

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

**FORM 10-K/A  
(Amendment No. 1)**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2017

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File number 1-10352

**Juniper Pharmaceuticals, Inc.**  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)  
  
33 Arch Street  
Boston, Massachusetts  
(Address of principal executive offices)

59-2758596  
(I.R.S. Employer  
Identification No.)  
  
02110  
(Zip Code)

Registrant's telephone number, including area code:  
(617) 639-1500

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

Common Stock, \$0.01 par value  
(Title of each class)

NASDAQ Global Select Market  
(Name of exchange on which registered)

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 Common Stock held by non-affiliates of the registrant on June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter, based on the adjusted closing price on that date of \$5.05, was \$52,653,764.

The number of shares of Common Stock of Juniper Pharmaceuticals, Inc. issued and outstanding as of March 2, 2018 is 10,975,208.

**Explanatory Note**

The purpose of this amendment is to include the information required by Part III of Form 10-K, which was omitted from Juniper Pharmaceutical, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2017, as originally filed on March 9, 2018. Except as otherwise expressly set forth in this amendment, no portion of the Annual Report on Form 10-K filed on March 9, 2018 is being amended or updated by this amendment.

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### PART III

#### Item 10. *Directors, Executive Officers and Corporate Governance*

##### The Board in General

The Board is currently comprised of eight members, each of whose current term of office as a director expires at our 2018 annual meeting of stockholders. The Board can fill vacancies and newly created directorships, as well as provide for a greater or lesser number of directors.

Biographical information with respect to our directors is provided in the table below.

There are no arrangements or understandings between any of our directors and any other persons pursuant to which such director was selected as a director. There are no family relationships among any of the executive officers and directors of the Company.

<u>Name</u>	<u>Position with the Company</u>	<u>Age</u>	<u>Director Since</u>
Dr. Cristina Csimma	Director	59	2010
James A. Geraghty	Chairman of the Board	63	2015
Jennifer Good	Director	53	2017
Dr. Mary Ann Gray	Director	65	2016
Ann Merrifield	Director	67	2015
Richard Messina	Director	55	2018
Dr. Nikin Patel	Director and Chief Operating Officer	45	2013
Alicia Secor	Director and Chief Executive Officer	55	2016

**Cristina Csimma, PharmD, MHP** has been a director of the Company since September 2010. She serves on the Board of Directors of Neuralstem, Inc. (nervous system diseases). She has also been Executive Chair of Exonics Therapeutics, Inc. (a rare disease company), November 2016 to November 2017, and has been engaged in strategic advisory roles with the biopharmaceutical and venture capital industries, as well as government and patient organizations. She was also a board director at Vtesse Inc. (a rare disease company) from January 2015 until its acquisition in March 2017. Dr. Csimma was a President and the founding Chief Executive Officer of Cydan Development, Inc. (therapeutics for orphan diseases) from November 2012 until April 2014, and was a director of the company from November 2012 through December 2014. Prior to that she served as Vice President, Drug Development, of Virdante Pharmaceuticals, Inc., from January 2009 to May 2011. She was a principal of Clarus Ventures, LLC (life sciences venture capital) from 2006 through 2008. She held clinical development roles at Wyeth Research (pharmaceuticals) from 2000 to 2006, at Genetics Institute from 1988 to 2000, and was a Clinical Pharmacist with Dana-Farber Cancer Institute from 1983 to 1988.

Dr. Csimma has also served in advisory roles including the National Institutes of Health's External Oversight Committee for the Blueprint Neurotherapeutics Network since January 2015, the Rockefeller University's Robertson Therapeutics Development Fund Review Committee since January 2014, the National Institutes of Health's Executive Oversight Board for NeuroNext since January 2013 and the Muscular Dystrophy Association's Scientific Advisory Board for MDA Venture Philanthropy since December 2008. Dr. Csimma has also served on the Treat-NMD Advisory Committee for Therapeutics from July 2009 through the present. Dr. Csimma holds a B.S. and Doctor of Pharmacy degrees from the Massachusetts College of Pharmacy and Allied Health Sciences, and a Master of Health Professions from Northeastern University.

**Qualifications:** Dr. Csimma has extensive experience in drug development, fund raising and company building in the biopharmaceutical industry, and venture capital, and has led global programs in multiple therapeutic areas.

**James A. Geraghty** has served as a member of the Board since May 2015, and was elected Chairman of the Board in July 2015. From May 2013 to October 2016, Mr. Geraghty served as an Entrepreneur in Residence at Third Rock Ventures, a leading biotech venture and company-formation fund. From April 2011 to December 2012, Mr. Geraghty served as Senior Vice President, North America Strategy and Business Development at Sanofi (pharmaceuticals), which he joined upon its acquisition of Genzyme Corporation ("Genzyme"). Mr. Geraghty spent the 20 prior years at Genzyme, where his roles included Senior Vice President International Development, President of Genzyme Europe, and General Manager of Genzyme's cardiovascular business. Mr. Geraghty has served as Chairman of the Board of Idera Pharmaceuticals (biotechnology) since 2013, and as a member of the board of directors of Voyager Therapeutics, Inc. (gene therapy) since 2014. Mr. Geraghty is also a member of the Fulcrum Therapeutics, Inc., of Pieris

Pharmaceuticals, and of the BIO Ventures for Global Health boards. He started his career in healthcare strategy consulting at Bain and Company.

Mr. Geraghty holds a J.D. from Yale Law School, M.S. from the University of Pennsylvania and a B.A. from Georgetown University.

**Qualifications:** Mr. Geraghty is an industry leader with 30 years of strategic and leadership experience, including more than 20 years as a senior member of executive teams at biotechnology companies developing and commercializing innovative therapies.

**Jennifer Good** has been a director of the Company since September 2017. Ms. Good is the co-founder of Trevi Therapeutics (“Trevi”) and has served as a director as well as the Company’s President and Chief Executive Officer since inception in 2011, raising financing through Series C capital and overseeing the development of Nalbuphine ER into Phase 3 development. Prior to founding Trevi, Ms. Good held various positions at Penwest Pharmaceuticals Co. from 1997 to 2010 including President and Chief Executive Officer, Chief Operating Officer and Chief Financial Officer, where she successfully led the transition of a publicly traded life sciences company from a development stage company to generating annual revenues in excess of \$50 million with strong profitability. The Company was acquired by its strategic partner in 2010.

Ms. Good received a Bachelor of Business Administration degree with a Concentration in Accounting from Pacific Lutheran University in 1987 and is a Certified Public Accountant licensed by the State of Washington, although her license is currently inactive. Ms. Good is a board member of the Friedreich's Ataxia Research Alliance (FARA), which is a patient advocacy group advancing treatments for the cure of Friedreich's Ataxia. Ms. Good serves on FARA’s Executive, Business Development and Finance Committees. Ms. Good is also the Treasurer for a non-profit organization, Newtown Youth and Family Services, which provides mental health services and programs to support the community.

**Qualifications:** Ms. Good has a background in executive operations, with expertise in financial strategy and business development.

