on a sustained basis in the future. Our failure to maintain or increase profitability on a sustained basis could negatively impact the market price of our common stock.

We have recently increased the size of our organization and will need to continue to increase the size of our organization. We may encounter difficulties with managing our growth, which could adversely affect our results of operations.

At December 31, 2019, we had approximately 700 full-time employees. Although we have substantially increased the size of our organization, we may need to add additional qualified personnel and resources, especially now that we have a commercial sales force. Our current infrastructure may be inadequate to support our development and commercialization efforts and expected growth. Future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees, and may take time away from running other aspects of our business, including development and commercialization of our product candidates.

Our future financial performance and our ability to commercialize INGREZZA and any other product candidates that receive regulatory approval will depend, in part, on our ability to manage any future growth effectively. In particular, as we commercialize INGREZZA, we will need to support the training and ongoing activities of our sales force and will likely need to continue to expand the size of our employee base for managerial, operational, financial and other resources. To that end, we must be able to successfully:

- manage our development efforts effectively;
- integrate additional management, administrative and manufacturing personnel;
- further develop our marketing and sales organization; and
- maintain sufficient administrative, accounting and management information systems and controls.

We may not be able to accomplish these tasks or successfully manage our operations and, accordingly, may not achieve our research, development, and commercialization goals. Our failure to accomplish any of these goals could harm our financial results and prospects.

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

As is commonplace in the biotechnology industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Because our operating results may vary significantly in future periods, our stock price may decline.

Our quarterly revenues, expenses and operating results have fluctuated in the past and are likely to fluctuate significantly in the future. Our financial results are unpredictable and may fluctuate, for among other reasons, due to seasonality of commercial sales of INGREZZA, royalties from out-licensed products, the impact of Medicare Part D coverage, our achievement of product development objectives and milestones, clinical trial enrollment and expenses, research and development expenses and the timing and nature of contract manufacturing and contract research payments. A high portion of our costs are predetermined on an annual basis, due in part to our significant research and development costs. Thus, small declines in revenue could disproportionately affect financial results in a quarter. While we were profitable for the year ended December 31, 2019, our future operating results and profitability may fluctuate from period to period, and even if we become profitable on a quarterly or annual basis, we may not be able to sustain or increase our profitability. Moreover, as our company and our market capitalization have grown, our financial performance has become increasingly subject to quarterly and annual comparisons with the expectations of securities analysts or investors. The failure of our financial results to meet these expectations, either in a single quarterly or annual period over a sustained period time, could cause our stock price to decline.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flows, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could adversely affect our business and financial condition. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, or the Tax Act, enacted many significant changes to the U.S. tax laws. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Act may affect us, and certain aspects of the Tax Act repealed or modified in future legislation. In addition, it is uncertain if and to what extent various states will conform to the Tax Act or any newly enacted federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Act or future reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

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

Our net operating loss, or NOL, carryforwards generated in tax years ending on or prior to December 31, 2017, are only permitted to be carried forward for 20 years under applicable U.S. tax law. Under the Tax Act, our federal NOLs generated in tax years ending after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs generated in tax years beginning after December 31, 2017, is limited. It is uncertain if and to what extent various states will conform to the Tax Act. In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income or taxes may be limited. We do not believe we have experienced any previous ownership changes, but the determination is complex and there can be no assurance we are correct. Furthermore, we may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside of our control.

As a result, our pre-2018 NOL carryforwards may expire prior to being used and our NOL carryforwards generated thereafter will be subject to a percentage limitation and, if we undergo an ownership change (or if we previously underwent such an ownership change), our ability to use all of our pre-change NOLs and other pre-change tax attributes (such as research tax credits) to offset our post-change income or taxes may be limited. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. As a result, we may be unable to use all or a material portion of our NOLs and other tax attributes, which could adversely affect our future cash flows.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions in excess of accrued amounts.

Our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of such places. Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including changes in the mix of our profitability from state to state, the results of examinations and audits of our tax filings, our inability to secure or sustain acceptable agreements with tax authorities, changes in accounting for income taxes and changes in tax laws. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations and may result in tax obligations in excess of amounts accrued in our financial statements.

The price of our common stock is volatile.

The market prices for securities of biotechnology and pharmaceutical companies historically have been highly volatile, and the market for these securities has from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. Furthermore, especially as we and our market capitalization have grown, the price of our common stock has been increasingly affected by quarterly and annual comparisons with the valuations and recommendations of the analysts who cover our business. If our results do not meet these analysts' forecasts, the expectations of our investors or the financial guidance we provide to investors in any period, which is based on assumptions that may be incorrect or that may change from quarter to quarter, the market price of our common stock could decline. Over the course of the last twelve months, the price of our common stock has ranged from approximately $120 per share to approximately $72 per share. The market price of our common stock may fluctuate in response to many factors, including:

- sales of INGREZZA and ORILISSA;
- the status and cost of our post-marketing commitments for INGREZZA;
- the results of our clinical trials;
- reports of safety issues related to INGREZZA or ORILISSA;
- whether the FDA approves opicapone for the treatment of Parkinson's disease and elagolix for the treatment of uterine fibroids, both of which have a PDUFA target action date in the second quarter of 2020, or if the FDA fails to meet such targeted action dates;
- developments concerning new and existing collaboration agreements;
- announcements of technological innovations or new therapeutic products by us or others;
- general economic and market conditions, including economic and market conditions affecting the biotechnology industry;
- developments in patent or other proprietary rights;
- developments related to the FDA;
- future sales of our common stock by us or our stockholders;
- comments by securities analysts;
- additions or departures of key personnel;
- fluctuations in our operating results;
- potential litigation matters;
- government regulation;
- government and third-party payor coverage and reimbursement;
- failure of any of our product candidates, if approved, to achieve commercial success; and
- public concern as to the safety of our drugs.

Our customers are concentrated and therefore the loss of a significant customer may harm our business.

We have entered into distribution agreements with a limited number of specialty pharmacy providers and a specialty distributor, and all of our product sales are to these customers. Two of these customers represented approximately 86% of our product revenue for the year ended December 31, 2019 and a significant majority of our accounts receivable balance at December 31, 2019. If any of these significant customers becomes subject to bankruptcy, is unable to pay us for our products or is acquired by a company that wants to terminate the relationship with us, or if we otherwise lose any of these significant customers, our revenue, results of operations and cash flows would be adversely affected. Even if we replace the loss of a significant customer, we cannot predict with certainty that such transition would not result in a decline in our revenue, results of operations and cash flows.

If we cannot raise additional funding, we may be unable to complete development of our product candidates or establish commercial and manufacturing capabilities in the future.

We may require additional funding to effectively commercialize INGREZZA, to continue our research and product development programs, to conduct preclinical studies and clinical trials, for operating expenses, to pursue regulatory approvals for our product candidates, for the costs involved in filing and prosecuting patent applications and enforcing or defending patent claims, if any, and the cost of product in-licensing and any possible acquisitions. In addition, we may require additional funding to establish manufacturing and marketing capabilities in the future. We believe that our existing capital resources, together with investment income, and future payments due under our strategic alliances, will be sufficient to satisfy our current and projected funding requirements for at least the next twelve months. However, these resources might be insufficient to conduct research and development programs, the cost of product in-taking and possible acquisitions, fully commercialize products and operate the company to the full extent currently planned. If we cannot obtain adequate funds, we may be required to curtail significantly our commercial plans or one or more of our research and development programs or obtain funds through additional arrangements with corporate collaborators or others that may require us to relinquish rights to some of our technologies or product candidates.

Our future capital requirements will depend on many factors, including:

- the commercial success of INGREZZA and/or ORILISSA;
- debt service obligations on the 2024 Notes;

- continued scientific progress in our R&D and clinical development programs;
- the magnitude and complexity of our research and development programs;
- progress with preclinical testing and clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- whether the FDA approves opicapone for the treatment of Parkinson's disease and elagolix for the treatment of uterine fibroids, both of which have a PDUFA target action date in the second quarter of 2020;
- the costs involved in filing and pursuing patent applications, enforcing patent claims, or engaging in interference proceedings or other patent litigation;
- competing technological and market developments;
- the establishment of additional strategic alliances;
- developments related to any future litigation;
- the cost of commercialization activities and arrangements, including manufacturing of our product candidates; and
- the cost of product in-licensing and any possible acquisitions.

We intend to seek additional funding through strategic alliances and may seek additional funding through public or private sales of our securities, including equity securities. For example, for so long as we continue to satisfy the requirements to be deemed a well-known seasoned issuer, we can utilize a shelf registration statement, to allow us to issue an unlimited number of securities from time to time. In addition, during the second quarter of 2017, we issued the 2024 Notes and we have previously financed capital purchases and may continue to pursue opportunities to obtain additional debt financing in the future. Additional equity or debt financing might not be available on reasonable terms, if at all. Any additional equity financings will be dilutive to our stockholders and any additional debt financings may involve operating covenants that restrict our business.

Compliance with changing regulation of corporate governance and public disclosure may result in additional expenses.

Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Dodd-Frank Wall Street Reform and Consumer Protection Act, new SEC regulations and Nasdaq rules, are creating uncertainty for companies such as ours. These laws, regulations and standards are subject to varying interpretations in some cases due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies, which could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We are committed to maintaining high standards of corporate governance and public disclosure. As a result, our efforts to comply with evolving laws, regulations and standards have resulted in, and are likely to continue to result in, increased sales, general and administrative expenses and management time related to compliance activities. If we fail to comply with these laws, regulations and standards, our reputation may be harmed, and we might be subject to sanctions or investigation by regulatory authorities, such as the SEC. Any such action could adversely affect our financial results and the market price of our common stock.

Risks Related to Our Industry

Health care reform measures and other recent legislative initiatives could adversely affect our business.

The business and financial condition of pharmaceutical and biotechnology companies are affected by the efforts of governmental and third-party payors to contain or reduce the costs of health care. In the U.S., comprehensive health care reform legislation was enacted by the Federal government and we expect that there will continue to be a number of federal and state proposals to implement government control over the pricing of prescription pharmaceuticals. In addition, increasing emphasis on reducing the cost of health care in the U.S. will continue to put pressure on the rate of adoption and pricing of prescription pharmaceuticals. Moreover, in some foreign jurisdictions, pricing of prescription pharmaceuticals is already subject to government control. Additionally, other federal and state legislation imposes new obligations on manufacturers of pharmaceutical products, among others, related to product tracking and tracing. Among the requirements of this new legislation, manufacturers are required to provide certain information regarding the drug product provided to individuals and entities to which product ownership is transferred, label drug product with a product identifier, and keep certain records regarding distribution of the drug product. Further, under this new legislation, manufacturers will have drug product investigation, quarantine, disposition, notification and purchaser license verification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products, as well as products that are the subject of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death.

Additionally, in March 2010, Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, was signed into law, which was intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add transparency requirements for the healthcare and health insurance industries, impose taxes and fees on the health industry and impose additional health policy reforms. Among the provisions of the ACA of importance to our potential drug candidates are:

- an annual, nondeductible fee on any entity that manufactures, or imports, specified branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;

- extension of a manufacturer's Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for a manufacturer's outpatient drugs to be covered under Medicare Part D;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Some of the provisions of the ACA have yet to be fully implemented, and there have been legal and political challenges to certain aspects of the ACA. Since January 2017, two executive orders and other directives designed to delay, circumvent, or loosen certain requirements mandated by the ACA have been put into place. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. Legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act includes a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". The Bipartisan Budget Act of 2018, or the BBA, among other things, amended the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole". In December 2018, the Centers for Medicare and Medicaid Services, or CMS, published a new final rule permitting further collections and payments to and from certain ACA-qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. In addition, the 2020 federal spending package permanently eliminates, effective January 1, 2020, the ACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. On December 14, 2018, a U.S. District Court Judge in Texas ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Cuts and Jobs Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit ruled that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. It is unclear how this decision, future decisions, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA and our business.

Other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and, due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Additional changes that may affect our business include the expansion of new programs such as Medicare payment for performance initiatives for physicians under the Medicare Access and CHIP Reauthorization Act of 2015, which ended the use of the statutory formula, also referred to as the Sustainable Growth Rate, for clinician payment and established a quality payment incentive program, also referred to as the Quality Payment Program. This program provides clinicians with two ways to participate, including through the Advanced Alternative Payment Models, or APMs, and the Merit-based Incentive Payment System, or MIPS. In November 2019, CMS issued a final rule finalizing the changes to the Quality Payment Program. At this time, it is unclear how the introduction of the Quality Payment Program will impact overall physician reimbursement.

Also, there has been heightened governmental scrutiny recently over pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, the current presidential administration's budget proposal for the 2020 fiscal year contains further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the current presidential administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The U.S. Department of Health and Human Services, or HHS, has solicited feedback on certain of these measures and, additionally, has implemented others under its existing authority. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain sustained profitability or commercialize our drugs.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017 was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase I clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

We are currently unable to predict what additional legislation or regulation, if any, relating to the health care industry may be enacted in the future or what effect recently enacted federal legislation or any such additional legislation or regulation would have on our business. The pendency or approval of such proposals or reforms could result in a decrease in our stock price or limit our ability to raise capital or to enter into collaboration agreements for the further development and commercialization of our programs and products.

Any relationships with healthcare professionals, principal investigators, consultants, customers (actual and potential) and third-party payors in connection with our current and future business activities are and will continue to be subject, directly or indirectly, to federal and state healthcare laws. If we are unable to comply, or have not fully complied, with such laws, we could face penalties, contractual damages, reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations.

Our business operations and activities may be directly, or indirectly, subject to various federal and state healthcare laws, including without limitation, fraud and abuse laws, false claims laws, data privacy and security laws, as well as transparency laws regarding payments or other items of value provided to healthcare providers. These laws may restrict or prohibit a wide range of business activities, including, but not limited to, research, manufacturing, distribution, pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. These laws may impact, among other things, our current activities with principal investigators and research subjects, as well as current and future sales, marketing, patient co-payment assistance and education programs.

Such laws include:

- the federal Anti-Kickback Statute which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid;
- the federal civil and criminal false claims laws, including the federal civil False Claims Act, and civil monetary penalties laws, which impose criminal and civil penalties against individuals or entities for, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- HIPAA, which imposes criminal and civil liability for, among other things, executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, and its implementing regulations, which also imposes obligations, including mandatory contractual terms, on certain types of individuals and entities, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to CMS information related to payments or other transfers of value made to physicians and teaching hospitals, and applicable manufacturers and applicable group purchasing organizations to report annually to CMS ownership and investment interests held by physicians and their immediate family members; and
- analogous state, local, and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third party payors, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures or drug pricing; state and local laws that require the registration of pharmaceutical sales representatives; state and local "drug takeback" laws and regulations; and state and foreign laws governing the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. While our interactions with healthcare professionals, including our speaker programs and other arrangements, such as our contributions to patient assistance programs, have been structured to comply with these laws and related guidance, it is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws. If our operations or activities are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to, without limitation, significant civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages,

reputational harm, diminished profits and future earnings and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate.

In addition, any sales of our product once commercialized outside the U.S. will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

We could face liability if a regulatory authority determines that we are promoting INGREZZA, or any of our product candidates that receives regulatory approval, for "off-label" uses.

A company may not promote "off-label" uses for its drug products. An off-label use is the use of a product for an indication that is not described in the product's FDA-approved label in the U.S. or for uses in other jurisdictions that differ from those approved by the applicable regulatory agencies. Physicians, on the other hand, may prescribe products for off-label uses. Although the FDA and other regulatory agencies do not regulate a physician's choice of drug treatment made in the physician's independent medical judgment, they do restrict promotional communications from companies or their sales force with respect to off-label uses of products for which marketing clearance has not been issued. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. A company that is found to have promoted off-label use of its product may be subject to significant liability, including civil and criminal sanctions. We intend to comply with the requirements and restrictions of the FDA and other regulatory agencies with respect to our promotion of our products, including INGREZZA, but we cannot be sure that the FDA or other regulatory agencies will agree that we have not violated their restrictions. As a result, we may be subject to criminal and civil liability. In addition, our management's attention could be diverted to handle any such alleged violations. If the FDA or any other governmental agency initiates an enforcement action against us, or if we are the subject of a *qui tam* suit brought by a private plaintiff on behalf of the government, and it is determined that we violated prohibitions relating to the promotion of products for unapproved uses, we could be subject to substantial civil or criminal fines or damage awards and other sanctions such as consent decrees and corporate integrity agreements pursuant to which our activities would be subject to ongoing scrutiny and monitoring to ensure compliance with applicable laws and regulations. Any such fines, awards or other sanctions would have an adverse effect on our revenue, business, financial prospects, and reputation.

If we are unable to protect our intellectual property, our competitors could develop and market products based on our discoveries, which may reduce demand for our products.

Our success will depend on our ability to, among other things:

- obtain patent protection for our products;
- preserve our trade secrets;
- prevent third parties from infringing upon our proprietary rights; and
- operate without infringing upon the proprietary rights of others, both in the U.S. and internationally.

Because of the substantial length of time and expense associated with bringing new products through the development and regulatory approval processes in order to reach the marketplace, the pharmaceutical industry places considerable importance on obtaining patent and trade secret protection for new technologies, products and processes. Accordingly, we intend to seek patent protection for our proprietary technology and compounds. However, we face the risk that we may not obtain any of these patents and that the breadth of claims we obtain, if any, may not provide adequate protection of our proprietary technology or compounds.

We also rely upon unpatented trade secrets and improvements, unpatented know-how and continuing technological innovation to develop and maintain our competitive position, which we seek to protect, in part, through confidentiality agreements with our commercial collaborators, employees and consultants. We also have invention or patent assignment agreements with our employees and some, but not all, of our commercial collaborators and consultants. However, if our employees, commercial collaborators or consultants breach these agreements, we may not have adequate remedies for any such breach, and our trade secrets may otherwise become known or independently discovered by our competitors.

In addition, although we own a number of patents, the issuance of a patent is not conclusive as to its validity or enforceability, and third parties may challenge the validity or enforceability of our patents. We cannot assure you how much protection, if any, will be given to our patents if we attempt to enforce them and they are challenged in court or in other proceedings. It is possible that a competitor may successfully challenge our patents or that challenges will result in limitations of their coverage. Moreover, competitors may infringe our patents or successfully avoid them through design innovation. To prevent infringement or unauthorized use, we may need to file infringement claims, which are expensive and time-consuming. In addition, in an infringement proceeding a court may decide that a patent of ours is not valid or is unenforceable or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover its technology. Interference proceedings declared by the U.S. Patent and Trademark Office may be necessary to determine the priority of inventions with respect to our patent applications or those of our licensors. Litigation or interference proceedings may fail and, even if successful, may result in substantial costs and be a distraction to management. We cannot assure you that we will be able to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the U.S.

If we fail to obtain or maintain orphan drug designation or other regulatory exclusivity for some of our product candidates, our competitive position would be harmed.

A product candidate that receives orphan drug designation can benefit from a streamlined regulatory process as well as potential commercial benefits following approval. Currently, this designation provides market exclusivity in the U.S. and the EU for seven years and ten years, respectively, if a product is the first such product approved for such orphan indication. This market exclusivity

does not, however, pertain to indications other than those for which the drug was specifically designated in the approval, nor does it prevent other types of drugs from receiving orphan designations or approvals in these same indications. Further, even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the new drug is clinically superior to the orphan product or a market shortage occurs.

In the EU, orphan exclusivity may be reduced to six years if the drug no longer satisfies the original designation criteria or can be lost altogether if the marketing authorization holder consents to a second orphan drug application or cannot supply enough drug, or when a second applicant demonstrates its drug is "clinically superior" to the original orphan drug. We may not be successful obtaining orphan drug designations for any indications and, even if we succeed, such orphan drug designations may fail to result in or maintain orphan drug exclusivity upon approval, which would harm our competitive position.

The technologies we use in our research as well as the drug targets we select may infringe the patents or violate the proprietary rights of third parties.

We cannot assure you that third parties will not assert patent or other intellectual property infringement claims against us or our collaborators with respect to technologies used in potential products. If a patent infringement suit were brought against us or our collaborators, we or our collaborators could be forced to stop or delay developing, manufacturing or selling potential products that are claimed to infringe a third party's intellectual property unless that party grants us or our collaborators rights to use its intellectual property. In such cases, we could be required to obtain licenses to patents or proprietary rights of others in order to continue to commercialize our products. However, we may not be able to obtain any licenses required under any patents or proprietary rights of third parties on acceptable terms, or at all. Even if our collaborators or we were able to obtain rights to the third party's intellectual property, these rights may be non-exclusive, thereby giving our competitors access to the same intellectual property. Ultimately, we may be unable to commercialize some of our potential products or may have to cease some of our business operations as a result of patent infringement claims, which could severely harm our business.

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

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees and independent contractors, such as principal investigators, consultants, commercial partners and vendors, or by employees of our commercial partners could include failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with manufacturing standards we have established, to comply with federal and state healthcare fraud and abuse laws, to report financial information or data accurately, to maintain the confidentiality of our trade secrets or the trade secrets of our commercial partners, or to disclose unauthorized activities to us. In particular, sales, marketing and other business arrangements in the healthcare industry are subject to extensive laws intended to prevent fraud, kickbacks, self-dealing and other abusive practices. Employee and independent contractor misconduct could also involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. Any action against our employees, independent contractors, principal investigators, consultants, commercial partners or vendors for violations of these laws could result in significant civil, criminal, and administrative penalties, fines, and imprisonment.

We face potential product liability exposure far in excess of our insurance coverage.

The use of any of our potential products in clinical trials, and the sale of any approved products, including INGREZZA, may expose us to liability claims. These claims might be made directly by consumers, health care providers, pharmaceutical companies or others selling our products. We have product liability insurance coverage for our clinical trials in the amount of $35.0 million per occurrence and $35.0 million in the aggregate. In addition, we have product liability insurance related to the sale of INGREZZA in the amount of $35.0 million per occurrence and $35.0 million in the aggregate. However, our insurance may not reimburse us or may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability from any current or future clinical trials or approved products. A successful product liability claim, or series of claims, brought against us would decrease our cash reserves and could cause our stock price to fall. Furthermore, regardless of the eventual outcome of a product liability claim, any product liability claim against us may decrease demand for our approved products, including INGREZZA, damage our reputation, result in regulatory investigations that could require costly recalls or product modifications, cause clinical trial participants to withdrawal, result in costs to defend the related litigation, decrease our revenue, and divert management's attention from managing our business.

Our activities involve hazardous materials, and we may be liable for any resulting contamination or injuries.

Our research activities involve the controlled use of hazardous materials. We cannot eliminate the risk of accidental contamination or injury from these materials. If an accident occurs, a court may hold us liable for any resulting damages, which may harm our results of operations and cause us to use a substantial portion of our cash reserves, which would force us to seek additional financing.

Cyber security breaches and other disruptions could compromise our information, including the theft of our intellectual property, and could expose us to liability, which would cause our business and reputation to suffer.

We are increasingly dependent on information technology systems and infrastructure, including mobile technologies, to operate our business. In the ordinary course of our business, we collect and store confidential and sensitive electronic information on our networks and in our data centers. This information includes, among other things, our intellectual property and proprietary information, the confidential information of our collaborators and licensees, and the personally identifiable information of our employees. It is

important to our operations and business strategy that this electronic information remains secure and is perceived to be secure. The size and complexity of our information technology systems, and those of third-party vendors with whom we contract, and the volume of data we retain, make such systems potentially vulnerable to breakdown, malicious intrusion, security breaches and other cyber-attacks. Information security risks have significantly increased in recent years in part due to the proliferation of new technologies and the increased sophistication and activities of organized crime, hackers, terrorists and other external parties, including foreign private parties and state actors. A security breach or privacy violation that leads to disclosure or modification of or prevents access to personally identifiable information or other protected information could harm our reputation, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, require us to verify the correctness of database contents and otherwise subject us to liability under laws and regulations that protect personal data, resulting in increased costs or loss of revenue. Similarly, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Additionally, theft of our intellectual property or proprietary business information could require substantial expenditures to remedy. If we are unable to prevent such security breaches or privacy violations or implement satisfactory remedial measures, our operations could be disrupted, and we may suffer loss of reputation, financial loss and other regulatory penalties because of lost or misappropriated information. In addition, these breaches and other inappropriate access can be difficult to detect, and any delay in identifying them may lead to increased harm of the type described above. Moreover, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information, trade secrets or other intellectual property. As cyber threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities. While we have implemented security measures to protect our data security and information technology systems, such measures may not prevent such events. Significant disruptions of our information technology systems or breaches of data security could have a material adverse effect on our business, financial condition and results of operations.

Compliance with global privacy and data security requirements could result in additional costs and liabilities to us or inhibit our ability to collect and process data globally, and the failure to comply with such requirements could have a material adverse effect on our business, financial condition or results of operations.

The regulatory framework for the collection, use, safeguarding, sharing, transfer and other processing of information worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. For example, the EU's General Data Protection Regulation, or GDPR, imposes strict obligations on the processing of personal data, including personal health data, and the free movement of such data. The GDPR applies to any company established in the EU as well as any company outside the EU that processes personal data in connection with the offering of goods or services to individuals in the EU or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, obligations relating to: processing health and other sensitive data; obtaining consent of individuals; providing notice to individuals regarding data processing activities; responding to data subject requests; taking certain measures when engaging third-party processors; notifying data subjects and regulators of data breaches; implementing safeguards to protect the security and confidentiality of personal data; and transferring personal data to countries outside the EU, including the U.S. The GDPR imposes substantial fines for breaches of data protection requirements, which can be up to four percent of global revenue or 20 million euros, whichever is greater, and it also confers a private right of action on data subjects for breaches of data protection requirements. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of sensitive data, such as healthcare data or other personal information from our clinical trials, could require us to change our business practices or lead to government enforcement actions, private litigation or significant penalties against us and could have a material adverse effect on our business, financial condition or results of operations.

Additionally, California recently enacted legislation that has been dubbed the first "GDPR-like" law in the U.S. Known as the California Consumer Privacy Act, or CCPA, it creates new individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The CCPA, which went into effect on January 1, 2020, requires covered companies to provide new disclosures to California consumers, and provides such consumers new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the U.S., which could increase our potential liability and adversely affect our business.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

We lease our corporate headquarters, which are located in San Diego, California, and consist of 141,000 square feet of laboratory and office space located at 12780 El Camino Real, 45,000 square feet of office space located at 12777 High Bluff Drive and 37,000 square feet of office space located at 12790 El Camino Real.

We believe that our property and equipment are generally well maintained and in good operating condition, and are suitable for the conduct of our business.

Item 3. ***Legal Proceedings***

From time to time in the normal course of business, we may be subject to various legal matters such as threatened or pending claims or proceedings. We are not currently a party to any material legal proceedings or claims, nor are we aware of any pending or threatened litigation or claims that could have a material adverse effect on our business, operating results, cash flows or financial condition should such litigation or claim be resolved unfavorably.

Item 4. ***Mine Safety Disclosures***

None.

PART II

Item 5. ***Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities***

Our common stock is traded on the Nasdaq Global Select Market under the symbol "NBIX".

At January 31, 2020, there were approximately 49 stockholders of record of our common stock. We have not paid any cash dividends on our common stock since inception and do not anticipate paying cash dividends in the foreseeable future.

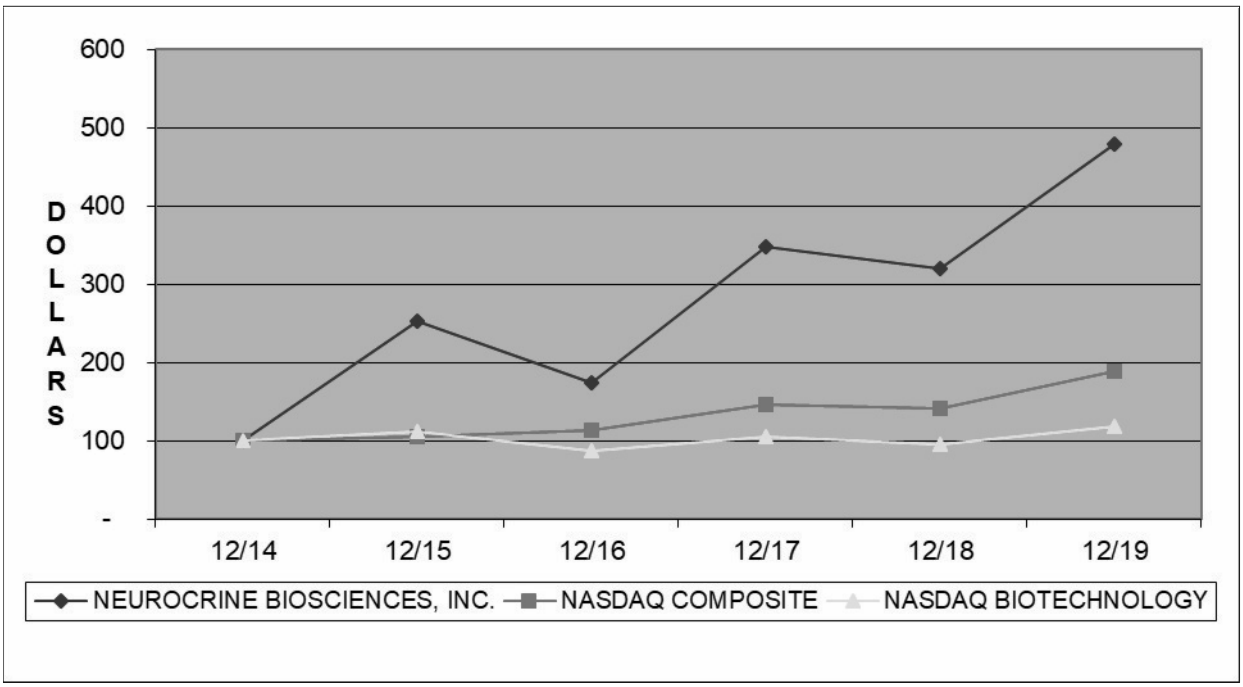
Information about our equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report on Form 10-K.

Recent Sales of Unregistered Securities and Issuer Purchases of Equity Securities

There were no unregistered sales of our equity securities during 2019. In addition, we did not repurchase any of our equity securities during 2019.

Stock Performance Graph and Cumulative Total Return*

The graph below shows the cumulative total stockholder return assuming the investment of $100 on December 31, 2014 (and the reinvestment of dividends thereafter) in each of (i) Neurocrine Biosciences, Inc.'s common stock, (ii) the Nasdaq Composite Index and (iii) the Nasdaq Biotechnology Index. The comparisons in the graph below are based upon historical data and are not indicative of, or intended to forecast, future performance of our common stock or Indexes.



** The material in this section is not "soliciting material", is not deemed "filed" with the Securities and Exchange Commission (SEC) and is not to be incorporated by reference into any of our SEC filings whether made before or after the date hereof and irrespective of any general incorporation language in any such SEC filing except to the extent we specifically incorporate this section by reference.*

Item 6. ***Selected Financial Data***

The following selected financial data have been derived from our audited financial statements. The information set forth below is not necessarily indicative of our results of future operations and should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and notes thereto appearing elsewhere in this Annual Report on Form 10-K.

(in thousands, except per share data)	2019	2018	2017	2016	2015
Consolidated Statements of Operations Data					
Revenues:					
Product sales, net	$ 752,900	$ 409,608	$ 116,626	$ —	$ —
Collaboration revenue	35,187	41,632	45,000	15,000	19,769
Total revenues	788,087	451,240	161,626	15,000	19,769
Operating expenses:					
Cost of sales	7,428	4,889	1,254	—	—
Research and development	200,042	155,774	91,827	94,291	81,491
Acquired in-process research and development	154,272	4,750	30,000	—	—
Sales, general and administrative	354,062	248,932	169,906	68,081	32,480
Total operating expenses	715,804	414,345	292,987	162,372	113,971
Operating income (loss)	72,283	36,895	(131,361)	(147,372)	(94,202)
Other (expense) income:					
Interest expense	(31,963)	(30,530)	(19,523)	—	—
Unrealized loss on restricted equity securities	(12,987)	—	—	—	—
Investment income and other, net	19,209	15,476	8,342	6,282	5,273
Total other (expense) income	(25,741)	(15,054)	(11,181)	6,282	5,273
Income (loss) before provision for income taxes	46,542	21,841	(142,542)	(141,090)	(88,929)
Provision for income taxes	9,530	730	—	—	—
Net income (loss)	$ 37,012	$ 21,111	$ (142,542)	$ (141,090)	$ (88,929)
Net income (loss) per share, basic	$ 0.40	$ 0.23	$ (1.62)	$ (1.63)	$ (1.05)
Net income (loss) per share, diluted	$ 0.39	$ 0.22	$ (1.62)	$ (1.63)	$ (1.05)
Weighted average common shares outstanding, basic	91,627	90,235	88,089	86,713	84,496
Weighted average common shares outstanding, diluted	95,732	95,386	88,089	86,713	84,496
Consolidated Balance Sheets Data					
Cash and cash equivalents and marketable securities	$ 970,178	$ 866,941	$ 763,290	$ 350,840	$ 461,679
Working capital [(1)]	$ 265,747	$ 649,544	$ 500,493	$ 280,028	$ 358,359
Total assets	$ 1,306,040	$ 993,151	$ 817,591	$ 365,086	$ 474,785
Convertible senior notes	$ 408,807	$ 388,496	$ 369,618	$ —	$ —
Accumulated deficit	$(1,132,700)	$(1,177,755)	$(1,198,866)	$(1,056,324)	$ (915,234)
Total stockholders' equity	$ 636,923	$ 480,765	$ 372,138	$ 314,877	$ 424,454

(1) At December 31, 2019, the conditional conversion feature of the 2024 Notes had been triggered, allowing holders of 2024 Notes to convert their 2024 Notes at any time during the period beginning on January 2, 2020 and ending at the close of business on March 31, 2020. Accordingly, the 2024 Notes have been classified as a current liability at December 31, 2019.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations section contains forward-looking statements pertaining to, among other things, the commercialization of our product and product candidates, the expected continuation of our collaborative agreements, the receipt of research and development payments thereunder, the future achievement of various milestones in product development and the receipt of payments related thereto, the potential receipt of royalty payments, preclinical testing and clinical trials of potential products, the period of time that our existing capital resources will meet our funding requirements, and our financial results of operations. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various risks and uncertainties, including those set forth in this Annual Report on Form 10-K under the heading "Item 1A. Risk Factors." See "Forward-Looking Statements" in Part I of this Annual Report on Form 10-K.

Overview

We are a commercial-stage biopharmaceutical company focused on discovering and developing innovative and life-changing treatments for patients with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. We specialize in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. Currently, we are primarily focused on the commercialization of INGREZZA® (valbenazine) in the United States, or U.S., our first U.S. Food and Drug Administration, or FDA, approved product.

In April 2017, we received FDA approval of our first product, INGREZZA, for the treatment of adults with tardive dyskinesia, or TD. Shortly after receiving FDA approval, we began commercializing INGREZZA in the U.S. using a specialty sales force primarily focused on educating physicians who treat patients with TD, including psychiatrists and neurologists.

In addition to our first marketed product, our collaboration partner, AbbVie Inc., or AbbVie, received approval of ORILISSA® (elagolix) for the management of moderate to severe endometriosis pain in women from the FDA in July 2018 and Health Canada in October 2018. We receive royalties at tiered percentage rates on any net sales of ORILISSA.

Our late-stage pipeline includes opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients, elagolix for the treatment of heavy menstrual bleeding, or HMB, associated with uterine fibroids in women, valbenazine for the treatment of chorea in adult patients with Huntington's disease, or HD, and NBIb-1817 (VY-AADC) for the treatment of advanced Parkinson's disease patients with motor fluctuations that are refractory to medical management. Our product candidates for uterine fibroids and advanced Parkinson's disease are partnered with AbbVie and Voyager Therapeutics, Inc., or Voyager, respectively.

In the third quarter of 2019, the FDA accepted our new drug application, or NDA, for opicapone for the treatment of Parkinson's disease with a Prescription Drug User Fee Act, or PDUFA, target action date of April 26, 2020. Also, in the third quarter of 2019, the FDA accepted AbbVie's NDA for elagolix for the treatment of uterine fibroids with a PDUFA target action date in the second quarter of 2020.

Our early-stage clinical pipeline includes crinecerfont (NBI-74788) for the treatment of congenital adrenal hyperplasia, or CAH, elagolix for the treatment of polycystic ovary syndrome, or PCOS, in women and a vesicular monoamine transporter 2, or VMAT2, inhibitor with potential use in the treatment of neurologic and psychiatric disorders. Our product candidate for PCOS is partnered with AbbVie.

In December 2019, we entered into a license and collaboration agreement with Xenon Pharmaceuticals Inc, or Xenon, a clinical-stage biopharmaceutical company. Pursuant to the terms of the agreement, we acquired an exclusive license to NBI-921352 (XEN901), a clinical-stage candidate with potential in epilepsy.

In January 2020, we announced a collaboration and optional licensing agreement with Idorsia Pharmaceuticals Ltd, granting us an option to license ACT-709478, a potent, selective, orally active and brain penetrating T-type calcium channel blocker, in clinical development for the treatment of a rare pediatric epilepsy. The option also includes a research collaboration to discover, identify and develop additional novel T-type calcium channel blockers.