**Mary Ann Gray, Ph.D.** has been a director of the Company since March 2016. Since 2003, Dr. Gray has served as President of Gray Strategic Advisors, LLC, which provides strategic advice to both public and private biotechnology companies. Previously, she spent three and a half years with the Federated Kaufmann Fund focusing on both public and private healthcare investments. Prior to joining the Kaufmann Fund, Dr. Gray was a sell-side biotechnology analyst for nine years with Kidder Peabody, Dillon Read and Raymond James. She also held scientific positions at Schering Plough and NeoRx (oncology specialty pharmaceuticals). Since 2010, Dr. Gray has served on the board of directors of Senomyx, Inc. (“Senomyx”) (biotechnology flavor ingredients). Until December 2017, she served on the board of directors of Galena Pharmaceuticals (cancer immunotherapy). Until 2016, she also served on the boards of Acadia Pharmaceuticals, Inc. (“Acadia”) (CNS disorders) and TetraLogic Pharmaceuticals Corporation (“TetraLogic”) (oncology and infectious disease therapeutics). At Senomyx she is the chairman of the compensation committee and lead independent director, and at Galena she was a member of the nominating and governance committee and audit committee chair. At Acadia she served as chairman of the audit committee and also served on the compensation committee. Dr. Gray previously served on the board of directors of Dyax Corp., beginning in 2001, and served as its lead director from 2010 until its acquisition by Shire plc (specialty biopharmaceuticals) in January 2016. Earlier in her career, Dr. Gray managed pre-clinical toxicology studies for the National Cancer Institute through Battelle Memorial Institute and worked in the hospital laboratory.

Dr. Gray holds a B.S. from the University of South Carolina and a Ph.D. in Pharmacology from the University of Vermont where she focused on novel chemotherapeutic agents for the treatment of cancer. She did post-doctoral work at Northwestern University Medical School and Yale University School of Medicine.

**Qualifications:** Dr. Gray has a strong dual background as a scientist and financial analyst and portfolio manager in the biotechnology industry, as well as public company board experience.

**Ann Merrifield** has been a director of the Company since July 2015. She was the President and Chief Executive Officer of PathoGenetix, Inc. (genomics technology), from December 2012 to July 2014. PathoGenetix, Inc. filed for Chapter 7 bankruptcy in July 2014. Prior to joining PathoGenetix, Inc., Ms. Merrifield served an 18-year tenure at Genzyme (now owned by Sanofi S.A.), a diversified, global biotechnology company. During her time at Genzyme, Ms. Merrifield served, among other roles, as Senior Vice President, Business Excellence, President of Genzyme Biosurgery, and President of Genzyme Genetics. Prior to joining Genzyme, Ms. Merrifield was a Partner at Bain and Company (global strategy consulting) and an Investment Officer at Aetna Life & Casualty.

She is also a director of Flexion Therapeutics (non-opioid pain therapies), Chair of the board of InVivo Therapeutics (spinal cord injury), and is a trustee of a portfolio of MassMutual investment funds.

Ms. Merrifield earned a B.A. in Zoology and a Master of Education from the University of Maine, and an M.B.A from the Amos Tuck School of Business at Dartmouth College.

**Qualifications:** Ms. Merrifield is a seasoned business executive with broad-ranging strategy development and leadership experience in the biotech sector as well as substantial corporate board experience.

**Richard Messina** has been a director of the Company since March 2018. Mr. Messina is the Founder, President and Chief Executive Officer of The Benchmark Company, LLC, an investment banking and financial advisory firm. Mr. Messina founded The Benchmark Company, LLC, in 1988.

Mr. Messina holds a B.A. from the University of Massachusetts, Amherst.

**Qualifications:** Mr. Messina has been a long-term shareholder in the company and has broad investment experience.

**Nikin Patel, Ph.D., MRPharmS** co-founded Juniper Pharma Services Ltd. (f/k/a Molecular Profiles, Ltd.) and served as its Chief Executive Officer from 1998 until April 2015, at which time he was named Chief Operating Officer of Juniper Pharmaceuticals, Inc. and President of Juniper Pharma Services Ltd. Dr. Patel joined our Board in September 2013, when Juniper Pharma Services was acquired by us. Dr. Patel is also a co-founder of Locate Therapeutics Ltd. (a specialist regenerative medicine and device company) and was a director from 2001 through 2014.

Dr. Patel holds a first class honours degree and Ph.D. in Pharmacy from the University of Nottingham, and is a Member of the Royal Pharmaceutical Society (MRPharmS).

**Qualifications:** Dr. Patel has over 20 years of management and technical experience centered on pharmaceutical development. His leadership was recognized externally through the U.K.'s most prestigious industry accolade, the Queen's Award for Enterprise, won by Molecular Profiles in both 2007 and 2011 in the Innovation category.

**Alicia Secor** has served as the Company's Chief Executive Officer and President since August 2016. Previously, she served as the Chief Commercial Officer of Zafgen Inc., a biopharmaceutical company, from January 2014 to July 2016. From August 2013 to October 2013, she served as Senior Vice President and Chief Operating Officer of Synageva BioPharma Corp., a biotechnology company. Previously, from November 1998 to July 2013, Ms. Secor spent 15 years at Genzyme, where she held various leadership positions, most recently as Vice President and General Manager of Metabolic Diseases, a global business with five marketed products, including two products for orphan diseases. Prior to this role, she was Vice President and General Manager of Biosurgical Specialties, a surgical device business focused on adhesion prevention and other novel applications for biomaterials. Prior to Genzyme, Ms. Secor held positions at Alkermes, Inc. in business development, at Centocor, Inc. (a Johnson & Johnson Company) in clinical and commercial operations, and began her career at Pfizer Inc. as a hospital-based sales representative. Ms. Secor also serves as a member of the Board of Directors for the Foundation for Prader-Willi Research. Ms. Secor is a director on the Board of GW Pharmaceuticals plc, and also serves as a member of the Board of Directors for the Foundation for Prader-Willi Research. She received her M.B.A. from Northeastern University, and her B.S. in Healthcare Administration from the University of New Hampshire.

**Qualifications:** Ms. Secor has a wide-ranging business background, including cross-functional and senior leadership roles in the pharmaceutical and healthcare industry with particular experience in biopharmaceuticals, biotechnology and drug development.

## Executive Officers

Our executive officers as of April 27, 2018 are as follows:

<u>Name</u>	<u>Age</u>	<u>Position with the Company</u>
Alicia Secor	55	President and Chief Executive Officer
Jeffrey Young	45	Chief Financial Officer
Dr. Nikin Patel	45	Chief Operating Officer

Officers serve at the discretion of the Board. There is no family relationship between any of the executive officers or between any of the executive officers and the Company's directors. There is no arrangement or understanding between any executive officer and any other person pursuant to which the executive officer was selected.

**Alicia Secor.** For Ms. Secor's biography, please see above under "The Board in General."

**Jeffrey Young.** Mr. Young has served as our Chief Financial Officer since January 2017. Mr. Young brings over 20 years of financial leadership in the life sciences sector to Juniper, most recently serving as Chief Financial Officer and Treasurer of OvaScience, Inc. a global fertility company focused on new treatment options for women, which he joined in September 2014. Before OvaScience, Mr. Young served as Chief Financial Officer and Treasurer of Transmedics, Inc. from August 2013 to August 2014, leading the finance, accounting, tax and treasury functions. Prior to Transmedics, Mr. Young was Chief Financial Officer and Treasurer at Lantheus Medical Imaging, Inc., an international corporation, from September 2008 to August 2013. While at Lantheus, he was responsible for multiple functions, including finance, accounting, customer service, tax and treasury. Before Lantheus, Mr. Young served as Chief Accounting Officer, Vice President of Finance and Treasurer at Critical Therapeutics Inc. from 2005 to 2008, and managed the company's transition during its acquisition by Comerstone BioPharma. Earlier in his career, Mr. Young held finance roles at PerkinElmer, Inc. and began his career as a Certified Public Accountant at PricewaterhouseCoopers LLP. Mr. Young holds a B.S. in Business Administration from Georgetown University.