Going forward, we expect to augment our product pipeline by acquiring, through license or otherwise, additional drug candidates for research and development, or R&D, and potential commercialization.

Results of Operations

Revenues

The following table presents our revenues by category.

	Year Ended December 31,		
(in thousands)	2019	2018	2017
INGREZZA product sales, net	$ 752,900	$ 409,608	$ 116,626
Collaboration revenue	35,187	41,632	45,000
Total revenues	$ 788,087	$ 451,240	$ 161,626

Product Sales, net

In April 2017, the FDA approved INGREZZA for the treatment of TD. INGREZZA became available for prescription in late April 2017. Net product sales were $752.9 million for 2019, $409.6 million for 2018 and $116.6 million for 2017.

Collaboration Revenue

Collaboration revenue reflects event-based milestones, royalties and license fees earned under our collaboration agreements with AbbVie and Mitsubishi Tanabe Pharma Corporation, or MTPC.

In the third quarter of 2019, we recognized a $20.0 million event-based milestone as revenue upon the FDA's acceptance of AbbVie's NDA submission of elagolix for the treatment of uterine fibroids. In the third quarter of 2018, we recognized a $40.0 million event-based milestone as revenue upon the FDA-approval of AbbVie's ORILISSA for the management of moderate to severe endometriosis pain in women. In the third quarter of 2017, AbbVie's NDA submission for elagolix in endometriosis was accepted as filed by the FDA, resulting in the achievement of a $30.0 million event-based milestone, which we recognized as revenue in the fourth quarter of 2017. We also recognized $15.0 million in development event-based payments as revenue in 2017, resulting from Mitsubishi Tanabe Pharma Corporation's, or MTPC's, initiation of Phase II/III development of INGREZZA in TD in Asia.

We are eligible to receive royalties at tiered percentage rates on any net sales of ORILISSA. We recognized royalty revenues on net sales of ORILISSA of $14.3 million for 2019 and $1.6 million for 2018. We recognized no royalty revenues in 2017.

Operating Expenses

Cost of Sales

Cost of sales was $7.4 million for 2019, $4.9 million for 2018 and $1.3 million for 2017.

Research and Development

We support our drug discovery and development efforts through the commitment of significant resources to discovery, R&D programs, and business development opportunities.

Costs are reflected in the applicable development stage based upon the program status when incurred. Therefore, the same program could be reflected in different development stages in the same reporting period. For several of our programs, the R&D activities are part of our collaborative and other relationships.

Late stage consists of costs incurred related to product candidates in Phase II registrational studies and onwards. Early stage consists of costs incurred related to product candidates in post-investigational new drug application, or IND, through Phase II non-registrational studies. Research and discovery consists of pre-IND costs. Milestone expenses reflect payments made in connection with our collaborative and other relationships. Payroll and benefits consists of costs incurred for salaries and wages, payroll taxes, benefits, and share-based compensation associated with employees involved in ongoing R&D activities. Share-based compensation may fluctuate from period to period based on factors that are not within our control, such as our stock price on the dates share-based grants are issued.

Facilities and other consists of indirect costs incurred in support of overall R&D activities and non-specific programs, including activities that benefit multiple programs, such as management costs, as well as depreciation, information technology, and facility-based expenses. These costs are not allocated to a specific program or stage.

The following table presents R&D expense by category:

	Year Ended December 31,		
(in thousands)	**2019**	**2018**	**2017**
Late stage	$ 43,673	$ 14,237	$ 6,423
Early stage	25,260	41,659	18,917
Research and discovery	24,642	17,047	11,173
Milestone payments	10,000	10,000	—
Payroll and benefits	71,347	61,950	42,180
Facilities and other	25,120	10,881	13,134
Total R&D expense	$ 200,042	$ 155,774	$ 91,827

R&D expense was $200.0 million in 2019, $155.8 million in 2018 and $91.8 million in 2017. The increase in R&D expense from 2018 to 2019 was primarily due to funding of development activities in connection with our collaboration with Voyager, ongoing progression of our product candidate pipeline and increased personnel expenses on higher headcount. The increase in R&D expense from 2017 to 2018 was primarily due to the ongoing progression of our product candidate pipeline and increased personnel expenses on higher headcount.

Acquired In-Process Research and Development

In-process research and development, or IPR&D, was $154.3 million for 2019, $4.8 million for 2018 and $30.0 million for 2017. In connection with the payment of the upfront fee pursuant to our collaboration and license agreement with Voyager, we recorded a

charge of $113.1 million, accounted for as IPR&D, in the first quarter of 2019. In the second quarter of 2019, we entered into an amendment to the collaboration and license agreement with Voyager, pursuant to which we paid Voyager $5.0 million upfront, accounted for as IPR&D, to obtain outside the U.S. rights to the Friedreich's ataxia program. In connection with the payment of the upfront fee pursuant to our collaboration with Xenon, we recorded a charge of $36.2 million, accounted for as IPR&D, in the fourth quarter of 2019. In the third quarter of 2018, we entered into a research collaboration with Jnana Therapeutics Inc., or Jnana, pursuant to which we paid Jnana $4.8 million upfront, accounted for as IPR&D, to obtain access to their proprietary drug discovery platform. In connection with the payment of the upfront fee pursuant to our exclusive license agreement with BIAL – Portela & Ca, S.A., we recorded a charge of $30.0 million, accounted for as IPR&D, in the first quarter of 2017.

Sales, General and Administrative

Sales, general and administrative, or SG&A, expense was $354.1 million in 2019, $248.9 million in 2018 and $169.9 million in 2017. The increase in SG&A expense from 2018 to 2019 was primarily due to the sales force expansion completed in the third quarter of 2018, the national launch of a patient-focused disease state awareness campaign, Talk About TD, and an increase in the Branded Pharmaceutical Drug fee expense. The increase in SG&A expense from 2017 to 2018 was primarily due to our commercial launch for INGREZZA in April 2017 and the subsequent sales force expansion in the third quarter of 2018.

Other Expense

Other expense, net, was $25.7 million in 2019, $15.1 million in 2018 and $11.2 million in 2017. The increase in other expense, net, from 2018 to 2019 was primarily due to an unrealized loss of $13.0 million to adjust our equity investments in Voyager and Xenon to fair value as of December 31, 2019. The increase in other expense, net, from 2017 to 2018 was primarily due to higher interest expense resulting from our issuance of $517.5 million of 2.25% convertible senior notes due May 15, 2024, or the 2024 Notes, in May 2017.

Provision for Income Taxes

Our provision for income taxes was $9.5 million for 2019 and $0.7 million for 2018, reflecting estimated current state income taxes for both periods. We did not have a provision for income taxes for 2017. At December 31, 2019 and 2018, we had full valuation allowances against our net deferred tax assets as realization was uncertain. As a result, our tax expense for both periods varies from the statutory tax rate primarily due to changes in our valuation allowances, net of other permanent book/tax differences, tax credits generated and impacts of changes in tax laws.

Net Income (Loss)

Net income was $37.0 million, or $0.39 diluted earnings per share, for 2019 and $21.1 million, or $0.22 diluted earnings per share, for 2018. We incurred a net loss of $142.5 million, or $1.62 net loss per share, for 2017. The change from 2018 to 2019 was primarily the result of increased INGREZZA net product sales, offset by $154.3 million of IPR&D in connection with our collaborations with Voyager and Xenon, ongoing support for the commercial launch of INGREZZA for TD and progression of our clinical pipeline. The change from 2017 to 2018 was primarily the result of increased INGREZZA net product sales, offset by ongoing support for the commercial launch of INGREZZA for TD and progression of our clinical pipeline.

Liquidity and Capital Resources

At December 31, 2019, our cash, cash equivalents and marketable securities totaled $970.2 million, compared with $866.9 million at December 31, 2018.

Net cash provided by operating activities was $152.1 million for 2019 and $101.4 million for 2018. Net cash used in operating activities was $94.3 million for 2017. The increase in positive cash flow from 2018 to 2019 was primarily driven by increased INGREZZA net product sales, partially offset by incremental INGREZZA investment and upfront payments of $118.1 million and $36.2 million in connection with our collaborations with Voyager and Xenon, respectively. The significant change to positive cash flow generated from operations from 2017 to 2018 was primarily driven by increased INGREZZA net product sales and the achievement of a $40.0 million event-based milestone related to the FDA's approval of ORILISSA.

Net cash used in investing activities was $211.1 million for 2019, $242.9 million for 2018 and $251.3 million for 2017. The change in net cash used in investing activities for all periods presented resulted primarily from timing differences in purchases, sales and maturities of marketable securities and changes in our portfolio-mix between cash equivalents and short-term and long-term investment holdings. Net cash used in investing activities for 2019 also reflects equity investments of $54.7 million in Voyager in the first quarter of 2019 and $14.2 million in Xenon in the fourth quarter of 2019.

Net cash provided by financing activities was $27.3 million for 2019, $29.5 million for 2018 and $516.6 million in 2017. Net cash provided by financing activities for 2019 and 2018 reflected proceeds from stock option issuances. Net cash provided by financing activities for 2017 primarily reflected net proceeds of $502.8 million associated with our issuance of the 2024 Notes in May 2017.

Shelf Registration Statement. In February 2017, we filed an automatic shelf registration statement which immediately became effective by rule of the Securities and Exchange Commission, or SEC. We sold no securities under this shelf registration statement in 2019, 2018 or 2017.

Convertible Senior Notes. In May 2017, we issued $517.5 million of 2.25% convertible senior notes due May 15, 2024, or the 2024 Notes. At December 31, 2019, the conditional conversion feature of the 2024 Notes had been triggered, allowing holders of 2024

Notes to convert their 2024 Notes at any time during the period beginning on January 2, 2020 and ending at the close of business on March 31, 2020.

Off-Balance Sheet Arrangements

As of December 31, 2019, we did not have any off-balance sheet arrangements.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon financial statements that we have prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses, and related disclosures. On an on-going basis, we evaluate these estimates, including those related to revenue recognition and share-based compensation. Estimates are based on historical experience, information received from third parties and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Historically, revisions to our estimates have not resulted in a material change to the financial statements. The items in our financial statements requiring significant estimates and judgments are as follows:

Product Sales, Net

Our product sales, net consist of sales of INGREZZA in the U.S. to a limited network of specialty pharmacy providers, which delivers INGREZZA to patients by mail, and a specialty distributor, which distributes INGREZZA primarily to closed-door pharmacies and government facilities. Product sales, net are recognized at the time the customer takes possession of the product.

Revenues from product sales are recorded net of reserves established for applicable discounts and allowances that are offered within contracts with our customers, payors and other third parties. The transaction price, which includes variable consideration reflecting the impact of discounts and allowances, may be subject to constraint and is included in the net sales price only to the extent that it is probable that a significant reversal of the amount of the cumulative revenue recognized will not occur in a future period. Actual amounts may ultimately differ from our estimates. If actual results vary, we adjust these estimates, which could have an effect on earnings in the period of adjustment.

Our significant categories of sales discounts and allowances are as follows:

Product discounts – product discounts are based on payment terms extended to our customers, which include incentives offered for prompt payment. We maintain a reserve for product discounts based on our historical experience, including the timing of customer payments. To date, actual product discounts have not differed materially from our estimates.

Product returns – our contracts with customers provide for product returns only if the product is damaged or there has been an error in shipment. Returns based on product expiry are not permitted. To date, product returns have not been significant, and a reserve has not been established.

Government rebates – we are obligated to pay rebates for mandated discounts under the Medicaid Drug Rebate Program. The liability for such rebates consist of invoices received for claims from prior quarters that remain unpaid or for which an invoice has not been received and estimated rebates for the current applicable reporting period. Such rebates are primarily estimated based upon actual historical rebates, estimated payor mix, state and federal regulations and related contractual terms and are recorded as a reduction of product sales in the same period the related revenue is recognized. To date, actual government rebates have not differed materially from our estimates.

Chargebacks – the difference between the list price, or the price at which we sell INGREZZA product to our customers, and the contracted price, or the price at which our customers sell INGREZZA product to qualified healthcare professionals, is charged back to us by our customers. In addition to actual chargebacks received, we maintain a reserve for chargebacks based on estimated contractual discounts on INGREZZA product inventory levels on hand in our distribution channel. To date, actual chargebacks have not differed materially from our estimates.

Payor and pharmacy rebates – we are obligated to pay rebates as a percentage of sales under payor and pharmacy contracts. We estimate these rebates based on actual historical rebates, contractual rebate percentages, sales made through the payor channel and purchases made by pharmacies. To date, actual payor and pharmacy rebates have not differed materially from our estimates.

Copay assistance – we offer qualified patients financial assistance with prescription drug co-payments required by insurance. We accrue for copay assistance based on estimated claims and the cost per claim we expect to receive associated with inventory that remains in the distribution channel at period end. To date, actual copay assistance has not differed materially from our estimates.

Share-Based Compensation

For purposes of calculating share-based compensation, we estimate the fair value of share-based compensation awards using a Black-Scholes option-pricing model. The determination of the fair value of share-based compensation awards utilizing the Black-Scholes model is affected by our stock price and a number of assumptions, including but not limited to expected stock price volatility over the term of the awards and the expected term of stock options. Our stock options have characteristics significantly different from those of traded options, and changes in the assumptions can materially affect the fair value estimates. For example, an increase in the underlying stock price results in a significant increase in the Black-Scholes option-pricing. The fair value of performance-based

restricted stock units, or PRSUs, is estimated based on the closing sale price of our common stock on the date of grant. Expense recognition for PRSUs commences when attainment of the associated performance-based criteria is determined to be probable.

If factors change and we employ different assumptions, share-based compensation expense may differ significantly from what we have recorded in the past. If there is a difference between the assumptions used in determining share-based compensation expense and the actual factors which become known over time, we may change the input factors used in determining share-based compensation expense for future grants. These changes, if any, may materially impact our results of operations in the period such changes are made. For actual forfeitures, we recognize the adjustment to compensation expense in the period the forfeitures occur.

Additional Information

Refer to Note 1 to the consolidated financial statements for information on accounting pronouncements that have impacted or are expected to materially impact our consolidated financial condition, results of operations, or cash flows.

Factors That May Affect Future Financial Condition and Liquidity

The funding necessary to execute our business strategies is subject to numerous uncertainties, which may adversely affect our liquidity and capital resources. Marketing of approved pharmaceuticals and completion of clinical trials may take several years or more, but the length of time generally varies substantially according to the type, complexity, novelty and intended use of a product candidate. It is also important to note that if a clinical candidate is identified, the further development of that candidate can be halted or abandoned at any time due to a number of factors. These factors include, but are not limited to, funding constraints, safety or a change in market demand.

The nature and efforts required to develop our product candidates into commercially viable products include research to identify a clinical candidate, preclinical development, clinical testing, FDA approval and commercialization. In the pharmaceutical industry, total R&D spend for a drug candidate that successfully completes all stages of R&D and is commercialized may exceed $2 billion. Further, it can take in excess of ten years to complete all stages of R&D for a drug candidate.

We test our potential product candidates in numerous preclinical studies to identify disease indications for which our product candidates may show efficacy. We may conduct multiple clinical trials to cover a variety of indications for each product candidate. As we obtain results from trials, we may elect to discontinue clinical trials for certain product candidates or for certain indications in order to focus our resources on more promising product candidates or indications. The duration and the cost of clinical trials may vary significantly over the life of a project as a result of differences arising during the clinical trial protocol, including, among others, the following:

- we or the FDA or similar foreign regulatory authorities may suspend the trials;
- we may discover that a product candidate may cause harmful side effects;
- patient recruitment may be slower than expected; and
- patients may drop out of the trials.

For each of our programs, we periodically assess the scientific progress and merits of the programs to determine if continued R&D is economically viable. Certain of our programs have been terminated due to the lack of scientific progress and lack of prospects for ultimate commercialization. Because of the uncertainties associated with R&D of these programs, we may not be successful in achieving commercialization. As such, the ultimate timeline and costs to commercialize a product cannot be accurately estimated.

Our in-license, research and clinical development agreements are generally cancelable with written notice within 180 days or less. We may be required to pay up to $4.9 billion in milestone payments, plus sales royalties, in the event that all scientific research, development and commercialization milestones under these agreements are achieved.

Other than INGREZZA, which has been approved by the FDA for the treatment of TD, and ORILISSA (partnered with AbbVie), which has been approved by the FDA for the management of moderate to severe endometriosis pain in women, our product candidates have not yet achieved FDA regulatory approval, which is required before we can market them as therapeutic products in the U.S. In order to proceed to subsequent clinical trial stages and to ultimately achieve regulatory approval, the FDA must conclude that our clinical data establish safety and efficacy. We must satisfy the requirements of similar regulatory authorities in foreign countries in order to market products in those countries. The results from preclinical testing and early clinical trials may not be predictive of results in later clinical trials. It is possible for a candidate to show promising results in clinical trials, but subsequently fail to establish sufficient safety and efficacy data necessary to obtain regulatory approvals.

As a result of the uncertainties discussed above, among others, the duration and completion costs of our R&D projects, clinical trials, and post-marketing studies are difficult to estimate and are subject to considerable variation. Our inability to complete our R&D projects in a timely manner or our failure to enter into collaborative agreements, when appropriate, could significantly increase our capital requirements and could adversely impact our liquidity. These uncertainties could force us to seek additional, external sources of financing from time to time in order to continue with our business strategy. Our inability to raise additional capital, or to do so on terms reasonably acceptable to us, would jeopardize the future success of our business.

We currently have limited experience in marketing and selling pharmaceutical products. If we fail to maintain successful marketing, sales, and reimbursement capabilities, or fail to enter into successful arrangements with third parties, our product revenues may suffer. We also may be required to make further substantial expenditures if unforeseen difficulties arise in other areas of our business. In particular, our future capital requirements will depend on many factors, including:

- the commercial success of INGREZZA and/or ORILISSA;
- debt service obligations on the 2024 Notes;
- continued scientific progress in our R&D and clinical development programs;
- the magnitude and complexity of our research and development programs;
- progress with preclinical testing and clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- whether the FDA approves opicapone for the treatment of Parkinson's disease and elagolix for the treatment of uterine fibroids, both of which have a PDUFA target action date in the second quarter of 2020;
- the costs involved in filing and pursuing patent applications, enforcing patent claims, or engaging in interference proceedings or other patent litigation;
- competing technological and market developments;
- the establishment of additional strategic alliances;
- developments related to any future litigation;
- the cost of commercialization activities and arrangements, including manufacturing of our product candidates; and
- the cost of product in-licensing and any possible acquisitions.

We believe that our existing capital resources, funds generated by anticipated INGREZZA net product sales and investment income will be sufficient to satisfy our current and projected funding requirements for at least the next twelve months. However, we cannot guarantee that our existing capital resources and anticipated revenues will be sufficient to conduct and complete all of our research and development programs or commercialization activities as planned.

We may require additional funding to effectively commercialize INGREZZA, to continue our research and product development programs, to conduct preclinical studies and clinical trials, for operating expenses, to pursue regulatory approvals for our product candidates, for the costs involved in filing and prosecuting patent applications and enforcing or defending patent claims, if any, the cost of product in-licensing and any possible acquisitions, and we may require additional funding to establish manufacturing and marketing capabilities in the future. We may seek to access the public or private equity markets whenever conditions are favorable. For example, we have an effective shelf registration statement on file with the SEC which allows us to issue an unlimited number of shares of our securities from time to time. In addition, we issued $517.5 million of convertible debt in May 2017 and we have previously financed capital purchases and may continue to pursue opportunities to obtain additional debt financing in the future. We may also seek additional funding through strategic alliances or other financing mechanisms. We cannot assure you that adequate funding will be available on terms acceptable to us, if at all. Any additional equity financings will be dilutive to our stockholders and any additional debt may involve operating covenants that may restrict our business. If adequate funds are not available through these means, we may be required to curtail significantly one or more of our research or development programs or obtain funds through arrangements with collaborators or others. This may require us to relinquish rights to certain of our technologies, products or product candidates. To the extent that we are unable to obtain third-party funding for such expenses, we expect that increased expenses will result in increased cash flow losses from operations. We cannot assure you that we will successfully develop our products under development or that our approved products will generate revenues sufficient to enable us to earn a profit.

Contractual Obligations

Our contractual obligations as of December 31, 2019, are as follows:

(in millions)	Total	2020	2021	2022	2023	2024 and Thereafter
2024 Notes and related interest [1]	$ 569.7	$ 11.6	$ 11.6	$ 11.6	$ 11.6	$ 523.3
Operating leases [2]	160.9	8.6	10.8	13.1	13.9	114.5
Total contractual obligations	$ 730.6	$ 20.2	$ 22.4	$ 24.7	$ 25.5	$ 637.8

(1) In May 2017, we completed a private placement of $517.5 million in aggregate principal amount of 2.25% convertible senior notes scheduled to mature on May 15, 2024, unless earlier converted, redeemed, or repurchased. At December 31, 2019, the conditional conversion feature of the 2024 Notes had been triggered, allowing holders of 2024 Notes to convert their 2024 Notes at any time during the period beginning on January 2, 2020 and ending at the close of business on March 31, 2020. We may not redeem the 2024 Notes prior to May 15, 2021. On or after this date, at our election, we may redeem all, or any portion, of the 2024 Notes under certain circumstances. The 2024 Notes do not contain any financial or operating covenants or any restrictions on the payment of dividends, the issuance of other indebtedness or the issuance or repurchase of securities by us. There are customary events of default with respect to the 2024 Notes, including that upon certain events of default, 100% of the principal and accrued and unpaid interest on the 2024 Notes will automatically become due and payable. Amounts for the 2024 Notes and related interest in the table above assume that the 2024 Notes will be held until maturity.

(2) We lease our corporate headquarters, which consist of laboratory and office space located San Diego, California, under various operating lease agreements. In addition to minimum rental commitments, these operating leases may require us to pay additional amounts for taxes, insurance, maintenance and other operating expenses. The non-cancelable lease terms for these operating leases expire at various dates between 2029 and 2031 and do not include renewal options. Amounts for operating leases presented in the

table above reflect future minimum rental commitments under non-cancelable operating leases as of December 31 for each of the periods presented.

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

Interest Rate Risk

We are exposed to interest rate risk on our short-term investments. The primary objective of our investment activities is to preserve principal while at the same time maximizing yields without significantly increasing risk. To achieve this objective, we invest in highly liquid and high-quality government and other debt securities. To minimize our exposure due to adverse shifts in interest rates, we invest in short-term securities and ensure that the maximum average maturity of our investments does not exceed twelve months. If a 10% change in interest rates were to have occurred on December 31, 2019, this change would not have had a material effect on the fair value of our investment portfolio as of that date. Due to the short holding period of our investments, we have concluded that we do not have a material financial market risk exposure.

Item 8. ***Financial Statements and Supplementary Data***

NEUROCRINE BIOSCIENCES, INC.
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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Neurocrine Biosciences, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Neurocrine Biosciences, Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive income (loss), stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2019 and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 6, 2020 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-02

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019 due to the adoption of Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), and the related amendments.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

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

Reserves for government rebates related to product sales

Description of the Matter

The Company sells drugs to specialty pharmacies and specialty distributors in the US (collectively, "customers"). As described in Note 1 to the consolidated financial statements, the Company recognizes revenues for sales of INGREZZA to its customers after deducting management's estimates of reserves, including drug coverage gap rebates, it will provide under government rebate programs ("government rebates"). Estimated government rebates are presented within accounts payable and accrued liabilities on the consolidated balance sheet.

Auditing the estimates of government rebates was complex and judgmental due to the level of uncertainty involved in management's assumptions used in the measurement process. In particular, management was required to estimate, for product that remains in the distribution channel at December 31, 2019, the portion of product that is expected to be subject to a government rebate and the applicable contractual government rebate percentage by forecasting the revenue, the payor type underlying the revenue and the applicable rebate amount applicable for the payor type.

How We Addressed the Matter in Our Audit

We tested the Company's internal controls over management's process for estimating the portion of product that is expected to be subject to a government rebate for product that remains in the distribution channel at December 31, 2019 including controls over management's forecast of revenue and the accuracy of data used in the calculation.

To test management's estimate of government rebate reserves our audit procedures included, among others, evaluating the methodologies used, testing the significant assumptions discussed above and testing the completeness and accuracy of the underlying data used by the Company in its analyses. Specifically, we compared the significant assumptions to third-party reports used by the Company to estimate product remaining in the distribution channel at December 31, 2019. In addition, we compared the underlying government rebate percentages used in the Company's analyses to those published by the applicable government entity. We assessed the historical accuracy of management's rebate estimates, tested payments of rebates and performed a sensitivity analysis of significant assumptions to evaluate the changes in the rebate allowance that would result from changes in the assumptions.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1992.

San Diego, California

February 6, 2020

NEUROCRINE BIOSCIENCES, INC.
CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 112,279	$ 141,714
Marketable securities	558,245	509,199
Accounts receivable	126,575	57,406
Inventory	17,288	10,864
Other current assets	16,647	18,594
Total current assets	831,034	737,777
Marketable securities	299,654	216,028
Operating lease assets	74,364	—
Restricted equity securities	55,868	—
Property and equipment, net	41,914	33,869
Restricted cash	3,206	5,477
Total assets	$ 1,306,040	$ 993,151
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued liabilities	$ 141,285	$ 86,377
Convertible senior notes	408,807	—
Other current liabilities	15,195	1,856
Total current liabilities	565,287	88,233
Convertible senior notes	—	388,496
Noncurrent operating lease liabilities	86,756	—
Other long-term liabilities	17,074	35,657
Total liabilities	669,117	512,386
Stockholders’ equity:		
Preferred stock, $0.001 par value; 5,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.001 par value; 220,000 shares authorized; issued and outstanding shares were 92,272 and 90,797 at December 31, 2019 and 2018, respectively	92	91
Additional paid-in capital	1,768,118	1,660,361
Accumulated other comprehensive income (loss)	1,413	(1,932)
Accumulated deficit	(1,132,700)	(1,177,755)
Total stockholders’ equity	636,923	480,765
Total liabilities and stockholders’ equity	$ 1,306,040	$ 993,151

See accompanying notes to consolidated financial statements.

NEUROCRINE BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
AND COMPREHENSIVE INCOME (LOSS)

(in thousands, except per share data)	Year Ended December 31, 2019	2018	2017
Revenues:			
Product sales, net	$ 752,900	$ 409,608	$ 116,626
Collaboration revenue	35,187	41,632	45,000
Total revenues	788,087	451,240	161,626
Operating expenses:			
Cost of sales	7,428	4,889	1,254
Research and development	200,042	155,774	91,827
Acquired in-process research and development	154,272	4,750	30,000
Sales, general and administrative	354,062	248,932	169,906
Total operating expenses	715,804	414,345	292,987
Operating income (loss)	72,283	36,895	(131,361)
Other (expense) income:			
Interest expense	(31,963)	(30,530)	(19,523)
Unrealized loss on restricted equity securities	(12,987)	—	—
Investment income and other, net	19,209	15,476	8,342
Total other expense, net	(25,741)	(15,054)	(11,181)
Income (loss) before provision for income taxes	46,542	21,841	(142,542)
Provision for income taxes	9,530	730	—
Net income (loss)	37,012	21,111	(142,542)
Unrealized gain (loss) on marketable securities	3,345	(82)	(1,532)
Comprehensive income (loss)	$ 40,357	$ 21,029	$ (144,074)
Net income (loss) per share, basic	$ 0.40	$ 0.23	$ (1.62)
Net income (loss) per share, diluted	$ 0.39	$ 0.22	$ (1.62)
Weighted average common shares outstanding, basic	91,627	90,235	88,089
Weighted average common shares outstanding, diluted	95,732	95,386	88,089

See accompanying notes to consolidated financial statements.

NEUROCRINE BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands)	Common Stock Shares	Common Stock Amount	Additional Paid in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2016	86,883	$ 87	$1,371,432	$ (318)	$(1,056,324)	$ 314,877
Net loss	—	—	—	—	(142,542)	(142,542)
Unrealized loss on marketable securities	—	—	—	(1,532)	—	(1,532)
Share-based compensation expense	—	—	42,522	—	—	42,522
Issuance of common stock for vested restricted stock units	562	1	—	—	—	1
Issuance of common stock for stock option exercises	1,349	1	13,863	—	—	13,864
Equity component of convertible debt, net	—	—	144,948	—	—	144,948
Balance at December 31, 2017	88,794	$ 89	$1,572,765	$ (1,850)	$(1,198,866)	$ 372,138
Net income	—	—	—	—	21,111	21,111
Unrealized loss on marketable securities	—	—	—	(82)	—	(82)
Share-based compensation expense	—	—	58,068	—	—	58,068
Issuance of common stock for vested restricted stock units	429	—	—	—	—	—
Issuance of common stock for stock option exercises	1,574	2	29,528	—	—	29,530
Balance at December 31, 2018	90,797	$ 91	$1,660,361	$ (1,932)	$(1,177,755)	$ 480,765
Net income	—	—	—	—	37,012	37,012
Unrealized gain on marketable securities	—	—	—	3,345	—	3,345
Share-based compensation expense	—	—	75,262	—	—	75,262
Cumulative-effect adjustment to equity due to adoption of ASU 2016-02	—	—	—	—	8,043	8,043
Issuance of common stock for vested restricted stock units	416	—	—	—	—	—
Issuance of common stock for stock option exercises	981	1	27,312	—	—	27,313
Issuance of common stock for employee stock purchase plan	78	—	5,183	—	—	5,183
Balance at December 31, 2019	92,272	$ 92	$1,768,118	$ 1,413	$(1,132,700)	$ 636,923

See accompanying notes to consolidated financial statements.

NEUROCRINE BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Year Ended December 31, 2019	2018	2017
Cash Flows from Operating Activities:			
Net income (loss)	$ 37,012	$ 21,111	$ (142,542)
Reconciliation of net income (loss) to net cash provided by (used in) operating activities:			
Share-based compensation expense	75,262	58,068	42,522
Depreciation	7,452	4,024	2,400
Amortization of debt discount	18,922	17,552	10,937
Amortization of debt issuance costs	1,389	1,326	848
Net (accretion of discounts) amortization of premiums on investments	(1,965)	1,449	1,756
Change in fair value of restricted equity securities	12,987	—	—
Other, net	754	(409)	(1,445)
Changes in operating assets and liabilities:			
Accounts receivable	(69,169)	(25,113)	(31,127)
Inventory	(6,424)	(3,524)	(1,024)
Accounts payable and accrued liabilities	53,955	24,223	27,338
Other changes in operating assets and liabilities, net	21,879	2,657	(3,994)
Net cash provided by (used in) operating activities	152,054	101,364	(94,331)
Cash Flows from Investing Activities:			
Purchases of marketable securities	(797,169)	(545,962)	(583,408)
Sales and maturities of marketable securities	669,691	327,825	339,088
Purchase of restricted equity securities	(68,855)	—	—
Purchases of property and equipment	(14,748)	(24,812)	(6,940)
Proceeds from sales of property and equipment	8	34	7
Net cash used in investing activities	(211,073)	(242,915)	(251,253)
Cash Flows from Financing Activities:			
Issuance of common stock	27,313	29,530	13,865
Proceeds from issuance of convertible senior notes, net	—	—	502,781
Net cash provided by financing activities	27,313	29,530	516,646
Change in cash and cash equivalents and restricted cash	(31,706)	(112,021)	171,062
Cash and cash equivalents and restricted cash at beginning of period	147,191	259,212	88,150
Cash and cash equivalents and restricted cash at end of period	$ 115,485	$ 147,191	$ 259,212
Supplemental Disclosure:			
Cash paid for interest	$ 11,644	$ 11,644	$ 6,242
Cash paid for income taxes	$ 507	$ —	$ —
Non-cash capital expenditures	$ 953	$ 2,318	$ —

See accompanying notes to consolidated financial statements.

Note 1. Organization and Summary of Significant Accounting Policies

Business Activities. Neurocrine Biosciences, Inc., or Neurocrine, the Company, we, our or us, was incorporated in California in 1992 and reincorporated in Delaware in 1996. Neurocrine Continental, Inc., is a Delaware corporation and a wholly owned subsidiary of Neurocrine. We also have two wholly-owned Irish subsidiaries, Neurocrine Therapeutics, Ltd. and Neurocrine Europe, Ltd. both of which were formed in December 2014 and are inactive.

We are a commercial-stage biopharmaceutical company focused on discovering and developing innovative and life-changing treatments for patients with serious, challenging and under-addressed neurological, endocrine and psychiatric disorders. We specialize in targeting and interrupting disease-causing mechanisms involving the interconnected pathways of the nervous and endocrine systems. Currently, we are primarily focused on the commercialization of INGREZZA® (valbenazine) in the United States, our first U.S. Food and Drug Administration, or FDA, approved product.

In April 2017, we received FDA approval of our first product, INGREZZA, for the treatment of adults with tardive dyskinesia, or TD. Shortly after receiving FDA approval, we began commercializing INGREZZA in the U.S. using a specialty sales force primarily focused on educating physicians who treat patients with TD, including psychiatrists and neurologists.

In addition to our first marketed product, our collaboration partner, AbbVie Inc., or AbbVie, received approval of ORILISSA® (elagolix) for the management of moderate to severe endometriosis pain in women from the FDA in July 2018 and Health Canada in October 2018. We are eligible to receive royalties at tiered percentage rates on any net sales of ORILISSA.

Our late-stage pipeline includes opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients, elagolix for the treatment of heavy menstrual bleeding, or HMB, associated with uterine fibroids in women, valbenazine for the treatment of chorea in adult patients with Huntington’s disease, or HD, and NBIB-1817 (VY-AADC) for the treatment of advanced Parkinson’s disease patients with motor fluctuations that are refractory to medical management. Our product candidates for uterine fibroids and advanced Parkinson’s disease are partnered with AbbVie and Voyager Therapeutics, Inc., or Voyager, respectively.

In December 2019, we entered into a license and collaboration agreement with Xenon Pharmaceuticals Inc, or Xenon, a clinical-stage biopharmaceutical company. Pursuant to the terms of the agreement, we acquired an exclusive license to NBI-921352 (XEN901), a clinical-stage candidate with potential in epilepsy.

In January 2020, we announced a collaboration and optional licensing agreement with Idorsia Pharmaceuticals Ltd, granting us an option to license ACT-709478, a potent, selective, orally active and brain penetrating T-type calcium channel blocker, in clinical development for the treatment of a rare pediatric epilepsy. The option also includes a research collaboration to discover, identify and develop additional novel T-type calcium channel blockers.

Principles of Consolidation. The consolidated financial statements include the accounts of Neurocrine as well as our wholly owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation.

Reclassifications. Certain amounts in the consolidated financial statements for 2018 and 2017 have been reclassified to conform with the presentation adopted in the current year period, including an increase of $4.8 million and $30.0 million to acquired in-process research and development for 2018 and 2017, respectively, and a corresponding decrease to research and development in the same periods. These reclassifications had no impact on operating income (loss), net income (loss) or net income (loss) per share.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America, or GAAP, requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes. Actual results could differ from those estimates.

Industry Segment and Geographic Information. We operate in a single industry segment – the discovery, development and marketing of pharmaceuticals for the treatment of neurological and endocrine-based diseases and disorders. We had no foreign-based operations during any of the years presented.

Cash Equivalents. We consider all highly liquid investments that are readily convertible into cash and have an original maturity of three months or less at the time of purchase to be cash equivalents.

Accounts Receivable. Accounts receivable are recorded net of customer allowances for prompt payment discounts, chargebacks and any allowance for doubtful accounts. We estimate the allowance for doubtful accounts based on existing contractual payment terms, actual payment patterns of our customers and individual customer circumstances. To date, an allowance for doubtful accounts has not been material.

Marketable Securities. Marketable securities consist of investments in certificates of deposit, corporate debt securities and securities of government-sponsored entities. We classify marketable securities as available-for-sale. Marketable securities are recorded at fair value, with unrealized gains and losses included in comprehensive income (loss), until realized. Realized gains and losses are included in investment income and other, net on a specific-identification basis. Marketable securities classified as current have maturities of less than one year. Marketable securities classified as non-current have maturities of one to two years.

We review marketable securities for other-than-temporary impairment whenever the fair value of a marketable security is less than the amortized cost and evidence indicates that a marketable security's carrying amount is not recoverable within a reasonable period of time. Factors considered in determining whether an impairment is other-than-temporary include the length of time and extent to which the marketable security has been less than the cost basis, the financial condition of the issuer and our intent and ability to hold such marketable security until recovery of the associated amortized cost basis. Based on our evaluation, no such other-than-temporary impairments were identified at December 31, 2019 and 2018. Further, we do not intend to sell our marketable security investments and it is not more likely than not that we will be required to sell these investments before recovery of their amortized cost bases, which may be maturity.

Restricted Equity Securities. Investments in equity securities of certain companies that are subject to holding period restrictions longer than one year are carried at fair value using an option pricing valuation model. The most significant assumptions within the option pricing valuation model are the term of the restrictions and the stock price volatility, which is based upon the historical volatility of similar companies. Unrealized gains and losses on investments in restricted equity securities are included in other expense, net.

Fair Value of Financial Instruments. We record cash equivalents, marketable securities and restricted equity securities at fair value based on a fair value hierarchy that distinguishes between assumptions based on market data (observable inputs) and our own assumptions (unobservable inputs). The hierarchy consists of three levels:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 – Quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability.