**Dr. Nikin Patel.** For Dr. Patel's biography, please see above under "The Board in General."

#### **Audit Committee**

The current members of our Audit Committee are Dr. Mary Ann Gray (Chair), Jennifer Good and James A. Geraghty.

The committee meets at regularly scheduled times during the year and on an *ad hoc* basis as business needs necessitate. In 2017 the committee held seven meetings. The primary function of the Audit Committee is to oversee Juniper's reporting processes on behalf of the Board and to report the results of its activities to the Board. The Audit Committee's duties and responsibilities are to, among other things:

- Select a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- Help ensure the independence and performance of the independent registered public accounting firm;
- Discuss the scope and results of the audit with the independent registered public accounting firm, and review, with management and the independent registered public accounting firm, our operating results;
- Review financial press releases;
- Develop procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- Review and address conflicts of interests of the Company's directors and executive officers;
- Review materials to identify and address the status of major risks to the Company;
- Review related party transactions;
- Obtain and review a report by the independent registered public accounting firm at least annually, that describes our internal control procedures, any material issues with such procedures and any steps taken to deal with such issues; and
- Approve (or, as permitted, pre-approve) all audit and all permissible non-audit service to be performed by the independent registered public accounting firm.

The Audit Committee acts pursuant to the Audit Committee Charter. While the Audit Committee has the powers and responsibilities set forth in its charter, it is not the responsibility of the Audit Committee to plan or conduct audits, or to determine that Juniper's financial statements are complete and accurate or are in compliance with generally accepted accounting principles. This is the responsibility of management and the Company's independent registered public accounting firm.

All of the members of the Audit Committee have been determined by the Board to be independent within the meaning of the applicable Nasdaq Marketplace Rules and Section 10A-3(b)(1) of the Exchange Act of 1934, as amended (the “Exchange Act”). The Company has identified Dr. Gray as an “audit committee financial expert” as that term is defined under applicable regulations of the SEC.

### **Code of Business Conduct and Ethics**

The Board has adopted a Code of Business Conduct and Ethics that applies to all of our directors, executive officers (including our Chief Executive Officer and our Chief Financial Officer), and employees of the Company. Our Code of Business Conduct and Ethics is posted on our corporate website, [www.juniperpharma.com](http://www.juniperpharma.com) under “Investor Relations”. We will provide an electronic or paper copy of this document free of charge upon request. If, in the future, we should amend our Code of Business Conduct and Ethics or grant a waiver to our Chief Executive Officer or our Chief Financial Officer with respect to our Code of Business Conduct and Ethics, then we will post the amendment or a description of the waiver in the “Investor Relations” section of our corporate website, [www.juniperpharma.com](http://www.juniperpharma.com), or in a Current Report on Form 8-K.

### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Exchange Act of 1934 (the “Exchange Act”), and the rules issued thereunder, requires our directors and executive officers and beneficial owners of more than 10% of the outstanding shares of our equity securities to file reports of ownership and changes in beneficial ownership of our equity securities with the SEC. Copies of these reports are furnished to the Company. The Company is required to identify any of those individuals who failed to file such reports on a timely basis. Based solely on our review of the copies of such reports furnished to us, and representations from the persons subject to Section 16(a) of the Exchange Act with respect to our Company, we believe that during 2017 all of our executive officers, directors, and 10% stockholders complied with the Section 16(a) requirements.

## **Item 11. Executive Compensation**

### **Compensation Discussion and Analysis**

#### **Introduction**

Our Compensation Committee provides assistance to the Board in fulfilling its responsibility to oversee the creation and administration of executive compensation programs and practices. Responsibilities of the Compensation Committee include, among other things:

- Reviewing and determining the compensation of the Company’s Chief Executive Officer and other executive officers;
- Reviewing and approving of the Company’s management incentive compensation policies and programs; and
- Reviewing and approving equity compensation programs for the Company’s employees, directors and consultants, including grants of options, restricted stock and other awards thereunder.

The Compensation Committee acts pursuant to the Compensation Committee Charter. This Charter can be found on our corporate website, [www.juniperpharma.com](http://www.juniperpharma.com).

The current members of our Compensation Committee are Ann Merrifield (Chair), Dr. Cristina Csimma and Jennifer Good. Each of these individuals has been determined by the Board to be independent within the meaning of the applicable Nasdaq Marketplace Rules.

The Compensation Committee meets at regularly scheduled times during the year and on an *ad hoc* basis as business needs necessitate. In 2017, the Compensation Committee held nine meetings. The Compensation Committee has the authority under its charter to retain, direct and oversee the work of compensation consultants and legal counsel to provide guidance on matters related to executive compensation and other related matters; provided, however, that the Compensation Committee must take into account certain independence factors outlined in the Nasdaq Marketplace Rules in making their selections. The Committee engaged Radford, an Aon plc company, (“Radford”) as its executive compensation consultant to provide executive and non-employee director compensation consulting services. The Compensation Committee determined that Radford is independent under applicable Nasdaq rules and that their work did not raise any conflicts of interest. Radford did not provide any services to the Company in 2017, other than to the Compensation Committee.

## **Risk Assessment**

The Compensation Committee regularly undertakes a qualitative assessment of the extent to which the Company's compensation program encourages or may aggravate or mitigate unnecessary or excessive risk-taking behavior by executive officers. The Compensation Committee has concluded that the Company's executive compensation program maintains an appropriate balance between risks and rewards and it does not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

## **Executive Compensation Philosophy and Objectives**

Our compensation program for the individuals named in the Summary Compensation Table (the "named executive officers") is designed and implemented based on our pay-for-performance compensation philosophy. Our named executive officers for 2017 were Alicia Secor, President and Chief Executive Officer; Jeffrey Young, Chief Financial Officer; Dr. Nikin Patel, Chief Operating Officer; and Dr. Bridget A. Martell, former Chief Medical Officer.

Effective September 18, 2017, Dr. Martell resigned as our Chief Medical Officer.

We strive to adhere to our pay-for-performance philosophy by differentiating the pay and rewards of our executive officers based on their demonstrated performance and potential to contribute to the long-term success of the Company. Competing for talent in the rapidly changing and increasingly competitive pharmaceutical industry is both challenging and critical to our success. We need and want the best people to be excited and motivated to work at Juniper and to understand that their rewards are driven by the Company's performance and by their individual contributions to the Company's performance. The quality of the Company's talent is a key component of long-term stockholder value.

We have established a total rewards framework that supports our compensation philosophy through the following objectives:

- affording our executives a competitive total rewards opportunity comparable to executives in similar positions at organizations with which we compete for executive talent;
- allowing us to attract and retain executives who can perform and succeed in our fast-paced and challenging environment; and
- delivering compensation in a cost-efficient manner that aligns employees' rewards with stockholders' long-term interests.

## **Compensation Program Elements and Pay Level Determination**

The Compensation Committee undertakes discussions and assessments of compensation-related programs and the performance of management throughout the year. Early in the Company's fiscal year, the Compensation Committee reviews and recommends base salaries, annual cash incentive bonuses, and equity incentives for all executive officers based on the prior year's performance, which are then approved by all non-employee directors.