Level 3 – Unobservable inputs that reflect our own assumptions about the assumptions that market participants would use in pricing the asset or liability when there is little, if any, market activity for the asset or liability at the measurement date.

The fair value of marketable securities is determined using proprietary valuation models and analytical tools, which utilize market pricing or prices for similar instruments that are both objective and publicly available, such as matrix pricing or reported trades, benchmark yields, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities and bids and offers.

The fair value of restricted equity securities is determined using an option pricing valuation model. The most significant assumptions within the option pricing valuation model are the term of the restrictions and the stock price volatility, which is based upon the historical volatility of similar companies. Significant changes in any of those inputs in isolation would result in a significantly higher or lower fair value measurement.

The carrying amounts of accounts receivable and accounts payable and accrued liabilities approximate their fair values due to their short-term maturities.

There were no transfers between levels in the fair value hierarchy during 2019 or 2018.

Inventory. Inventory is valued at the lower of cost or net realizable value. We determine the cost of inventory using the standard-cost method, which approximates actual cost based on the first-in, first-out method. We assess the valuation of our inventory on a quarterly basis and adjust the value for excess and obsolete inventory to the extent management determines that the cost cannot be recovered based on estimates about future demand. Inventory costs resulting from these adjustments are recognized as cost of sales in the period in which they are incurred. When future commercialization is considered probable and the future economic benefit is expected to be realized, based on management's judgment, we capitalize pre-launch inventory costs prior to regulatory approval.

Property and Equipment. Property and equipment are stated at cost and depreciated over the estimated useful lives of the assets using the straight-line method. Equipment is depreciated over an average estimated useful life of three to seven years. Leasehold improvements are depreciated over the shorter of their estimated useful lives or the remaining lease term. Depreciation expense was $7.5 million for 2019, $4.0 million for 2018 and $2.4 million for 2017.

Impairment of Long-Lived Assets. We review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. If indicators of impairment exist, we assess the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through undiscounted future operating cash flows. If the carrying amount is not recoverable, we measure the amount of any impairment by comparing the carrying value of the asset to the present value of the expected future cash flows associated with the use of the asset.

Revenue Recognition. We recognize revenue when our customer obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods or services. Revenue is recognized using a five-step model: (i) identify contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenues when (or as) we satisfy the performance obligation.

Product Sales, Net

Our product sales, net consist of sales of INGREZZA in the U.S. to a limited network of specialty pharmacy providers, which delivers INGREZZA to patients by mail, and a specialty distributor, which distributes INGREZZA primarily to closed-door pharmacies and government facilities. Product sales, net are recognized at the time the customer takes possession of the product.

Revenues from product sales are recorded net of reserves established for applicable discounts and allowances that are offered within contracts with our customers, payors and other third parties. Our process for estimating reserves established for these variable consideration components does not differ materially from historical practices. The transaction price, which includes variable consideration reflecting the impact of discounts and allowances, may be subject to constraint and is included in the net sales price only to the extent that it is probable that a significant reversal of the amount of the cumulative revenue recognized will not occur in a future period. Actual amounts may ultimately differ from our estimates. If actual results vary, we adjust these estimates, which could have an effect on earnings in the period of adjustment.

Our significant categories of sales discounts and allowances are as follows:

Product discounts – product discounts are based on payment terms extended to our customers, which include incentives offered for prompt payment. We maintain a reserve for product discounts based on our historical experience, including the timing of customer payments. To date, actual product discounts have not differed materially from our estimates.

Product returns – our contracts with customers provide for product returns only if the product is damaged or there has been an error in shipment. Returns based on product expiry are not permitted. To date, product returns have not been significant, and a reserve has not been established.

Government rebates – we are obligated to pay rebates for mandated discounts under the Medicaid Drug Rebate Program. The liability for such rebates consist of invoices received for claims from prior quarters that remain unpaid or for which an invoice has not been received and estimated rebates for the current applicable reporting period. Such rebates are primarily estimated based upon, actual historical rebates, estimated payor mix, state and federal regulations and related contractual terms and are recorded as a reduction of product sales in the same period the related revenue is recognized. To date, actual government rebates have not differed materially from our estimates.

Chargebacks – the difference between the list price, or the price at which we sell INGREZZA product to our customers, and the contracted price, or the price at which our customers sell INGREZZA product to qualified healthcare professionals, is charged back to us by our customers. In addition to actual chargebacks received, we maintain a reserve for chargebacks based on estimated contractual discounts on INGREZZA product inventory levels on hand in our distribution channel. To date, actual chargebacks have not differed materially from our estimates.

Payor and pharmacy rebates – we are obligated to pay rebates as a percentage of sales under payor and pharmacy contracts. We estimate these rebates based on actual historical rebates, contractual rebate percentages, sales made through the payor channel and purchases made by pharmacies. To date, actual payor and pharmacy rebates have not differed materially from our estimates.

Copay assistance – we offer qualified patients financial assistance with prescription drug co-payments required by insurance. We accrue for copay assistance based on estimated claims and the cost per claim we expect to receive associated with inventory that remains in the distribution channel at period end. To date, actual copay assistance has not differed materially from our estimates.

Collaboration Revenue

We have entered into collaboration and licensing agreements under which we license certain rights to our product candidates to third parties. The terms of these arrangements typically include payment to us of one or more of the following: non-refundable, up-front license fees; development, regulatory, and/or commercial milestone payments; and royalties on net sales of licensed products.

Licenses of intellectual property – if the license to our intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, we recognize revenue from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are bundled with other promises, we use judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue from non-refundable, up-front fees. We evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition.

Milestone payments – at the inception of each arrangement that includes developmental, regulatory or commercial milestone payments, we evaluate whether achieving the milestones is considered probable and estimate the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the value of the associated milestone is included in the transaction price. Milestone payments that are not within our control, such as approvals from regulators or where attainment of the specified event is dependent on the development activities of a third party, are not considered probable of being achieved until those approvals are received or the specified event occurs. Revenue is recognized from the satisfaction of performance obligations in the amount billable to the customer.

Royalty revenue – for arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, we recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). Each quarterly period, sales-based royalties are recorded based on estimated quarterly net sales of ORILISSA. Differences between actual results and estimated amounts are adjusted for in the period in which they become known, which typically follows the quarterly period in which the estimate was made. To date, actual royalties received have not differed materially from our estimates.

Concentration of Credit Risk. We do not currently have any of our own manufacturing facilities and therefore we depend on an outsourced manufacturing strategy for the production of INGREZZA for commercial use and for the production of our product candidates in clinical trials. We have contracts with one third-party manufacturer approved for the commercial production of

INGREZZA's capsules at two separate sites and two third-party manufacturers approved for the production of INGREZZA's API. Although there are potential sources of supply other than our existing suppliers, any new supplier would be required to qualify under applicable regulatory requirements.

We have entered into distribution agreements with a limited number of specialty pharmacy providers and a specialty distributor, and all of our product sales are to these customers. Our two largest customers represented approximately 86% of our product revenue for 2019 and a significant majority of our accounts receivable balance at December 31, 2019. For 2018 and 2017, our three largest customers represented approximately 93% of our product revenue and substantially all of our accounts receivable balance at December 31, 2018 and 2017.

Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash, cash equivalents, investments and accounts receivables. We established guidelines to limit our exposure to credit risk by placing investments with high credit quality financial institutions, diversifying our investment portfolio and placing investments with maturities that maintain safety and liquidity.

Cost of Sales. Cost of sales includes third-party manufacturing, transportation, freight and indirect overhead costs associated with the manufacture and distribution of INGREZZA, royalty fees on net sales of ORILISSA and adjustments for excess and obsolete inventory to the extent management determines that the cost cannot be recovered based on estimates about future demand.

Research and Development Expenses. R&D expenses consist primarily of salaries, payroll taxes, employee benefits and share-based compensation charges for those individuals involved in ongoing R&D efforts; as well as scientific consulting fees, preclinical and clinical trial costs, R&D facilities costs, laboratory supply costs and depreciation of scientific equipment. All such costs are charged to R&D expense as incurred. These expenses result from our independent R&D efforts, as well as efforts associated with collaborations, in-licenses and third-party funded research arrangements.

Asset Acquisitions. We account for acquisitions of an asset or group of assets that do not meet the definition of a business using the cost accumulation method, whereby the cost of the acquisition, including certain transaction costs, is allocated to the assets acquired on the basis of their relative fair values. No goodwill is recognized in an asset acquisition. Intangible assets that are acquired in an asset acquisition for use in R&D activities which have no alternative future use are expensed as in-process research and development, or IPR&D, on the acquisition date. Future costs to develop these assets are recorded to R&D expense as they are incurred.

Advertising Expense. In connection with the FDA approval and commercial launch of INGREZZA in April 2017, we began to incur advertising costs, which are expensed when services are performed, or goods are delivered. We incurred advertising costs related to our marketed product, INGREZZA, of $40.6 million in 2019, $20.5 million in 2018 and $10.1 million in 2017.

Share-Based Compensation. We grant stock options to purchase our common stock to eligible employees and directors and also grant certain employees restricted stock units, or RSUs, and performance-based restricted stock units, or PRSUs. Additionally, we allow employees to participate in an employee stock purchase plan, or ESPP.

We estimate the fair value of stock options and shares to be issued under the ESPP using the Black-Scholes option-pricing model on the date of grant. Restricted stock units are valued based on the closing price of our common stock on the date of grant. The fair value of equity instruments expected to vest are recognized and amortized on a straight-line basis over the requisite service period of the award, which is generally three to four years; however, certain provisions in our equity compensation plans provide for shorter vesting periods under certain circumstances. The fair value of shares to be issued under the ESPP are recognized and amortized on a straight-line basis over the purchase period, which is generally six months. Additionally, we granted certain PRSUs that vest upon the achievement of certain pre-defined company-specific performance-based criteria. Expense related to these PRSUs is generally recognized ratably over the expected performance period once the pre-defined performance-based criteria for vesting becomes probable.

Net Income (Loss) Per Share. Basic net income (loss) per share is computed using the weighted average number of common shares outstanding during the period. Diluted net income (loss) per share is computed using the weighted average number of common and potentially dilutive shares outstanding during the period, including the potentially dilutive shares resulting from the conversion of the 2024 Notes and excluding the effect of stock options and restricted stock outstanding for periods when their effect is anti-dilutive, using the treasury stock method.

Convertible debt instruments that may be settled entirely or partly in cash (such as the 2024 Notes) may, in certain circumstances where the borrower has the ability and intent to settle in cash, be accounted for under the treasury stock method. We issued the 2024 Notes with a combination settlement feature, which we have the ability and intent to use upon conversion of the 2024 Notes, to settle the principal amount of debt for cash and the excess of the principal portion in shares of our common stock. As a result, of the approximately 6.8 million shares underlying the 2024 Notes, only the shares required to settle the excess of the principal portion would be considered dilutive under the treasury stock method. Further, approximately 0.3 million PRSUs were excluded from the calculation of diluted net income per share as the performance condition has not been achieved. In loss periods, basic net loss per share and diluted net loss per share are identical because the otherwise dilutive potential common shares become anti-dilutive and are therefore excluded.

Recently Adopted Accounting Pronouncements.

ASU 2016-02. In February 2016, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, 2016-02, "Leases (Topic 842)", which requires lessees to recognize leases on the balance sheet and disclose key information about leasing arrangements. ASU 2016-02 establishes a right-of-use, or ROU, model that requires a lessee to recognize a ROU asset and lease liability on the balance sheet for all leases with a term longer than twelve months. ASU 2016-02 also requires disclosures to

meet the objective of enabling users of financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. On January 1, 2019, we adopted ASU 2016-02 using the modified retrospective transition method. Under this transition method, we recognized and measured leases that existed at the application date in our consolidated balance sheet as of January 1, 2019.

Arrangements that are determined to be operating leases at inception are included in operating lease assets, noncurrent operating lease liabilities and other current liabilities in our consolidated balance sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and operating lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As none of our operating leases provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The operating lease ROU asset is adjusted for any prepaid or accrued lease payments and any lease incentives received. Operating lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term. We have lease agreements with lease and non-lease components, which we have elected to account for as a single lease component. Further, we have elected to recognize our short-term lease payments in profit or loss on a straight-line basis over the associated lease term and variable lease payments in the period in which the obligation for those payments is incurred. Short-term and variable lease payments were not material for 2019.

In connection with the adoption of ASU 2016-02, we elected the package of practical expedients requiring no reassessment of whether any expired or existing contracts are or contain leases, the lease classification of any expired or existing leases, or initial direct costs for any existing leases. We also made accounting policy elections not to apply the recognition requirements under ASU 2016-02 to any of our short-term leases and to account for each separate lease and associated nonlease components as a single lease component for all of our leases.

In preparation for implementation of ASU 2016-02, we finalized key accounting assessments and updated processes to appropriately recognize and present the associated financial information. Based on these efforts, the adoption of ASU 2016-02 resulted in the recognition of (1) ROU assets of $50.0 million and operating lease liabilities of $70.9 million, resulting from leases of office and laboratory space; (2) the derecognition of deferred rent of $20.9 million for certain lease incentives received; and (3) a cumulative-effect adjustment of $8.0 million to the opening balance of the accumulated deficit as of January 1, 2019, resulting from the recognition of an existing deferred gain on sale of real estate. The comparative prior period information continues to be reported under the accounting standards in effect during those periods. Further, we expect the adoption of ASU 2016-02 to be immaterial to our results of operations and cash flows on an ongoing basis.

ASU 2018-07. In June 2018, the FASB issued ASU 2018-07, “Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting”, which expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees and applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor’s own operations by issuing share-based payment awards. On January 1, 2019, we adopted ASU 2018-07 using the modified retrospective transition method with no impact on our consolidated financial statements. Further, we expect the adoption of ASU 2018-07 to be immaterial to our financial position, results of operations and cash flows on an ongoing basis.

Recently Issued Accounting Pronouncements.

ASU 2016-13. In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments". The standard requires that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, the standard requires allowances to be recorded instead of reducing the amortized cost of the investment. The standard limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. The standard is effective for interim and annual periods beginning after December 15, 2019.

Based on the composition of our investment portfolio, current market conditions and historical credit loss activity, the adoption of ASU 2016-13 is not expected to have a material impact on our consolidated financial position, results of operations or the related disclosures.

Note 2. License and Collaboration Agreements

AbbVie. In June 2010, we announced an exclusive worldwide collaboration with AbbVie, to develop and commercialize elagolix and all next-generation gonadotropin-releasing factor, or GnRH, antagonists and collectively, GnRH Compounds, for women’s and men’s health. AbbVie made an upfront payment of $75.0 million and has agreed to make additional development and regulatory event-based payments of up to $480.0 million, of which $135.0 million has been earned as of December 31, 2019, and up to an additional $50.0 million in commercial event-based payments.

Under the terms of the agreement, AbbVie is responsible for all third-party development, marketing and commercialization costs. We will be entitled to a percentage of worldwide sales of GnRH Compounds for the longer of ten years or the life of the related patent rights. AbbVie may terminate the collaboration at its discretion upon 180 days’ written notice to us.

We evaluated the terms of this agreement under Topic 606 and determined that there is one performance obligation, the exclusive worldwide license with rights to develop, manufacture and commercialize elagolix. At execution, the transaction price included only

the $75.0 million up-front consideration received. None of the development or regulatory milestones were included in the transaction price, as all milestone amounts were fully constrained. As part of our evaluation of the constraint, we considered numerous factors, including that achievement of the milestones is outside of our control and contingent upon success in future clinical trials and the licensee's efforts. Any consideration related to sales-based milestones (including royalties) will be recognized when the related sales occur as they were determined to relate predominantly to the license granted to AbbVie and therefore have also been excluded from the transaction price. We will re-evaluate the transaction price in each reporting period and as uncertain events are resolved or other changes in circumstances occur.

In the third quarter of 2019, AbbVie submitted a new drug application, or NDA, with the FDA for the approval of elagolix in the treatment of uterine fibroids. The NDA was accepted by the FDA with a Prescription Drug User Fee Act, or PDUFA, target action date in the second quarter of 2020. The FDA's acceptance of the NDA triggered a milestone payment of $20.0 million, which we recognized as revenue in the third quarter of 2019 and received in the fourth quarter of 2019. On July 24, 2018, AbbVie received approval from the FDA for ORILISSA for the management of moderate to severe endometriosis pain in women, resulting in the achievement of a $40.0 million event-based milestone, which we recognized as revenue in 2018. We also recognized sales-based royalties on AbbVie net sales of ORILISSA of approximately $14.3 million for 2019 and $1.6 million for 2018. In 2017, event-based revenue of $30.0 million was recognized based on AbbVie's new drug application, or NDA, submission for elagolix in endometriosis being accepted by the FDA.

BIAL – Portela & Ca, S.A. In February 2017, we entered into an exclusive license agreement with BIAL – Portela & Ca, S.A., or BIAL, for the development and commercialization of opicapone for the treatment of human diseases and conditions, including Parkinson's disease, in the U.S. and Canada. We paid BIAL an upfront license fee of $30.0 million, which was expensed in 2017 as acquired in-process R&D. During the first quarter of 2018, the FDA provided guidance on the regulatory path forward to support an NDA for opicapone for Parkinson's disease, in which the FDA did not request that we conduct an additional Phase III study, resulting in a $10.0 million event-based milestone payment to BIAL, which was expensed as incurred. In the second quarter of 2019, we submitted an NDA with the FDA for opicapone as an adjunctive therapy to levodopa/DOPA decarboxylase inhibitors in adult Parkinson's disease patients. The NDA was accepted by the FDA with a PDUFA target action date of April 26, 2020. The FDA's acceptance of the NDA triggered a milestone payment of $10.0 million, which we expensed as R&D in the second quarter of 2019. We may be required to pay up to an additional $95.0 million in milestone payments associated with the regulatory approval and net sales of opicapone. FDA approval of opicapone for Parkinson's disease would trigger a milestone payment of $20.0 million, payable by us to BIAL. Upon commercialization of opicapone, we agreed to determine certain annual sales forecasts. In the event we fail to meet the minimum sales requirements for a particular year, we would be required to pay BIAL an amount equal to the difference between the actual net sales and minimum sales requirements for such year. In the event we fail to meet the minimum sales requirements for any two years, BIAL may terminate the agreement.