As part of the review process, the Chief Executive Officer provides to the Compensation Committee an individual assessment of the major accomplishments of each other executive officer over the prior year and recommends compensation for each such executive officer to the Compensation Committee. The Compensation Committee evaluates the performance of our Chief Executive Officer and recommends to the non-employee members of the Board for their approval all compensation elements and amounts to be awarded to our Chief Executive Officer. Our Chief Executive Officer and our Chief Operating Officer, who are members of the Board, do not participate in Board decisions relating to their compensation. The key metrics we use to measure the performance of our executive officers can be grouped into the following categories:

- Financial—We evaluate measures of our financial performance such as revenue, expense management and cash flow metrics.
- Operational—We evaluate operational measures to determine that the Company is operating effectively and efficiently.
- Clinical—We evaluate clinical measures to assess progress in developing and bringing new drugs to market.



The Compensation Committee considers the recommendations of the Chief Executive Officer and other information (including each executive's significant accomplishments, external competitiveness, Company performance, progress towards strategic objectives, and internal equity among executive officers) and applies its knowledge and discretion to determine, or recommend to the non-employee members of the Board for approval, the compensation for each executive officer.

### Public Company Peer Group

To understand external competitiveness, the Compensation Committee compares each element of total compensation against a peer group of publicly traded pharmaceutical and biotechnology companies. At the Compensation Committee's request, Radford undertook a review of the Company's peer group and provided recommendations to the Compensation Committee based on their findings. Based, in part, on Radford's recommendations, the Compensation Committee revised the Company's peer group, based on the following key factors: market capitalization, industry focus defined as commercial biotechnology and pharmaceutical companies, stage of development (defined as a mix of Phase 2 and Phase 3 and marketed products), revenue, and number of employees. Adverum Biotechnologies, Inc., Corium International, Inc., Dicema Pharmaceuticals, Inc., Ignyta, Inc. and Peregrine Pharmaceuticals Inc. were additions to the 2017 peer group replacing Athersys, Inc., Cytokinetics, Incorporated, and OncoGenex Pharmaceuticals, Inc., each of which was removed due to market capitalization that had moved well outside of the Company's comparable range.

The Compensation Committee, with Radford's input and advice, approved the following companies as our public company peer group for 2017:

Adverum Biotechnologies Inc.	ADVM
Alimera Sciences, Inc.	ALIM
Antares Pharma, Inc.	ATRS
Assembly Biosciences, Inc.	ASBM
Argos Therapeutics, Inc.	ARGS
Athersys, Inc.	ATHX
BioDelivery Sciences International, Inc.	BDSI
Caladrius BioSciences, Inc. (formerly NeoStem, Inc.)	CLBS
Codexis, Inc.	CDXS
Corium International, Inc.	CORI
CTI BioPharma Corp.	CTIC
Dicema Pharmaceuticals, Inc.	DRNA
Elite Pharmaceuticals, Inc.	ELTP
Endocyte, Inc.	ECYT
Ignyta, Inc.	RXDX
Ocera Therapeutics Inc.	OCRX
Pain Therapeutics, Inc.	PTIE
Paratek Pharmaceuticals, Inc. (formerly Transcept Pharmaceuticals, Inc.)	PRTK
Peregrine Pharmaceuticals Inc.	PPHM
Rigel Pharmaceuticals, Inc.	RIGL
XOMA Corporation	XOMA
Zogenix, Inc.	ZGNX

### The Role of Stockholder "Say-on-Pay" Votes

As required by Section 14A of the Exchange Act, the Company provides its stockholders with the opportunity to cast an annual advisory vote to approve the compensation of our named executive officers. At the Company's 2017 Annual Meeting, approximately 61% of the votes cast at that meeting voted in favor of the proposal. The Compensation Committee regularly reviews all elements of compensation to ensure that we remain competitive in the market and to ensure that overall compensation, including the mix of stock and cash, is aligned with our business objectives, our performance and the interests of our stockholders. In particular, to enhance our commitment to performance-based compensation, we added time and performance-based restricted stock unit awards to our equity compensation program in 2017 and, in 2017, we granted our executive officers a mix of stock options subject to time-based vesting, restricted stock units subject to time-based vesting and restricted stock unit awards that vest only if we achieve certain specified objective performance criteria. With these changes, we believe that our stockholders will generally approve of and continue to support our core compensation principles and our executive compensation program. The Compensation Committee will continue to

consider changes to our executive compensation program as appropriate in response to input from stockholders and evolving factors such as the business environment and competition for talent.

### Components of our Executive Compensation Program

Total compensation for our named executive officers generally consists of a mix of cash and equity awards. Base salaries and annual incentive bonuses are paid in cash. Long-term incentives are provided in the form of stock option awards and restricted stock units subject to both time- and performance-based vesting. Named executive officers are also eligible to participate in our employee benefits programs on the same terms as other employees.

Each primary component of compensation and the purpose of such element is summarized in the table below.

Component	Purpose/Description
Base salary	Competitive fixed income for performance of day-to-day responsibilities.
Annual incentive bonus	Rewards achievement of annual goals that support short-term (annual) business objectives.
Equity compensation	Fosters a culture of ownership, aligns compensation with stockholder interests, promotes long-term retention with the Company and incentivizes operational success and long-term value creation for our stockholders. Consists primarily of stock options and restricted stock units subject to both time and performance-based vesting.
Benefits	Standard employee benefits, such as health, dental, vision, short- and long-term disability, and life insurance.
Retirement benefits	Standard employee 401(k) Plan. The Company's safe harbor non-elective contribution to the savings plan is in the amount equal to 3% of base salary up to the statutory maximum.
Perquisites	None.

While the general mix of each compensation component is considered in the design of our total compensation program, the Compensation Committee and the Board do not target a specific mix of pay either in their program design or in compensation determinations. By design, our executive officers have more variability in their compensation than non-executives, to more closely tie their compensation to the Company's overall performance. The Compensation Committee considers each element of total compensation offered by the Company against each element of total compensation provided by our peer group companies.

### Base Salary

We pay our executive officers base salaries to provide a baseline level of compensation that is both competitive with the external market and our peer group, and commensurate with each executive officer's past performance, experience, responsibilities, and skills. The base salary levels of our executive officers may be increased from time to time to recognize external competitive compensation levels, internal pay equity, and individual contributions and performance.

Generally, the Compensation Committee compares our executive officers' base salaries with base salaries of individuals in comparable positions at the peer group companies. In connection with determining or recommending the base salary levels for the Company's executive officers, the Compensation Committee compares their total target cash compensation (i.e., base salary plus target annual bonus) to total target cash compensation of individuals in comparable positions at the peer group companies.

The 2017 base salaries of each of our named executive officers were as follows:

<u>Name and principal position</u>	<u>2016 Base</u>	<u>2017 Base</u>	<u>% change</u>
Alicia Secor <i>President and Chief Executive Officer</i>	\$410,000	\$459,200	12%
Jeffrey Young(1) <i>Senior Vice President, Finance, Chief Financial Officer and Treasurer</i>	N/A	\$355,000	NA
Dr. Nikin Patel (2) <i>Chief Operating Officer</i>	\$253,163	\$310,137	23% (3)
Dr. Bridget A. Martell <i>Former Chief Medical Officer</i>	\$320,000	\$360,000	13%

(1) Mr. Young joined the Company in January 2017.

(2) The amount shown for Dr. Patel represents his 2016 and 2017 base salary designated in British pound (£205,218 and £229,884, respectively) and converted to U.S. dollars for purposes of this table, using an exchange rate as of December 31, 2016 and 2017 of 1.23363 and 1.34912, respectively.

(3) The percentage increase is in part attributable to foreign exchange rate fluctuations. The actual percentage increase in GBP is 12%, and this increase is in part balanced out by a decrease in Dr. Patel's target bonus level from 55% to 45%.

The 2017 base salaries for our Chief Executive Officer, Chief Operating Officer and Chief Medical Officer were below the 50<sup>th</sup> percentile for comparable positions at peer group companies. The 2017 base salaries for our Mr. Young, Chief Financial Officer, was at the 50<sup>th</sup> percentile for comparable positions at peer group companies.

#### Annual Cash Incentive Bonuses

We maintain an annual cash incentive program (the "Incentive Plan"), the purpose of which is to motivate and reward the attainment of annual Company and individual performance goals. For our named executive officers, annual incentive opportunities, which are expressed as a percentage of base salary, can range from 0% to 150% of targeted levels, depending on the attainment of pre-established Company base performance goals and individual goals for the particular year, or up to 200% if certain specified stretch Company performance goals were achieved. In order for any named executive officer to be eligible to receive an annual incentive bonus, the Company must achieve at least 50% of the pre-established target corporate goals (as described below).

Actual payouts under the Incentive Plan are recommended by the Compensation Committee to the Board based on achievement of corporate goals, overall individual performance, and the broad discretion of the Compensation Committee and the Board. Our corporate goals are discussed at the beginning of each year by management and the Compensation Committee and are approved by the Compensation Committee and the Board.

The extent to which corporate goals are achieved is assessed by the Compensation Committee with input from the Chief Executive Officer and other members of management. The Compensation Committee and the Board consider the following in determining cash bonuses:

- The extent to which base and stretch corporate goals are achieved or exceeded;
- The overall success of the Company throughout the year as determined by factors such as progress in key programs, execution of the strategic plan, and share price; and
- For executive officers other than the Chief Executive Officer, achievement of individual performance goals.

## 2017 Annual Cash Incentive Bonuses

Bonus targets for 2017 for Ms. Secor, Mr. Young and Drs. Patel and Martell were 60%, 45%, 45% and 40% of their base salaries, respectively.

The following table summarizes the Company's goals for 2017 and the Compensation Committee's determination with respect to the achievement level of each such goal.

<b>Company Goal</b>	<b>Weight</b>	<b>Achievement</b>
<b>Financial Goals</b>		
Establish an IVR product partnership with a company by the end of 2017	20%	0%
Complete 2017 with no new material weaknesses identified through implementation and maintenance of robust financial processes	10%	10%
<b>Operational Goals</b>		
Achieve a specified service revenue and GP target for 2017*	15%	18%
Deliver target of at least 99% for Crinone sub-lots against the initial firm 4-month forecast received from Merck	15%	17%
<b>Clinical Goals</b>		
Qualify and secure a second source of EVA medical grade	10%	0%
Define go-forward decision by year-end for JNP-0201 and JNP-0301 supported by either a successful US PIND meeting for JNP-0201 or FDA endorsement of clinical development protocol design for JNP-0301	15%	15%
Confirm validation of IVR technology by using a successful formulation in a positive sheep study (PK and Tolerability)	15%	15%
<b>Total</b>	<b>100%</b>	<b>75%</b>
<b>Stretch Goals</b>		
Complete 2 inbound non-IVR asset transactions	25%	0%
IND submission for one IVR pipeline program	25%	0%
<b>Total including Stretch Goals</b>	<b>150%</b>	<b>75%</b>

\* *The above-described metrics include highly sensitive data. We do not disclose the specific target levels for this metric because we believe that such disclosure would result in competitive harm to our Company. Revealing this metrics could potentially reveal insights about our commercialization plans and research and other objectives that our competitors could use against us in the marketplace for similar pharmaceutical products. We believe each of these target levels were designed to be challenging but attainable under assumed conditions if we had what we considered to be a successful year.*

The Compensation Committee recognized the Company's achievement of the 2017 goals at 75% in the aggregate, which was more than the required 50% minimum achievement level for corporate goals.

In the case of Ms. Secor, 100% of bonus eligibility is based on achievement of the corporate goals. For the other executive officers, 80% of bonus eligibility is based on achievement of the corporate goals and the other 20% of bonus eligibility is determined based on achievement of individual performance goals. Individual performance goals were established for each of the other named executive officers in the first quarter of 2017.

The individual performance goals for Mr. Young were as follows: (i) ensure robust internal control process and compliance with all necessary Public Company Accounting Oversight Board requirements by December 31, 2017; (ii) ensure that (a) identified material weaknesses are remediated and (b) no new material weaknesses are identified at December 31, 2017; (iii) financial process and reporting improvement; (iv) establish a cohesive international finance team; and (v) develop and hire top talent to effectively service the Company. The individual performance goals for Dr. Patel were as follows: (i) determine the path forward and options for future Nottingham facility site; (ii) establish Crinone capacity requirements to 2020 and implement changes to ensure sufficient capacity to deliver on current Merck contract requirements, and (iii) invest in ongoing executive development. In the case of

each Mr. Young and Dr. Patel, the Compensation Committee determined that these individual performance goals were achieved at the 100% level. Dr. Martell resigned effective September 18, 2017 and was not eligible to receive a cash incentive bonus for 2017.

The 2017 annual cash incentive bonus targets and the actual annual cash incentive payments made to the named executive officers based upon achievement of the corporate and individual goal described above were as follows:

Name	Position	2017 Target Annual Incentive Bonus Target	2017 Annual Incentive Bonus Paid
Alicia Secor	President and Chief Executive Officer	\$ 275,520	\$ 206,640
Jeffrey Young	Senior Vice President, Finance, Chief Financial Officer and Treasurer	\$ 159,750	\$ 127,801
Dr. Nikin Patel	Chief Operating Officer	\$ 139,458 (1)	\$ 114,545 (2)
Dr. Bridget A. Martell	Chief Medical Officer	\$ 144,000	— (3)

- (1) The amount shown for Dr. Patel represents a target amount that was designated in British pound (£103,448) and converted to U.S. dollars for purposes of this table, using an exchange rate as of February 28, 2018 of 1.3841 U.S. dollars for each British pound.
- (2) The amount shown for Dr. Patel represents a target amount that was designated in British pound (£82,758) and converted to U.S. dollars for purposes of this table, using an exchange rate as of February 28, 2018 of 1.3841 U.S. dollars for each British pound.
- (3) Dr. Martell resigned as the Company's Chief Medical Officer effective September 18, 2017 and was not eligible to receive a cash incentive bonus for 2017.

### Equity Compensation

An equity compensation program is provided to all executives and certain key employees to foster a culture of ownership, align compensation with stockholder interests, and promote long-term retention with the Company. Each year the Compensation Committee determines the types of awards to be used for equity compensation. In doing so, the Compensation Committee considers the ability of each type of award to achieve key compensation objectives (such as employee retention, motivation, and attraction), the needs of the business, competitive market practices, dilution, and expense constraints, as well as tax and accounting implications.

Stock options awarded under the Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Performance Plan (the "2015 Plan") must have an exercise price equal to or greater than the fair market value (i.e., the closing price) of the Company's Common Stock on the Nasdaq Global Market on the date of grant. Stock option grants are normally approved at Board and Compensation Committee meetings that are scheduled up to a year in advance. Scheduling decisions are made without regard to anticipated financial reporting dates or other major announcements by the Company.

Newly hired employees, including executive officers, may be granted equity awards effective on the first day of employment, with such equity awards granted in the form of stock options having an exercise price set at the fair market value (i.e., the closing price) of our Common Stock on the Nasdaq Global Market on the employment start date. Our employees' start dates are scheduled without regard to anticipated financial reporting dates or other major announcements by the Company.