Under the terms of the agreement, we are responsible for the management and cost of all opicapone development and commercialization activities in the U.S. and Canada. Further, unless terminated earlier, the agreement will continue on a licensed product-by-product and country-by-country basis until a generic product in respect of such licensed product under the agreement is sold in a country and sales of such generic product are greater than a specified percentage of total sales of such licensed product in such country. Upon our written request prior to the estimated expiration of the term in respect of a licensed product, the parties shall negotiate a good faith continuation of BIAL's supply of such licensed product after the term. After the term, and if BIAL is not supplying a certain licensed product, we shall pay BIAL a trademark royalty based on the net sales of such licensed product. Either party may terminate the agreement earlier if the other party materially breaches the agreement and does not cure the breach within a specified notice period, or upon the other party's insolvency. BIAL may terminate the agreement if we fail to use commercially reasonable efforts or to submit an NDA for a licensed product by a specified date or under certain circumstances involving a change of control of Neurocrine. In certain circumstances where BIAL elects to terminate the agreement in connection with Neurocrine's change of control, BIAL shall pay us a termination fee. We may terminate the agreement at any time for any reason upon six months written notice to BIAL if prior to the first NDA approval in the U.S., and upon nine months written notice to BIAL if such notice is given after the first NDA approval in the U.S. If our termination request occurs prior to the first NDA approval in the U.S., we shall pay BIAL a termination fee except under certain conditions specified in the agreement.

Voyager. We entered into a collaboration and license agreement with Voyager, a clinical-stage gene therapy company, which became effective in March 2019. The agreement is focused on the development and commercialization of four programs using Voyager's proprietary gene therapy platform. The four programs consist of the NBIb-1817 (VY-AADC) program for Parkinson's disease, the Friedreich's ataxia program and the rights to two undisclosed programs.

In connection with the agreement, we paid Voyager $115.0 million upfront and purchased $50.0 million of Voyager's common stock at $11.9625 per share, representing approximately 4.2 million shares. Pursuant to the terms of the agreement, Voyager may also be entitled to an additional $1.7 billion in development, regulatory and commercial milestone payments, as well as royalties on net sales of any collaboration product.

Pursuant to development plans agreed to by us and Voyager, unless Voyager exercises its co-development and co-commercialization rights as provided for in the agreement, we will be responsible for all development costs. Further, upon the occurrence of a specified event for each program, we will assume responsibility for the development, manufacturing, and commercialization activities of such program.

We accounted for the transaction as an asset acquisition as the set of acquired assets did not constitute a business. Our equity investment in Voyager was recorded at a fair value of $54.7 million after considering Voyager's stock price on the date of closing and certain lock-up and voting provisions applicable to the acquired shares. The remaining $113.1 million of the purchase price, which

includes the applicable transaction costs, was expensed as in-process research and development, or IPR&D, in the first quarter of 2019.

In June 2019, we entered into an amendment to the collaboration and license agreement with Voyager. Under the terms of the amendment, we paid Voyager $5.0 million upfront to obtain rights outside the United States, or U.S., to the Friedreich's ataxia program in connection with the early return of those rights to Voyager pursuant to a restructuring of Voyager's gene therapy relationship with Sanofi Genzyme. The upfront payment was expensed as IPR&D in the second quarter of 2019.

We may terminate the collaboration and license agreement with Voyager upon 180 days' written notice to Voyager prior to the first commercial sale of any collaboration product or upon one year after the date of notice if such notice is provided after the first commercial sale of any collaboration product. Unless terminated earlier, the agreement will continue in effect until the expiration of the last to expire royalty term with respect to any collaboration product or the last expiration or termination of any exercised co-development and co-commercialization rights by Voyager as provided for in the agreement.

Xenon. In December 2019, we entered into a license and collaboration agreement with Xenon to establish a collaboration under which the parties will identify, research and develop sodium channel inhibitors, including clinical candidate NBI-921352 (XEN901) and three preclinical candidates, which compounds we will have the exclusive right to further develop and commercialize under the terms and conditions set forth in the agreement.

We will be solely responsible, at our sole cost and expense, for all development and manufacturing of the compounds and any pharmaceutical product that contains a compound, subject to Xenon's right to elect to co-fund the development of one product in a major indication and thus receive a mid-single digit percentage increase in royalties owed on the net sales of such product in the U.S. If Xenon exercises such option, the parties will share equally all reasonable and documented costs and expenses incurred in connection with the development of such product in the applicable indication, except costs and expenses that are solely related to the development of such product for regulatory approval outside the U.S.

In connection with the agreement, we paid Xenon $30.0 million upfront and purchased $20.0 million of Xenon's common stock at $14.196 per share, representing approximately 1.4 million shares. Pursuant to the terms of the agreement, Xenon may also be entitled to an additional $1.7 billion in development, regulatory and commercial milestone payments, as well as royalties on net sales of any collaboration product.

We accounted for the transaction as an asset acquisition as the set of acquired assets did not constitute a business. Our equity investment in Xenon was recorded at a fair value of $14.1 million after considering Xenon's stock price on the date of closing and certain lock-up and voting provisions applicable to the acquired shares. The remaining $36.2 million of the purchase price, which includes the applicable transaction costs, was expensed as IPR&D in the fourth quarter of 2019.

Unless earlier terminated, the term of the license and collaboration agreement will continue on a product-by-product and country-by-country basis until the expiration of the royalty term for such product in such country. Upon the expiration of the royalty term for a particular product and country, the exclusive license granted by Xenon to us with respect to such product and country will become fully-paid, royalty free, perpetual and irrevocable. We may terminate the license and collaboration agreement by providing at least 90 days' written notice, provided that such unilateral termination will not be effective for certain products until we have used commercially reasonable efforts to complete certain specified clinical studies. Either party may terminate the agreement in the event of a material breach in whole or in part, subject to specified conditions.

Mitsubishi Tanabe Pharma Corporation. During 2015, we entered into a collaboration and license agreement with Mitsubishi Tanabe Pharma Corporation, or MTPC, for the development and commercialization of INGREZZA for movement disorders in Japan and other select Asian markets. MTPC made an up-front license fee of $30.0 million and has agreed to make payments up to $85.0 million in development and commercialization event-based payments, payments for the manufacture of pharmaceutical products and royalties on product sales in select territories in Asia.

Under the terms of the agreement, MTPC is responsible for all third-party development, marketing and commercialization costs in Japan and other select Asian markets and we would be entitled to a percentage of sales of INGREZZA in Japan and other select Asian markets for the longer of ten years or the life of the related patent rights. Further, the collaboration effort between the parties to advance INGREZZA towards commercialization in Japan and other select Asian markets is governed by joint steering and development committees with representatives from both parties. There are no performance, cancellation, termination or refund provisions in the agreement that would have a material financial consequence to us. We do not directly control when event-based payments will be achieved or when royalty payments will begin. MTPC may terminate the agreement at its discretion upon 180 days' written notice to us. In such event, all INGREZZA product rights for Japan and other select Asian markets would revert to us.

We assessed this arrangement in accordance with Topic 606 and identified the following performance obligations: (i) INGREZZA technology license and existing know-how; and (ii) development activities to initiate a clinical study of INGREZZA for Huntington's chorea. We have the option to participate on the joint steering committee, but since participation is at our option it was deemed to not be a performance obligation. The option for MTPC to engage us to manufacture and supply pharmaceutical products, not at a discount, was not considered a material right and therefore not a performance obligation. Based on these assessments, we identified the license and the development activities as the only performance obligations at the inception of the agreement, which were both deemed to be distinct.

To evaluate the appropriate transaction price, we determined that the up-front amount constituted the entirety of the consideration to be included in the transaction price and to be allocated to the performance obligations based on our best estimate of their relative stand-alone selling prices. For the license, the stand-alone selling price was calculated using an income approach model and included the following key assumptions: the development timeline, revenue forecast, discount rate and probabilities of technical and regulatory

success. The relative selling price of our development activities to initiate a clinical study of INGREZZA for Huntington's chorea was based on an assessment of costs to perform the study, based upon a peer company analysis for similar studies. We believe a change in the assumptions used to determine our stand-alone selling price for the license most likely would not have a significant effect on the allocation of consideration received (or receivable) to the performance obligations.

At execution, the transaction price included only the $30.0 million up-front consideration received. None of the development or regulatory milestones have been included in the transaction price, as all milestone amounts were fully constrained. As part of our evaluation of the constraint, we considered numerous factors, including that achievement of the milestones is outside of our control and contingent upon success in future clinical studies and the licensee's efforts. Any consideration related to sales-based milestones (including royalties) will be recognized when the related sales occur as they were determined to relate predominantly to the license granted to MTPC and therefore have also been excluded from the transaction price. We will re-evaluate the transaction price in each reporting period and as uncertain events are resolved or other changes in circumstances occur. Under the terms of the agreement, any payment we receive is generally non-refundable.

Since inception of the agreement, we have recognized revenue of $20.6 million associated with the delivery of a technology license and existing know-how, and $15.0 million in development event-based payments resulting from MTPC's initiation of Phase II/III development of INGREZZA in tardive dyskinesia, or TD, in Asia. In 2019, we recognized revenue of $0.9 million in connection with our initiation of the KINECT-HD study in November 2019, a placebo-controlled Phase III study of valbenazine in adult Huntington's disease patients with chorea. In accordance with our continuing performance obligations, $9.4 million of the $30.0 million up-front payment is being deferred and will be recognized as revenue over the KINECT-HD study period. No revenue was recognized under the MTPC agreement for 2018. In 2017, we recognized $15.0 million in development event-based payments resulting from MTPC's initiation of Phase II/III development of INGREZZA in TD in Asia.

Note 3. Marketable Securities

Available-for-sale debt securities consisted of the following:

	December 31,	
(in thousands)	2019	2018
Commercial paper	$ 144,472	$ 94,572
Corporate debt securities	521,946	544,978
Securities of government-sponsored entities	191,481	85,677
Total marketable securities	$ 857,899	$ 725,227

The following table presents the amortized cost, gross unrealized gain (loss) positions and estimated fair value for available-for-sale debt securities, aggregated by investment category.

(in thousands)	Contractual Maturity (in years)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Aggregate Estimated Fair Value
December 31, 2019:					
Classified as current assets:					
Commercial paper	Less than 1	$ 144,460	$ 27	$ (15)	$ 144,472
Corporate debt securities	Less than 1	270,485	557	(42)	271,000
Securities of government-sponsored entities	Less than 1	142,351	422	—	142,773
		$ 557,296	$ 1,006	$ (57)	$ 558,245
Classified as non-current assets:					
Corporate debt securities	1 to 2	$ 250,499	$ 515	$ (68)	$ 250,946
Securities of government-sponsored entities	1 to 2	48,691	19	(2)	48,708
		$ 299,190	$ 534	$ (70)	$ 299,654
December 31, 2018:					
Classified as current assets:					
Commercial paper	Less than 1	$ 94,617	$ —	$ (45)	$ 94,572
Corporate debt securities	Less than 1	395,385	—	(1,598)	393,787
Securities of government-sponsored entities	Less than 1	20,887	8	(55)	20,840
		$ 510,889	$ 8	$ (1,698)	$ 509,199
Classified as non-current assets:					
Corporate debt securities	1 to 2	$ 151,594	$ 66	$ (469)	$ 151,191
Securities of government-sponsored entities	1 to 2	64,676	162	(1)	64,837
		$ 216,270	$ 228	$ (470)	$ 216,028

The following table presents the estimated fair value and gross unrealized loss position for available-for-sale debt securities, aggregated by investment category and length of time that such securities have been in a continuous loss position.

	Less Than 12 Months		12 Months or Greater		Total	
(in thousands)	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses
December 31, 2019:						
Commercial paper	$ 33,070	$ (15)	$ —	$ —	$ 33,070	$ (15)
Corporate debt securities	186,052	(110)	—	—	186,052	(110)
Securities of government-sponsored entities	15,002	(2)	—	—	15,002	(2)
	$ 234,124	$ (127)	$ —	$ —	$ 234,124	$ (127)
December 31, 2018:						
Commercial paper	$ 51,927	$ (45)	$ —	$ —	$ 51,927	$ (45)
Corporate debt securities	274,696	(746)	234,798	(1,321)	509,494	(2,067)
Securities of government-sponsored entities	4,999	(1)	10,947	(55)	15,946	(56)
	$ 331,622	$ (792)	$ 245,745	$ (1,376)	$ 577,367	$ (2,168)

Note 4. Fair Value Measurements

Investments measured at fair value on a recurring basis consisted of the following:

		Fair Value Measurements Using		
(in thousands)	Carrying Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2019:				
Classified as current assets:				
Cash and money market funds	$ 112,279	$ 112,279	$ —	$ —
Commercial paper	144,472	—	144,472	—
Securities of government-sponsored entities	142,773	—	142,773	—
Corporate debt securities	271,000	—	271,000	—
	670,524	112,279	558,245	—
Classified as long-term assets:				
Certificates of deposit	3,206	3,206	—	—
Securities of government-sponsored entities	48,708	—	48,708	—
Corporate debt securities	250,946	—	250,946	—
Restricted equity securities	55,868	—	—	55,868
	1,029,252	115,485	857,899	55,868
Less cash and cash equivalents and restricted cash	(115,485)	(115,485)	—	—
Total investments	$ 913,767	$ —	$ 857,899	$ 55,868
December 31, 2018:				
Classified as current assets:				
Cash and money market funds	$ 141,714	$ 141,714	$ —	$ —
Commercial paper	94,572	—	94,572	—
Securities of government-sponsored entities	20,840	—	20,840	—
Corporate debt securities	393,787	—	393,787	—
	650,913	141,714	509,199	—
Classified as long-term assets:				
Cash and money market funds	1,500	1,500	—	—
Certificates of deposit	3,977	3,977	—	—
Securities of government-sponsored entities	64,837	—	64,837	—
Corporate debt securities	151,191	—	151,191	—
	872,418	147,191	725,227	—
Less cash and cash equivalents and restricted cash	(147,191)	(147,191)	—	—
Total investments	$ 725,227	$ —	$ 725,227	$ —

A reconciliation of restricted equity securities measured at fair value on a recurring basis follows.

(in thousands)	
Balance at December 31, 2018	$ —
Investments in restricted equity securities	68,855
Net unrealized loss recognized on restricted equity securities during the period	(12,987)
Balance at December 31, 2019	$ 55,868

Note 5. Convertible Senior Notes

On May 2, 2017, we completed a private placement of $517.5 million in aggregate principal amount of 2.25% convertible senior notes due 2024, or the 2024 Notes, and entered into an indenture agreement that sets forth the details of all the terms and conditions of the 2024 Notes, or the 2024 Indenture. The 2024 Notes accrue interest at a fixed rate of 2.25% per year, payable semiannually in arrears on May 15 and November 15 of each year, beginning on November 15, 2017. The 2024 Notes mature on May 15, 2024. The net proceeds from the issuance of the 2024 Notes were approximately $502.8 million, after deducting commissions and the offering expenses payable by us.

Holders of the 2024 Notes may convert the 2024 Notes at any time prior to the close of business on the business day immediately preceding May 15, 2024, only under the following circumstances:

(i) during any calendar quarter commencing after the calendar quarter ending on September 30, 2017 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than 130% of the conversion price on each applicable trading day;

(ii) during the five business-day period immediately after any 5 consecutive trading-day period (the measurement period) in which the trading price (as defined in the 2024 Indenture) per $1,000 principal amount of the 2024 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day;

(iii) upon the occurrence of specified corporate events, including a merger or a sale of all or substantially all of our assets; or

(iv) if we call the 2024 Notes for redemption, until the close of business on the business day immediately preceding the redemption date.

On or after January 15, 2024, until the close of business on the scheduled trading day immediately preceding May 15, 2024, holders may convert their 2024 Notes at any time.

As the conditional conversion feature described under (i) above had been triggered as of December 31, 2019, holders of the 2024 Notes may convert the 2024 Notes at any time during the period beginning on January 2, 2020 and ending at the close of business on March 31, 2020. Accordingly, the 2024 Notes have been classified as a current liability as of December 31, 2019. The future conditional convertibility of the 2024 Notes will be monitored at each quarterly reporting date and analyzed dependent upon market prices of our common stock during the prescribed measurement periods.

Upon conversion, holders will receive the principal amount of their 2024 Notes and any excess conversion value, calculated based on the per share volume-weighted average price, or VWAP, for each of the 30 consecutive trading days during the observation period. For both the principal and excess conversion value, holders may receive cash, shares of our common stock or a combination of cash and shares of its common stock, at our option.

It is our intent and policy to settle conversions through combination settlement, which essentially involves repayment of an amount of cash equal to the "principal portion" and delivery of the "share amount" in excess of the principal portion in shares of common stock or cash. In general, for each $1,000 in principal, the "principal portion" of cash upon settlement is defined as the lesser of $1,000, and the conversion value during the 25-day observation period as described in the indenture for the notes. The conversion value is the sum of the daily conversion value which is the product of the effective conversion rate divided by 25 days and the daily VWAP of our common stock. The "share amount" is the cumulative "daily share amount" during the observation period, which is calculated by dividing the daily VWAP into the difference between the daily conversion value (i.e., conversion rate x daily VWAP) and $1,000.

The initial conversion rate for the 2024 Notes is 13.1711 shares of common stock per $1,000 principal amount, which is equivalent to an initial conversion price of approximately $75.92 per share of our common stock. At the initial conversion rate, settlement of the 2024 Notes for shares of our common stock would approximate 6.8 million shares. The conversion rate will be subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest. The initial conversion price of the 2024 Notes represented a premium of approximately 42.5% to the closing sale price of $53.28 per share of our common stock on the Nasdaq Global Select Market on April 26, 2017, the date we priced the private offering of the 2024 Notes.

In the event of conversion, holders would forgo all future interest payments, any unpaid accrued interest and the possibility of further stock price appreciation. Upon the receipt of conversion requests, the settlement of the 2024 Notes will be paid pursuant to the terms of the 2024 Indenture. In the event that all of the 2024 Notes are converted, we would be required to repay the $517.5 million in principal value and any conversion premium in any combination of cash and shares of its common stock (at the Company's option).

On or after, but not prior to May 15, 2021, we may redeem for cash all or part of the 2024 Notes if the last reported sale price (as defined in the 2024 Indenture) of its common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading-day period ending on, and including, the trading day immediately before the date which we provide notice of redemption. The redemption price will equal the sum of (i) 100% of the principal amount

of the 2024 Notes being redeemed, plus (ii) accrued and unpaid interest, including additional interest, if any, to, but excluding, the redemption date. No sinking fund is provided for the 2024 Notes.

If we undergo a fundamental change, as defined in the 2024 Indenture, subject to certain conditions, holders of the 2024 Notes may require us to repurchase for cash all or part of their 2024 Notes at a repurchase price equal to 100% of the principal amount of the 2024 Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date. In addition, if a ‘‘make-whole fundamental change’’ (as defined in the 2024 Indenture) occurs prior to January 15, 2024, we will, in certain circumstances, increase the conversion rate for a holder who elects to convert the 2024 Notes in connection with the make-whole fundamental change.