We have historically made an annual grant of stock options at the time of the annual review of each executive's performance, usually in February or early March of each year. Stock option grants typically vest over four years to provide an incentive for employees to remain with the Company and to increase stockholder value.

The Compensation Committee determined, based on its review of overall compensation practices, and equity compensation practices specifically, and with input from Radford, to modify its equity compensation structure for 2017 to enhance our commitment to performance-based compensation and a pay-for-performance philosophy. Accordingly, in 2017, the Compensation Committee granted grant equity awards in the form of time-based stock options, time-based restricted stock units and performance-based restricted stock units. The performance conditions are long-term in nature, where achievement criteria are difficult to achieve and if achieved deliver stockholder value. We also consider stock options to be performance-based as they have value only if and to the extent that the Company's stock price increases. The value of restricted stock units is also dependent on the price of our Common Stock, which further incentivizes executive officers to increase stockholder value.

In determining the equity awards for 2017, the Compensation Committee concluded as follows: (1) the value of equity awards should be comparable to those provided by our peer group of companies; (2) the aggregate grants should be limited, so as not

to exceed a predetermined dilution effect; and (3) the grants to executive officers should be within a range that is appropriate from a Company-wide internal fairness perspective.

Based on these determinations, on March 3, 2017, Ms. Secor was granted an option to purchase 127,500 shares of Common Stock, 26,200 restricted stock units subject to time-based vesting and 50,000 restricted stock units subject to performance-based vesting; Mr. Young was granted 25,000 restricted stock units subject to performance-based vesting; Dr. Patel was granted an option to purchase 53,000 shares, 11,000 restricted stock units subject to time-based vesting and 25,000 restricted stock units subject to performance-based vesting; and Dr. Martell was granted an option to purchase 74,900 shares of Common Stock, 15,500 restricted stock units subject to time-based vesting and 30,000 restricted stock units subject to performance-based vesting. On April 11, 2017, following an additional review of Dr. Patel's compensation, Dr. Patel was granted an additional option to purchase 10,000 shares of Common Stock and an additional 5,000 restricted stock units subject to performance-based vesting.

On January 3, 2017, in connection with his hire, Mr. Young received an inducement grant of an option to purchase 170,000 shares of the Company's Common Stock, which vests over four years from the grant date, with 25% of the shares subject to the option vesting on each of the first four anniversaries of the grant date.

Each of the stock options and time-based restricted stock units granted to the named executive officers vests over four years from the grant date, with 25% of the shares underlying the award vesting on each of the first four anniversaries of the grant date. Performance-based restricted stock units are earned and vest upon the Compensation Committee's certification of achievement of the specific performance criteria by defined dates as follow:

<u>Vesting Percentage</u>	<u>Performance Condition</u>	<u>Achievement Date</u>
25%	Execution of a strategic 'new-product' related transaction	December 31, 2017
20%	Successful completion of a targeted financing	December 31, 2017
20%	Confirmation of successful drug delivery, as measured by human clinical data which confirms the product can deliver an adequate dose of drug, with the IVR technology in human clinical trial for a commercially relevant indication	December 31, 2018
20%	Execution of Merck KGaA extension contract	December 31, 2018
15%	Targeted organic revenue growth of Juniper Pharma Services Limited (UK)*	December 31, 2019

*\*The above-described metrics include highly sensitive data. We do not disclose the specific target levels for this metric because we believe that such disclosure would result in competitive harm to our Company. Revealing this metrics could potentially reveal insights about our commercialization plans and research and other objectives that our competitors could use against us in the marketplace for similar pharmaceutical products. We believe each of these target levels were designed to be a stretch to achieve.*

Upon the Compensation Committee's certification in February 2018 of achievement of execution of the extension of the Merck KGaA contract in January 2018, 20% of these restricted stock units vested. The performance conditions with an achievement date of December 31, 2017 were not achieved and therefore the portion of those awards attributable to those performance criteria expired as of December 31, 2017. Dr. Martell's restricted stock units subject to performance-based vesting expired upon her resignation from the Company on September 18, 2017.

#### **Benefits and Perquisites**

All named executive officers are eligible for the standard benefits that are offered to other full-time employees of the Company. For U.S. employees, these standard benefits include health, dental, vision, and life insurance, and both short- and long-term disability. UK employees receive health insurance and life insurance.

In addition, the Company offers a 401(k) plan to its U.S. employees and contributes a safe harbor non-elective contribution in an amount equal to 3% of the employee's base salary up to the statutory maximum. UK employees are entitled to a matching 3% retirement plan contribution (of gross annual salary) from the Company.

The Company does not provide perquisites for our executive officers.

## Compensation Policy Implementation in 2018

As noted elsewhere in this Compensation Discussion and Analysis section, the Compensation Committee believes that it is important when making compensation decisions to be informed as to the current practices of comparable, publicly-held companies. The Compensation Committee engaged Radford as executive compensation consultants to provide executive and non-employee director compensation consulting services.

At the Compensation Committee's request, Radford undertook a review of the Company's peer group and provided recommendations to the Compensation Committee based on their findings. Based, in part, on Radford's recommendations, the Compensation Committee revised the Company's peer group for 2018, based on the following key factors: market capitalization, industry focus defined as biotechnology and pharmaceutical companies and contract development companies, stage of development (defined as a mix of Preclinical, Phase 1, 2 and Phase 3 and marketed products), revenue, and number of employees.

The Compensation Committee, with Radford's input and advice, approved the following 19 companies as our 2018 peer group:

Adverum Biotechnologies, Inc. (ADVM)	Dicema Pharmaceuticals, Inc. (DRNA)
Antares Pharma, Inc. (ATRS)	Elite Pharmaceuticals, Inc. (ELTP)
Applied Genetic Technologies Corp. (AGTC)	Endocyte, Inc. (ECYT)
Arrowhead Pharmaceuticals, Inc. (ARWR)	Fate Therapeutics, Inc. (FATE)
Assembly BioSciences, Inc. (ASMB)	NanoViricides (NNVC)
aTyr Pharma, Inc. (LIFE)	Orgenesis, Inc. (ORGS)
BioDelivery Sciences International, Inc. (BDSI)	Peregrine Pharmaceuticals, Inc. (PPHM)
Caladrius Biosciences, Inc. (CLBS)	Pfenix Inc. (PFNX)
Codexis, Inc. (CDXS)	Regulus Therapeutics Inc. (RGLS)
Dicema Pharmaceuticals, Inc. (DRNA)	Zogenix, Inc. (ZGNX)

Following its review of the executive compensation paid by the Company's peer group companies and other survey information provided by Radford with respect to compensation paid by biopharmaceutical and contract development companies generally, the Compensation Committee determined that an increase in the base salaries and bonus targets of our named executive officers was advisable. Accordingly, the Compensation Committee approved the following base salaries for 2018: Ms. Secor—\$477,600 (25<sup>th</sup> percentile of peer group); Mr. Young—\$369,200 (50<sup>th</sup> percentile of peer group); and Dr. Patel—£239,079 (50<sup>th</sup> percentile of peer group).

The 2018 target cash bonuses for the named executive officers for 2018 remain unchanged their 2017 target bonus amounts: Ms. Secor—60% (75<sup>th</sup> percentile); Mr. Young—45% (75<sup>th</sup> percentile) and Dr. Patel—45% (75<sup>th</sup> percentile).