The 2024 Notes are our general unsecured obligations that rank senior in right of payment to all of our indebtedness that is expressly subordinated in right of payment to the 2024 Notes, and equal in right of payment to our unsecured indebtedness.

An entity must separately account for the liability and equity components of convertible debt instruments, such as the 2024 Notes, that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer’s economic interest cost. The liability component of the instrument was valued in a manner that reflects the market interest rate for a similar nonconvertible instrument at the date of issuance. The initial carrying value of the liability component of $368.3 million was calculated using a 7.5% assumed borrowing rate. The equity component of $149.2 million, representing the conversion option, was determined by deducting the fair value of the liability component from the par value of the 2024 Notes and is recorded in additional paid-in capital on the consolidated balance sheet at the issuance date. That equity component is treated as a discount on the liability component of the 2024 Notes, which is amortized over the seven-year term of the 2024 Notes using the effective interest rate method. The equity component is not re-measured as long as it continues to meet the conditions for equity classification. At December 31, 2019, the remaining period over which the discount on the liability component will be amortized was approximately 4.4 years.

We allocated the total transaction costs of approximately $14.7 million related to the issuance of the 2024 Notes to the liability and equity components of the 2024 Notes based on their relative values. Transaction costs attributable to the liability component are amortized to interest expense over the seven-year term of the 2024 Notes, and transaction costs attributable to the equity component are netted with the equity component in stockholders’ equity.

The 2024 Notes do not contain any financial or operating covenants or any restrictions on the payment of dividends, the issuance of other indebtedness or the issuance or repurchase of securities by the Company. The 2024 Indenture contains customary events of default with respect to the 2024 Notes, including that upon certain events of default, 100% of the principal and accrued and unpaid interest on the 2024 Notes will automatically become due and payable.

Convertible senior notes, net of discounts and deferred financing costs consisted of the following:

	December 31,	
(in thousands)	**2019**	**2018**
Principal	$ 517,500	$ 517,500
Deferred financing costs	(6,937)	(8,326)
Debt discount, net	(101,756)	(120,678)
Net carrying amount	$ 408,807	$ 388,496

The 2024 Notes were recorded at the estimated value of a similar non-convertible instrument on the date of issuance and accretes to the face value of the 2024 Notes over their seven-year term. The fair value of the 2024 Notes, which was estimated utilizing market quotations from an over-the-counter trading market (Level 2), was $596.8 million at December 31, 2019 and $616.1 million at December 31, 2018.

Note 6. Other Balance Sheet Details

Inventory consisted of the following:

	December 31,	
(in thousands)	**2019**	**2018**
Raw materials	$ 14,148	$ 7,855
Work in process	1,470	2,208
Finished goods	1,670	801
Total inventory	$ 17,288	$ 10,864

Property and equipment, net, consisted of the following:

(in thousands)	December 31, 2019	December 31, 2018
Tenant improvements	$ 26,342	$ 19,857
Scientific equipment	33,483	28,163
Computer equipment	12,460	11,152
Furniture and fixtures	3,188	2,968
	75,473	62,140
Less accumulated depreciation	(33,559)	(28,271)
Total property and equipment, net	$ 41,914	$ 33,869

Accounts payable and accrued liabilities consisted of the following:

(in thousands)	December 31, 2019	December 31, 2018
Accrued employee related costs	$ 38,941	$ 27,341
Revenue-related reserves for discounts and allowances	30,634	13,586
Accrued development costs	25,496	7,069
Accounts payable and other accrued liabilities	46,214	38,381
Total accounts payable and accrued liabilities	$ 141,285	$ 86,377

The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the consolidated balance sheet that sum to the total of the same such amounts shown in the consolidated statement of cash flows.

(in thousands)	December 31, 2019	December 31, 2018
Cash and cash equivalents	$ 112,279	$ 141,714
Restricted cash	3,206	5,477
Total cash, cash equivalents and restricted cash	$ 115,485	$ 147,191

Note 7. Net Income (Loss) Per Share

Net income (loss) per share was calculated as follows:

(in thousands, except per share data)	Year Ended December 31, 2019	2018	2017
Net income (loss) - basic and diluted	$ 37,012	$ 21,111	$ (142,542)
Weighted average common shares outstanding, basic	91,627	90,235	88,089
Effect of dilutive securities:			
Employee stock purchase program	25	11	—
Stock options	2,559	3,228	—
Restricted stock units	449	564	—
2024 Notes	1,072	1,348	—
Weighted average common shares outstanding, diluted	95,732	95,386	88,089
Net income (loss) per share, basic	$ 0.40	$ 0.23	$ (1.62)
Net income (loss) per share, diluted	$ 0.39	$ 0.22	$ (1.62)

Shares which have been excluded from diluted per share amounts because their effect would have been anti-dilutive include the following:

(in thousands)	Year Ended December 31, 2019	2018	2017
Stock options and restricted stock units	2,144	887	7,436

Note 8. Share-Based Compensation

Share-Based Compensation Plans. In May 2011, we adopted the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan, as amended, or the 2011 Plan, pursuant to which 21 million shares of our common stock are authorized for issuance. The 2011 Plan provides for the grant of stock options that qualify as incentive stock options under Section 422 of the Internal Revenue Code of 1986, as amended, non-statutory stock options, restricted stock awards, restricted stock unit awards, or RSUs, stock appreciation rights, performance stock awards, performance-based restricted stock units, or PRSUs, and other forms of equity compensation. In May 2018, we adopted the Neurocrine Biosciences, Inc. ESPP pursuant to which 300,000 shares of our common stock are authorized for issuance. During 2019, we issued 78,000 shares of our common stock under the ESPP. No purchases occurred under the ESPP during 2018.

We previously issued stock options and RSUs under the Neurocrine Biosciences, Inc. Inducement Plan, or the Inducement Plan, to certain employees. Pursuant to the Inducement Plan, we granted 70,000 stock options and 20,000 RSUs in 2018 and 410,000 stock options and 12,500 RSUs in 2017. We did not grant any stock options or RSUs pursuant to the Inducement Plan during 2019. These stock option grants have a four-year vesting period and the RSUs generally have vesting periods of three to four years. We currently have a total of 211,000 stock options and RSUs outstanding under this Inducement Plan.

At December 31, 2019, 6.8 million shares of common stock remained available for the future grant of awards under the 2011 Plan. Only share awards made under the 2011 Plan that are subsequently cancelled due to forfeiture or expiration are returned to the share pool available for future grants.

We issue new shares upon the exercise of stock options, the issuance of stock bonus awards, and the vesting of RSUs and PRSUs. At December 31, 2019, 7.8 million shares of common stock were reserved for such issuances.

Vesting Provisions of Share-Based Compensation. Stock options generally have terms of ten years from the date of grant, and generally vest over a three to four-year period. The maximum contractual term for all options granted from the 2011 Plan is ten years. RSUs granted under the 2011 Plan generally have vesting periods of four years. PRSUs granted under the 2011 Plan vest based on the achievement of certain pre-defined Company-specific performance criteria and expire four to five years from the grant date.

Share-Based Compensation. The compensation cost that has been included in the statements of operations and comprehensive income (loss) for all share-based compensation arrangements is as follows:

	Year Ended December 31,		
(in thousands)	2019	2018	2017
Sales, general and administrative expense	$ 49,489	$ 31,847	$ 27,951
Research and development expense	25,773	26,221	14,571
Share-based compensation expense	$ 75,262	$ 58,068	$ 42,522

Stock Options. The exercise price of our stock options granted is equal to the closing price of our common stock on the date of grant. The estimated fair value of each stock option award granted was determined on the date of grant using the Black-Scholes option-pricing valuation model with the following weighted-average assumptions for option grants:

	Year Ended December 31,		
(in thousands)	2019	2018	2017
Risk-free interest rate	2.4%	2.5%	2.0%
Expected volatility of common stock	54.8%	59.5%	58.0%
Dividend yield	0.0%	0.0%	0.0%
Expected option term	5.4 years	4.7 years	5.7 years

We estimate the fair value of stock options using a Black-Scholes option-pricing model on the date of grant. The fair values of equity instruments are recognized and amortized on a straight-line basis over the requisite service period. The Black-Scholes option-pricing model incorporates various and highly sensitive assumptions including expected volatility, term and interest rates. The expected volatility is based on the historical volatility of our common stock over the most recent period commensurate with the estimated expected term of our stock options. The expected option term is estimated based on historical experience as well as the status of the employee. For example, directors and officers have a longer expected option term than all other employees. The risk-free rate for periods within the contractual life of the option is based upon observed interest rates appropriate for the expected term of our employee stock options. We have never declared or paid dividends and has no plans to do so in the foreseeable future.

Our determination of fair value is affected by our stock price as well as a number of assumptions that require judgment. The weighted-average fair values of stock options granted during 2019, 2018 and 2017 estimated as of the grant date using the Black-Scholes option-pricing model, were $41.74, $43.42 and $25.11, respectively.

A summary of activity related to stock options follows:

	Year Ended December 31,					
	2019		2018		2017	
(in thousands, except weighted average data)	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at January 1	5,746	$ 41.38	6,356	$ 28.83	6,112	$ 20.01
Granted	1,416	82.27	1,040	84.97	1,807	46.55
Exercised	(983)	27.95	(1,592)	18.95	(1,353)	10.41
Canceled	(72)	75.09	(58)	64.67	(210)	43.05
Outstanding at December 31	6,107	$ 52.62	5,746	$ 41.38	6,356	$ 28.83

Stock options outstanding at December 31, 2019 had a weighted average remaining contractual term of 6.7 years.

For 2019, 2018 and 2017 share-based compensation expense related to stock options was $36.5 million, $35.4 million and $28.2 million, respectively. At December 31, 2019, there was approximately $75.0 million of unamortized compensation cost related to stock options, which we expect to recognize over a weighted average remaining vesting period of approximately 2.4 years. At

December 31, 2019, there were approximately 4.0 million stock options exercisable with a weighted average exercise price of $41.01 and a weighted-average remaining contractual term of 5.8 years. The total intrinsic value, which is the amount by which the exercise price was exceeded by the sale price of our common stock on the date of sale, of stock option exercises during 2019, 2018, and 2017 was $64.3 million, $117.0 million and $61.4 million, respectively. At December 31, 2019, the total intrinsic value of stock options outstanding and exercisable was $335.7 million and $268.2 million, respectively. Cash received from stock option exercises for 2019, 2018 and 2017 was $27.3 million, $29.5 million, and $13.9 million, respectively.

Restricted Stock Units. The fair value of RSUs is based on the closing sale price of our common stock on the date of issuance. For 2019, 2018, and 2017 share-based compensation expense related to RSUs was $30.4 million, $21.9 million, and $13.9 million, respectively. As of December 31, 2019, there was approximately $75.5 million of unamortized compensation cost related to RSUs, which is expected to be recognized over a weighted average remaining vesting period of approximately 2.4 years.

The total intrinsic value of RSUs converted into common shares for 2019, 2018 and 2017 was $36.1 million, $35.5 million, and $14.9 million, respectively. The RSUs, at the election of eligible employees, may be subject to deferred delivery arrangement. The total intrinsic value of RSUs outstanding at December 31, 2019 was $147.2 million based on our closing stock price on that date.

A summary of activity related to RSUs follows:

	Year Ended December 31,					
	2019		2018		2017	
(in thousands, except weighted average data)	Number of Units	Weighted Average Grant Date Fair Value per Unit	Number of Units	Weighted Average Grant Date Fair Value per Unit	Number of Units	Weighted Average Grant Date Fair Value per Unit
Outstanding at January 1	1,133	$ 62.31	1,080	$ 40.30	883	$ 29.33
Granted	707	82.66	540	85.29	588	47.21
Cancelled	(56)	74.49	(58)	36.21	(41)	40.62
Converted into common shares	(416)	54.30	(429)	59.23	(350)	24.19
Outstanding at December 31	1,368	$ 74.77	1,133	$ 62.31	1,080	$ 40.30

Performance-Based Restricted Stock Units. We had 0.3 million PRSUs outstanding at both December 31, 2019 and 2018. During 2018, we granted approximately 0.2 million PRSUs that vest based on the achievement of certain pre-defined Neurocrine-specific performance criteria and expire approximately four to five years from the grant date. No PRSUs were granted during 2019 or 2017. The fair value of PRSUs is estimated based on the closing sale price of our common stock on the date of grant. Expense recognition for PRSUs commences when attainment of the performance-based criteria is determined to be probable. We recognized expense of $5.6 million for 2019 and $0.4 million for 2017 related to PRSUs. We recognized no expense related to PRSUs for 2018. At December 31, 2019, total unrecognized estimated compensation expense related to PRSUs was $14.1 million and the total intrinsic value of PRSUs outstanding was $35.5 million based on our closing stock price on that date. The total intrinsic value of PRSUs converted into common shares was $8.8 million for 2017.

Employee Stock Purchase Plan. Under the ESPP, eligible employees may purchase shares of our common stock at a discount semi-annually based on a percentage of their annual compensation. The discounted purchase price is equal to the lower of 85% of (i) the market value per share of the common stock on the first day of the offering period or (ii) the market value per share of common stock on the purchase date. Share-based compensation expense recognized under the ESPP was $2.7 million for 2019 and $0.8 million for 2018.

Note 9. Income Taxes

Components of income tax expense for continuing operations were as follows:

	Year Ended December 31,		
(in thousands)	2019	2018	2017
Current:			
Federal	$ —	$ (100)	$ —
State	9,530	830	—
Total income tax expense	$ 9,530	$ 730	$ —

The provision for income taxes on earnings subject to income taxes differs from the statutory federal rate due to the following:

(in thousands)	December 31, 2019	2018	2017
Federal income taxes at 21% for 2019 and 2018 and 35% for 2017	$ 9,775	$ 4,587	$ (49,889)
State income tax, net of federal benefit	4,044	361	(4,013)
Tax effect on non-deductible expenses	855	446	433
Branded prescription drug fee	3,707	—	—
Share-based compensation expense	(12,785)	(9,778)	(19,589)
Officer compensation	3,068	915	2,163
Change in tax rate	(4,143)	(198)	154,415
Expired tax attributes	1,228	13,874	2,998
Research credits	(10,359)	(13,526)	(5,596)
Change in valuation allowance	13,883	4,306	(79,966)
Other	257	(257)	(956)
	$ 9,530	$ 730	$ —

Significant components of our deferred tax assets as of December 31, 2019 and 2018 are listed below.

We assess all available positive and negative evidence to estimate whether sufficient future taxable income will be generated to permit use of the existing deferred tax assets. A significant piece of objective negative evidence evaluated was the cumulative book loss incurred over the three-year period ended December 31, 2019. Such objective evidence limits the ability to consider other subjective evidence, such as projections for future growth.

On the basis of this analysis, we recorded a valuation allowance of $346.0 million and $335.2 million at December 31, 2019 and 2018, respectively, to offset the net deferred tax asset below as realization of such asset is uncertain. The amount of the deferred tax asset considered realizable, however, could be adjusted if estimates of future taxable income during the carryforward period are increased or if objective negative evidence in the form of cumulative losses is no longer present and additional weight is given to subjective evidence such as our projections for future growth.

(in thousands)	December 31, 2019	2018
Deferred tax assets:		
Net operating losses	$ 181,300	$ 223,800
Research and development credits	71,900	62,200
Capitalized research and development	28,000	34,800
Share-based compensation expense	22,900	17,300
Operating lease assets	23,300	100
Intangible assets	49,300	9,400
Other	18,500	19,100
Total deferred tax assets	395,200	366,700
Deferred tax liabilities:		
Convertible senior notes	(24,100)	(26,400)
Operating lease liabilities	(18,200)	—
Other	(6,900)	(5,100)
Total deferred tax liabilities	(49,200)	(31,500)
Net of deferred tax assets and liabilities	346,000	335,200
Valuation allowance	(346,000)	(335,200)
Net deferred tax assets	$ —	$ —

At December 31, 2019, we had federal and state income tax net operating loss carry forwards of approximately $816.2 million and $359.8 million, respectively. The federal net operating losses will begin to expire in 2024, unless previously utilized.

A portion of the California net operating loss carry forwards expired in 2018. The remaining California net operating losses will begin to expire in 2028 and the net operating losses related to other states will begin to expire in 2026.

In addition, we have federal and California R&D tax credit carry forwards of $73.2 million and $47.5 million, respectively. A portion of the federal R&D tax credit carry forwards expired in 2019. The remaining federal R&D tax credits will continue to expire in 2020, unless previously utilized. The California R&D tax credits carry forward indefinitely.

Additionally, the future utilization of our net operating loss and R&D tax credit carry forwards to offset future taxable income may be subject to annual limitation, pursuant to Internal Revenue Code Sections 382 and 383, as a result of ownership changes that could result in the future. No such ownership changes have occurred through December 31, 2019.

The impact of an uncertain income tax position on the income tax return must be recognized at the largest amount that is more-likely-than-not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained.

Our policy is to recognize interest or penalties related to income tax matters in income tax expense. Interest and penalties related to income tax matters were not material for 2019, 2018 or 2017.

We are subject to taxation in the U.S. and various state jurisdictions. Our tax years for 2001 (federal) and 2008 (California) and forward are subject to examination by federal and state tax authorities due to the carry forward of unutilized net operating losses and R&D tax credits.

A summary of activity related to unrecognized tax benefits follows:

	Year Ended December 31,		
(in thousands)	2019	2018	2017
Balance at January 1	$ 54,775	$ 37,403	$ 34,112
Increases related to prior year tax positions	281	6,103	—
Increases related to current year tax positions	9,519	11,726	3,291
Expiration of the statute of limitations for the assessment of taxes	(657)	(457)	—
Balance at December 31	$ 63,918	$ 54,775	$ 37,403

We excluded deferred tax assets that are not more-likely-than-not to be sustained under the technical merits of the tax position. Such unrecognized tax benefits totaled $9.5 million for current year tax positions, as reflected in the table above.

At December 31, 2019, we had $57.9 million of unrecognized tax benefits that, if recognized and realized, would affect the effective tax rate, subject to the valuation allowance. We do not expect a significant change in our unrecognized tax benefits in the next twelve months.

Note 10. Leases

In December 2007, we closed the sale of our facility and associated real property for a purchase price of $109.0 million. Concurrent with the sale, we retired the entire $47.7 million in mortgage debt previously outstanding with respect to the facility and associated real property and received cash of $61.0 million, net of transaction costs and debt retirement. The ultimate result of this real estate sale was a net deferred gain of $39.1 million, of which the remaining balance was $8.0 million as of December 31, 2018, and which we recognized as a cumulative-effect adjustment to equity upon adoption of Topic 842 on January 1, 2019.