In February 2018, the Compensation Committee approved the following equity award grants to our executive officers: Ms. Secor—an option to purchase 110,000 shares of Common Stock and 50,500 restricted stock units subject to time-based vesting; Mr. Young—an option to purchase 40,000 shares of Common Stock and 18,400 restricted stock units subject to time-based vesting; and Dr. Patel—an option to purchase 40,000 shares of Common Stock and 18,400 restricted stock subject to time-based vesting.

### Termination or Change of Control

We are party to employment agreements with each of Ms. Secor, Mr. Young and Dr. Patel and were party to an employment agreement with Dr. Martell during her employment with the Company. The employment agreements provide for payments to be made to the executives if their employment is terminated under certain circumstances. We believe employment agreements can be important components of our effort to recruit and retain senior executives, particularly for companies at our stage of development and in our relatively high-risk industry.

In addition, our 2015 Plan provides for the acceleration and vesting of equity awards granted under the plan in the event of a Change of Control. A Change in Control, as defined in the employment agreements, is the consummation of (A) any consolidation or merger of the Company resulting in a change of greater than 50% in the ownership of the Company, (B) sale or other transfer of all or substantially all of the assets of the Company and (C) any "person" shall become the beneficial owner of securities of the Company representing 50% or more of the combined voting power of the Company's then outstanding securities having the right to vote in an election of the Board. The acceleration is either single-trigger or double-trigger depending on when the award was granted, and whether any provision is made for the assumption or substitution of awards in the event of a Change of Control. Pursuant to the terms

of the award agreements governing such awards, performance-based restricted stock units granted in 2017 accelerate upon a Change of Control.

A further discussion of the potential payments to be made to our named executive officers upon the termination of their employment and/or a Change of Control is set forth below under the heading "Payments upon Termination or Change of Control."

### **Share Ownership Guidelines for Executive Officers**

The Board adopted guidelines for executive officers to own and hold, at a minimum, that number of shares of the Company's Common Stock having a market value of at least one times, or two times in the case of the Chief Executive Officer, the officer's base salary on or prior to the later of (i) five years after the date of original adoption of the guidelines or (ii) five years after becoming an executive officer. For purposes of these guidelines, stock ownership includes shares held outright by the executive officer or his or her immediate family members who share a household, shares of restricted stock held by the executive officer and shares subject to vested stock options held by the executive officer. Each executive officer should make incremental progress toward the ownership goal over the course of the applicable period. The Board believes that these ownership expectations are an important tool in aligning the interests of the Company's executive officers with the long-term interests of stockholders. All executive officers are currently meeting or are working to achieve these guidelines within the applicable phase-in period time period.

### **Tax Considerations**

We have not provided or agreed to provide any of our executive officers with a gross-up or other reimbursement for tax amounts they might pay pursuant to Section 4999 or Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). Sections 280G and 4999 of the Code provide that executive officers, directors who hold significant stockholder interests and certain other service providers could be subject to significant additional taxes if they receive payments or benefits in connection with a change in control of our Company that exceed certain limits, and that we or our successor could lose a deduction on the amounts subject to the additional tax. Section 409A also imposes additional significant taxes on the individual in the event that an employee, director or service provider receives "deferred compensation" that does not meet the requirements of Section 409A.

Generally, Section 162(m) of the Code disallows a federal income tax deduction for public company compensation in excess of \$1 million paid for any fiscal year to "covered employees" of the Company. With respect to taxable years before January 1, 2018, compensation in excess of \$1 million was exempt from this deduction limit if it qualified as "performance-based compensation" within the meaning of Section 162(m). In 2017, the Compensation Committee endeavored to structure compensation to maintain deductibility under Section 162(m) of the Code to the extent practicable while maintaining the ability to provide a competitive compensation program for our named executive officers.

Recently-enacted tax legislation, effective for taxable years beginning after December 31, 2017, (1) expands the scope of Section 162(m) such that all named executive officers are "covered employees" and anyone who was a named executive officer in any year after 2016 will remain a covered employee for as long as he or she (or his or her beneficiaries) receive compensation from the Company and (2) eliminates the exception to the deduction limit for commission-based compensation and performance-based compensation except with respect to certain grandfathered arrangements in effect as of November 2, 2017 that are not subsequently materially modified. Accordingly, compensation paid to our named executive officers in excess of \$1 million will not be deductible unless it qualifies for the transition relief applicable to certain arrangements in place as of November 2, 2017, as described above.

The Compensation Committee believes that stockholder interests are best served if the Committee retains maximum flexibility to design executive compensation programs that meet stated business objectives. For these reasons, the Compensation Committee, while considering tax deductibility as a factor in determining executive compensation, may not limit such compensation to those levels that will be deductible, particularly in light of the elimination of the expansion of the covered employee group and the elimination of the exception for performance-based compensation.



## Executive and Director Compensation

### 2017 Summary Compensation Table

Name and principal position	Year	Salary (\$)	Bonus (1) (\$)	Stock Awards(2) (\$)	Option Awards(3) (\$)	Non-Equity Incentive Plan Compensation(4) (\$)	All Other Compensation(5) (\$)	Total (\$)
Alicia Secor (6)	2017	459,200	—	134,930	307,932	206,640	15,622	1,124,324
<i>President and Chief Executive Officer</i>	2016	170,883	65,127 (7)	—	1,047,305	(12) 56,391	4,613	297,014
Jeffrey Young	2017	350,563	45,000 (8)	—	448,457	(12) 127,801	10,517	982,338
<i>Senior Vice President, Finance, Chief Financial Officer and Treasurer</i>								
Dr. Nikin Patel (9)	2017	310,029	—	56,650	146,886	114,545	9,892	638,002
<i>Chief Operating Officer</i>	2016	253,157	5,612	—	243,594	89,786	7,527	356,082
	2015	271,270	—	—	106,432	169,085	8,138	448,493
Dr. Bridget A. Martell (10)	2017	256,500	—	79,825	198,301	—	217,525 (11)	752,151
<i>Former Chief Medical Officer</i>	2016	320,040	5,120	—	243,594	81,920	13,094	420,174
	2015	284,649	—	—	205,353	106,400	7,000	398,049

- (1) Amounts reported for 2016 include a discretionary bonus paid to the named executive officers in recognition of over-achievement for the Crinone supply goal and services revenue goals for 2016.
- (2) This column represents the grant date fair values of the restricted stock units awarded in 2017, computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 (“ASC Topic 718”). For performance-based restricted stock units, the value reported reflects the value of the award at the grant date based upon the probable outcome of the performance condition. The value of the awards at the grant date assuming that the highest level of the performance conditions will be achieved would be \$257,500 for Ms. Secor, \$128,750 for Mr. Young, \$149,000 for Dr. Patel and \$154,500 for Dr. Martell. As of December 31, 2017, none of the performance conditions were deemed probable. See Note 2 to the consolidated financial statements included in our 2017 Annual Report, as filed on March 9, 2018, regarding the assumptions underlying the valuation of our equity awards.
- (3) This column represents the grant date fair values of the stock options awarded in 2017, 2016 and 2015, computed in accordance with ASC Topic 718. For Dr. Martell, the amount also includes the incremental fair value of \$17,406 attributable to the modification of option awards held by Dr. Martell at the time of her termination of employment to extend the post-termination exercise period for such awards to the earlier of 180 days following termination of expiration of the award. See Note 2 to the consolidated financial statements included in our 2017 Annual Report, as filed on March 9, 2018, regarding the assumptions underlying the valuation of our equity awards.
- (4) This column represents incentive compensation earned under the Company’s Incentive Plan. See “Compensation Discussion and Analysis—2017 Annual Cash Incentive Bonuses” for information concerning the determination of these awards.
- (5) Except as otherwise noted, the amounts reported in this column include the Company’s safe harbor non-elective contribution to the named executive officers’ 401(k) savings account, or a pension plan in the case of Dr. Patel, in the amount equal to 3% of eligible compensation.
- (6) Ms. Secor was appointed President and Chief Executive Officer effective August 1, 2016. Her 2016 annualized base salary was \$410,000.
- (7) The amount reported represents a \$60,000 sign-on bonus payment made to Ms. Secor pursuant to the terms of her employment agreement.
- (8) The amount reported represents a \$45,000 sign-on bonus payment made to Mr. Young pursuant to the terms of his employment agreement.
- (9) The amounts shown for Dr. Patel (other than for bonus, stock awards and option awards) represent amounts that were paid in British pounds and converted to U.S. dollars using an exchange rate as of December 31, 2017, 2016 and 2015 of 1.3491, 1.2336 and 1.4802 U.S. dollars, respectively, for each British pound. The amount shown in the bonus column represents an amount that