Upon closing of the sale of the facility and associated real property, we entered into an agreement, or the original lease, to lease back our corporate headquarters, comprised of two buildings located in San Diego, California, for a term of twelve years. In 2008 through 2011, we entered into a series of subsequent amendments to the original lease, whereby we vacated one of the two buildings and continued to occupy one building, or the existing premises. In June 2017, we entered into an amendment to the original lease, or the amended lease, whereby we extended its term through December 31, 2029. In August 2019, we entered into an amendment, or the 2019 amendment, to the amended lease, whereby we agreed to lease 80,282 square feet of additional office space, or the expanded premises, in San Diego, California, for a term of twelve years, and to extend the total term of the original lease to a coterminous date of July 31, 2031.

Under the terms of the 2019 amendment, we will take possession of the expanded premises on a tranche-by-tranche basis as office space currently occupied by third-party tenants becomes available through 2021. Commencing on each applicable tranche lease commencement date and continuing throughout the term of the lease, we will be obligated to pay base annual rent (subject to an annual fixed percentage increase) and our then-applicable portion of the operating expenses and taxes attributable to the expanded premises. Additionally, we will continue to be obligated to pay base annual rent (subject to an annual fixed percentage increase), operating expenses, and taxes attributable to the existing premises.

The 2019 amendment includes two options to extend the term of the lease for a period of ten years each. We were not reasonably certain to exercise either of these options at lease commencement. As such, neither option was recognized as part of the associated operating lease ROU asset or liability. In connection with the amended lease, in lieu of a cash security deposit, Wells Fargo Bank, N.A., or Wells Fargo, issued a $3.0 million letter of credit on our behalf, which is secured by a deposit of equal amount.

In May 2018, we entered into an agreement to lease 44,718 square feet of office space in San Diego, California, which commenced on July 1, 2018, for a term of ten years and ten months. Under the terms of the lease, we pay base annual rent (subject to an annual fixed percentage increase), plus property taxes, and other normal and necessary expenses, such as utilities, repairs, and maintenance. Certain incentives were included in the lease, including $4.2 million in tenant improvement allowances and twelve months of rent abatement. In lieu of a cash security deposit, Wells Fargo issued a $1.0 million letter of credit on our behalf, which is secured by a deposit of $0.2 million. We do not have the right to extend the lease or right of first offer for future rental of adjacent office space owned by the landlord.

For 2019, our operating lease cost was $8.1 million, and cash paid for amounts included in the measurement of lease liabilities for operating cash flows from operating leases was $7.7 million. At December 31, 2019, we reported operating lease ROU assets and operating lease liabilities of $74.4 million and $95.0 million, respectively. Further, at December 31, 2019, our operating leases had a weighted average remaining lease term of 11.2 years and a weighted average discount rate of 5.8%.

At December 31, 2019, the approximate future minimum lease payments under operating leases were as follows:

(in thousands)	Operating Leases
Year Ending December 31,	
2020	$ 8,558
2021	10,578
2022	10,900
2023	11,232
2024	11,574
Thereafter	91,271
Total operating lease payments	134,681
Less accreted interest	(39,643)
	95,038
Less current operating lease liabilities	(8,282)
Noncurrent operating lease liabilities	$ 86,756

Note: Amounts presented in the table above exclude $28.3 million of non-cancelable future minimum lease payments for operating leases that have not yet commenced.

Note 11. Retirement Plan

We have a 401(k) defined contribution savings plan, or the 401(k) Plan. The 401(k) Plan is for the benefit of all qualifying employees and permits voluntary contributions by employees up to 60% of base salary limited by the IRS-imposed maximum. Employer contributions were $4.9 million, $1.8 million, and $1.1 million for 2019, 2018 and 2017, respectively.

Note 12. Commitments and Contingencies

We have entered into various collaboration and licensing agreements that provide us with rights to certain know-how, technology and patent rights. Under the terms of these agreements, we may be required to make milestone payments upon achievement of certain development and regulatory activities of up to $4.9 billion and pay royalties on future sales, if any, of commercial products resulting from these agreements.

Note 13. Selected Quarterly Financial Data (Unaudited)

A summary of our quarterly results follows:

(in thousands, except per share data)	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Year Ended December 31, 2019:				
Total revenues	$ 138,403	$ 183,580	$ 222,094	$ 244,010
Total operating expenses [(1)]	$ 239,400	$ 149,119	$ 131,996	$ 195,289
Net (loss) income [(1)]	$ (102,115)	$ 51,338	$ 53,789	$ 34,000
Net (loss) income per share, basic [(1)]	$ (1.12)	$ 0.56	$ 0.59	$ 0.37
Net (loss) income per share, diluted [(1)]	$ (1.12)	$ 0.54	$ 0.56	$ 0.35
Weighted average common shares outstanding, basic	91,056	91,389	91,859	92,182
Weighted average common shares outstanding, diluted	91,056	94,779	96,074	97,229
Year Ended December 31, 2018:				
Total revenues	$ 71,086	$ 96,905	$ 151,757	$ 131,492
Total operating expenses	$ 108,533	$ 98,757	$ 97,434	$ 109,621
Net (loss) income	$ (41,818)	$ (5,913)	$ 50,764	$ 18,078
Net (loss) income per share, basic	$ (0.47)	$ (0.07)	$ 0.56	$ 0.20
Net (loss) income per share, diluted	$ (0.47)	$ (0.07)	$ 0.52	$ 0.19
Weighted average common shares outstanding, basic	89,526	90,100	90,555	90,742
Weighted average common shares outstanding, diluted	89,526	90,100	96,798	95,724

(1) In connection with the payment of the upfront fee pursuant to our collaboration and license agreement with Voyager, we recorded a charge of $113.1 million, accounted for as IPR&D, in the first quarter of 2019. In the second quarter of 2019, we entered into an amendment to the collaboration and license agreement with Voyager, pursuant to which we paid Voyager $5.0 million upfront, accounted for as IPR&D, to obtain outside the U.S. rights to the Friedreich's ataxia program. In connection with the payment of the upfront fee pursuant to our collaboration with Xenon, we recorded a charge of $36.2 million, accounted for as IPR&D, in the fourth quarter of 2019.

Item 9. ***Changes and Disagreements with Accountants on Accounting and Financial Disclosure***

Not applicable.

Item 9A. ***Controls and Procedures***

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the timelines specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives, and in reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by SEC Rule 13a-15(b), we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the year covered by this report. Based on the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control Over Financial Reporting

Internal control over financial reporting refers to the process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer, and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

(1) Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;

(2) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and

(3) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk. Management is responsible for establishing and maintaining adequate internal control over financial reporting for the company.

Management has used the framework set forth in the report entitled Internal Control-Integrated Framework (2013 framework) published by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), known as COSO, to evaluate the effectiveness of our internal control over financial reporting. Based on this assessment, management has concluded that our internal control over financial reporting was effective as of December 31, 2019. Ernst & Young, LLP, our independent registered public accounting firm, has issued an attestation report on our internal control over financial reporting as of December 31, 2019, which is included herein.

There has been no change in our internal control over financial reporting during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of

Neurocrine Biosciences, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Neurocrine Biosciences, Inc.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), (the COSO criteria). In our opinion, Neurocrine Biosciences, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive income (loss), stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes and our report dated February 6, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

San Diego, California
February 6, 2020

Item 9B. ***Other Information***

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

We have adopted a code of ethics that applies to our Chief Executive Officer, Chief Financial Officer, and to all of our other officers, directors, employees and agents. The code of ethics is available at the Corporate Governance section of the Investors page on our website at www.neurocrine.com. We intend to disclose future amendments to, or waivers from, certain provisions of our code of ethics on the above website within four business days following the date of such amendment or waiver. Information found on, or accessible through, our website is not part of, and is not incorporated into, this Annual Report on Form 10-K.

Item 11. *Executive Compensation*

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

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

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

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

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

Item 14. *Principal Accounting Fees and Services*

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

PART IV

Item 15. ***Exhibits, Financial Statement Schedules***

(a) Documents filed as part of this report.

1. List of Financial Statements. The following are included in Item 8 of this report:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2019 and 2018

Consolidated Statements of Operations and Comprehensive Income (Loss) for the years ended December 31, 2019, 2018 and 2017

Consolidated Statements of Stockholders' Equity for the years ended December 31, 2019, 2018 and 2017

Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018 and 2017

Notes to the Consolidated Financial Statements (includes unaudited Selected Quarterly Financial Data)

2. List of all Financial Statement schedules. All schedules are omitted because they are not applicable, or the required information is shown in the Financial Statements or notes thereto.

3. List of Exhibits required by Item 601 of Regulation S-K. See part (b) below.

(b) Exhibits. The following exhibits are filed as part of, or incorporated by reference into, this report:

Exhibit		
3.1	Description: Reference:	Certificate of Incorporation, as amended Incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q filed on November 5, 2018
3.2	Description: Reference:	Bylaws, as amended Incorporated by reference to Exhibit 3.2 of the Company's Quarterly Report on Form 10-Q filed on November 5, 2018
4.1	Description: Reference:	Form of Common Stock Certificate Incorporated by reference to the Company's Registration Statement on Form S-1 (Registration No. 333-03172)
4.2	Description: Reference:	Indenture, dated as of May 2, 2017, by and between the Company and U.S. Bank National Association, as Trustee Incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on May 2, 2017
4.3	Description: Reference:	Form of Note representing the Company's 2.25% Convertible Notes due 2024 Incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K filed on May 2, 2017
4.4	Description:	Description of Common Stock of the Company
21.1	Description:	Subsidiaries of the Company
23.1	Description:	Consent of Independent Registered Public Accounting Firm
31.1	Description:	Certification of Chief Executive Officer pursuant to Rules 13a-14 and 15d-14 promulgated under the Securities Exchange Act of 1934
31.2	Description:	Certification of Chief Financial Officer pursuant to Rules 13a-14 and 15d-14 promulgated under the Securities Exchange Act of 1934
32***	Description:	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Description:	Inline XBRL Instance Document. – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Description:	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Description:	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Description:	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Description:	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Description:	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Description:	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibit 101)

Collaboration and License Agreements:

10.1*	Description:	Collaboration Agreement dated June 15, 2010, by and between Abbott International Luxembourg S.a.r.l. and the Company as amended on August 31, 2011
	Reference:	Incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q filed on July 29, 2010
10.2*	Description:	First Amendment to Collaboration and License Agreement Dated August 31, 2011 between the Company and Abbott International Luxemburg S.a.r.l.
	Reference:	Incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q filed on October 31, 2011
10.3*	Description:	Collaboration and License Agreement dated March 31, 2015 between Mitsubishi Tanabe Pharma Corporation and the Company
	Reference:	Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on April 30, 2015
10.4*	Description:	License Agreement dated February 9, 2017 between BIAL– Portela & CA, S.A. and the Company
	Reference:	Incorporated by reference to Exhibit 99.4 of the Company's Current Report on Form 8-K filed on April 25, 2017
10.5*	Description:	Collaboration and License Agreement dated January 28, 2019 between Voyager Therapeutics, Inc. and the Company
	Reference:	Incorporated by reference to Exhibit 10.5 of the Company's Annual Report on Form 10-K filed on February 7, 2019
10.6	Description:	Stock Purchase Agreement dated January 28, 2019 between Voyager Therapeutics, Inc. and the Company
	Reference:	Incorporated by reference to Exhibit 10.6 of the Company's Annual Report on Form 10-K filed on February 7, 2019
10.7	Description:	Investor Agreement dated January 28, 2019 between Voyager Therapeutics, Inc. and the Company
	Reference:	Incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K filed on February 7, 2019
10.8	Description:	Amendment No. 1 to Collaboration and License Agreement dated June 14, 2019 between Voyager Therapeutics, Inc. and the Company
	Reference:	Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on July 29, 2019

Equity Plans and Related Agreements:

10.9**	Description:	Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan, as amended
	Reference:	Incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K filed on May 30, 2018
10.10**	Description:	Form of Stock Option Grant Notice and Option Agreement for use under the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan, and Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement for use under the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan
	Reference:	Incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K filed on June 1, 2015
10.11**	Description:	Neurocrine Biosciences, Inc. Inducement Plan, as amended
	Reference:	Incorporated by reference to Exhibit 10.17 of the Company's Annual Report on Form 10-K filed on February 13, 2018
10.12**	Description:	Form of Stock Option Grant Notice and Option Agreement for use under the Neurocrine Biosciences, Inc. Inducement Plan, and Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement for use under the Neurocrine Biosciences, Inc. Inducement Plan
	Reference:	Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on July 29, 2015
10.13**	Description:	Neurocrine Biosciences, Inc. 2018 Employee Stock Purchase Plan dated May 30, 2018
	Reference:	Incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K filed on May 30, 2018

Agreements with Officers and Directors:

10.14**	Description:	Amended and Restated Employment Agreement effective August 1, 2007 between the Company and Kevin C. Gorman, Ph.D.
	Reference:	Incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q filed on August 3, 2007
10.15**	Description:	Form of Amendment to Employment Agreement for executive officers, effective as of December 15, 2010
	Reference:	Incorporated by reference to Exhibit 10.32 of the Company's Annual Report on Form 10-K filed on February 11, 2008
10.16**	Description:	Employment Agreement dated November 3, 2014 between the Company and Kyle Gano

10.17**	Description:	Employment Agreement dated May 26, 2015 between the Company and Eric Benevich
	Reference:	Incorporated by reference to Exhibit 10.3 of the Company's Annual Report on Form 10-K filed on February 14, 2017
10.18**	Description:	Employment Agreement effective November 29, 2017 between the Company and Matthew C. Abernethy
	Reference:	Incorporated by reference to Exhibit 10.26 of the Company's Annual Report on Form 10-K filed on February 13, 2018
10.19**	Description:	Form of Indemnity Agreement entered into between the Company and its officers and directors
	Reference:	Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on November 1, 2017
10.20**	Description:	Employment Agreement dated January 8, 2018 between the Company and Eiry W. Roberts, M.D.
	Reference:	Incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q filed on July 29, 2019

Agreements Related to Real Property:

10.21	Description:	Amended and Restated Lease dated November 1, 2011 between the Company and Kilroy Realty, L.P.
	Reference:	Incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K filed on January 18, 2012
10.22	Description:	First Amendment to Amended and Restated Lease between the Company and Kilroy Realty, L.P., dated June 5, 2017
	Reference:	Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on August 3, 2017
10.23	Description:	Second Amendment to Amended and Restated Lease between the Company and Kilroy Realty, L.P., dated October 12, 2017
	Reference:	Incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q filed on November 1, 2017
10.24	Description:	Letter of Credit dated December 3, 2007, issued by Wells Fargo Bank, N.A. for the benefit of Kilroy Realty, L.P., as amended on November 20, 2014 and June 19, 2017
	Reference:	Incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K filed on December 10, 2007; Exhibit 10.5 of the Company's Annual Report on Form 10-K filed on February 9, 2015; and Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q filed on August 3, 2017
10.25	Description:	Third Amendment to Amended and Restated Lease between the Company and Kilroy Realty, L.P. dated August 7, 2019
	Reference:	Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q filed on November 4, 2019

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* Confidential treatment has been granted with respect to certain portions of the exhibit.

** Management contract or compensatory plan or arrangement.

*** These certifications are being furnished solely to accompany this annual report pursuant to 18 U.S.C. Section 1350 and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and are not to be incorporated by reference into any filing of Neurocrine Biosciences, Inc., whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Except as specifically noted above, the Company's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K have a Commission File Number of 000-22705.

(c) Financial Statement Schedules. See Item 15(a)(2) above.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NEUROCRINE BIOSCIENCES, INC.
(Registrant)

By: /s/ *Kevin C. Gorman*
Kevin C. Gorman
Chief Executive Officer

Date: February 6, 2020

By: /s/ *Matthew C. Abernethy*
Matthew C. Abernethy
Chief Financial Officer

Date: February 6, 2020

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kevin C. Gorman and Matthew C. Abernethy, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution for him or her, and in his or her name in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power of authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and any of them, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities indicated as of February 6, 2020:

Signature	Title
/s/ *Kevin C. Gorman* Kevin C. Gorman, Ph.D.	Chief Executive Officer and Director *(Principal Executive Officer)*
/s/ *Matthew C. Abernethy* Matthew C. Abernethy	Chief Financial Officer *(Principal Financial and Accounting Officer)*
/s/ *William H. Rastetter* William H. Rastetter, Ph.D.	Chairman of the Board of Directors
/s/ *Gary A. Lyons* Gary A. Lyons	Director
/s/ *George J. Morrow* George J. Morrow	Director
/s/ *Leslie V. Norwalk* Leslie V. Norwalk	Director
/s/ *Richard F. Pops* Richard F. Pops	Director
/s/ *Alfred W. Sandrock, Jr.* Alfred W. Sandrock, Jr., M.D., Ph.D.	Director
/s/ *Stephen A. Sherwin* Stephen A. Sherwin, M.D.	Director
 Shalini Sharp	Director

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Neurocrine Biosciences
Corporate Information

CORPORATE MANAGEMENT

Kevin C. Gorman, Ph.D.
Chief Executive Officer

Matthew C. Abernethy
Chief Financial Officer

Eric Benevich
Chief Commercial Officer

David W. Boyer
Chief Corporate Affairs Officer

Haig P. Bozigian, Ph.D.
Chief Development Officer

Julie S. Cooke
Chief Human Resources Officer

Kyle W. Gano, Ph.D.
Chief Business Development and Strategy Officer

Dimitri E. Grigoriadis, Ph.D.
Chief Research Officer

Darin M. Lippoldt, J.D.
Chief Legal Officer

Malcolm C. Lloyd-Smith
Chief Regulatory Officer

Eiry W. Roberts, M.D.
Chief Medical Officer

BOARD OF DIRECTORS

William H. Rastetter, Ph.D.
Chairman of the Board, Neurocrine Biosciences, Inc. and Fate Therapeutics

Kevin C. Gorman, Ph.D.
Chief Executive Officer, Neurocrine Biosciences, Inc.

Gary A. Lyons
Former President and Chief Executive Officer, Neurocrine Biosciences, Inc.

George J. Morrow
Former Executive Vice President, Global Commercial Operations, Amgen Inc.

Leslie V. Norwalk
Former Acting Administrator for the Centers for Medicare & Medicaid Services

Richard F. Pops
Chairman of the Board and Chief Executive Officer, Alkermes plc

Alfred W. Sandrock, Jr., M.D., Ph.D.
Executive Vice President, Research and Development, Biogen Inc.

Shalini Sharp
Chief Financial Officer and Executive Vice President of Ultragenyx

Stephen A. Sherwin, M.D.
Former Chairman of the Board and Chief Executive Officer, Cell Genesys, Inc.

STOCKHOLDER INFORMATION

Transfer Agent
American Stock Transfer

Corporate Counsel
Cooley LLP

Auditors
Ernst & Young LLP

12780 EL CAMINO REAL, SAN DIEGO, CA 92130 (858) 617-7600

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