were paid in British pounds and converted to U.S. dollars using an exchange rate as of the date it was paid, February 28, 2017, which was 1.24293 U.S. dollars, respectively, for each British pound. The amounts shown for non-equity incentive plan compensation represent the amounts that were paid in British pounds and converted to U.S. dollars using an exchange rate as of the date they were paid, which was 1.3841 for his 2017 award, which was paid on February 28, 2018, 1.2429 for his 2016 award, which was paid on February 28, 2017, and 1.3877 for his 2015 award which was paid on February 29, 2016.

- (10) Dr. Martell resigned as Chief Medical Officer effective September 18, 2017. Her annualized base salary for 2017 was \$360,000.
- (11) Includes cash severance payment of \$180,000, vacation payout of \$14,262, and continuation of medical and welfare benefits with a value of \$12,957, each of which were paid pursuant to the terms of a separation agreement entered into with her in connection with her resignation.
- (12) Includes an inducement grant to Ms. Secor of an option to purchase 225,000 shares of Common Stock on July 20, 2016 and to Mr. Young of an option to purchase 170,000 shares of Common Stock on January 3, 2017.

### Total Realized Compensation

To supplement the SEC-required disclosure in the 2017 Summary Compensation Table set forth above, we have included the additional table below, which shows “Total Realized Compensation,” representing the total compensation realized by each named executive officer in each of the years shown. Total compensation as calculated under SEC rules and, as shown in the 2017 Summary Compensation Table, includes several items that are driven by accounting assumptions, which are not necessarily reflective of compensation actually realized by the named executives in a particular year. The amounts reported in the Total Realized Compensation column differ substantially from the amounts reported in the Total column required under SEC rules and are not a substitute for those Total amounts. Total Realized Compensation represents: (1) Total compensation, as determined under applicable SEC rules, minus (2) the aggregate grant-date fair value of restricted stock units and stock option awards (as reflected in the Stock Awards and Option Awards columns), plus (3) the value realized in the applicable year from the vesting of restricted stock units and exercises of stock options.

Name and Principal Position	Year	Total Realized Compensation (\$)
Alicia Secor	2017	681,462
<i>President and Chief Executive Officer</i>	2016	297,014
Jeffrey Young	2017	533,881
<i>Senior Vice President, Finance, Chief Financial Officer and Treasurer</i>		
Dr. Nikin Patel(1)	2017	434,466
<i>Chief Operating Officer</i>	2016	356,082
	2015	448,493
Dr. Bridget A. Martell(2)	2017	474,025
<i>Former Chief Medical Officer</i>	2016	420,174
	2015	398,049

- (1) The amounts shown for Dr. Patel have been converted from British pounds to U.S. dollars using an exchange rate as of December 31, 2017, 2016 and 2015 of 1.3491, 1.2336 and 1.4802 U.S. dollars, respectively, for each British pound. Amounts paid to Dr. Patel for non-equity incentive plan compensation have been converted from British pounds to U.S. dollars using an exchange rate as of the dates of payment, February 28, 2018, February 28, 2017 and February 28, 2016, of 1.3841, 1.24293 and 1.38767 U.S. dollars, respectively, for each British pound.
- (2) Dr. Martell resigned as Chief Medical Officer effective September 18, 2017.

## 2017 Grants of Plan-Based Awards Table

The following table provides information about annual incentive bonus and equity awards granted to the named executive officers in 2017.

Name	Grant Date	Estimated Possible Payouts Under			Estimated Future Payouts Under Equity Incentive Plan Awards Target (#) (2)	All Other Stock Awards: Number of Shares of Stock or Units (#) (3)	All Other Option Awards: Number of Securities Underlying Options (#) (4)	Exercise or Base Price of Option Awards (\$/share)(5)	Grant Date Fair Value of Stock and Option Awards(6)
		Non-Equity Incentive Plan Awards(1)							
		Threshold (\$)	Target (\$)	Maximum (\$)					
Alicia Secor	3/3/2017	137,760	275,520	413,280	50,000	26,200	127,500	5.15	442,862
Jeffrey Young	1/3/2017	95,850	159,750	239,625	—	—	170,000	5.60	448,457
	3/3/2017				25,000	—	—	5.15	128,750
Dr. Nikin Patel(7)	—	85,894	143,157	194,872	—	—	—	—	—
	3/3/2017				25,000	11,000	53,000	5.15	184,653
	4/11/2017				5,000	—	10,000	4.05	18,883
Dr. Bridget A. Martell (8)	3/3/2017	86,400	144,000	216,000	30,000	15,500	74,900	5.15	278,126

- (1) These columns show the range of possible payouts for 2017 annual incentive compensation granted under the Incentive Plan. For a description of the 2017 annual incentive program, see “Compensation Discussion and Analysis—2017 Annual Cash Incentive Bonuses”. The actual amounts paid to our named executive officers under the 2017 annual incentive program were as follows – Ms. Secor, \$206,640; Mr. Young, \$127,801 and Dr. Patel, \$114,545. Dr. Martell resigned effective September 18, 2017 and was not eligible to receive a cash incentive bonus for 2017.
- (2) Represents the number of shares underlying performance-based restricted stock units granted to the named executive officers in 2017.
- (3) Represents the number of shares underlying time-based restricted stock units that were granted to the named executive officers in 2017.
- (4) Represents the number of shares underlying stock option awards that were granted to the named executive officers in 2017.
- (5) The exercise price is the closing price on the Nasdaq Global Market on the date of grant.
- (6) These amounts represent the grant date fair value of the equity granted to the named executive officers in 2017, computed in accordance with the ASC Topic 718. See Note 2 to the consolidated financial statements included in our 2017 Annual Report as filed on March 9, 2018, regarding the assumptions underlying the valuation of our equity awards.
- (7) The amounts shown in the table above for Dr. Patel’s possible payouts under non-equity incentive plan awards have been converted from British pounds to U.S. dollars using an exchange rate as of February 28, 2018 of 1.3841 U.S. dollars for each British pound.
- (8) Dr. Martell resigned as Chief Medical Officer effective September 18, 2017.

## Outstanding Equity Awards at 2017 Fiscal Year-End

The following table provides information on outstanding equity awards held by the named executive officers as of December 31, 2017. Each equity award is shown separately for each named executive officer. The vesting schedule for each award is shown following this table, based on the grant date.

Name	Date	Option Awards				Stock Awards				
		Number of Securities Underlying Unexercised Options (#)	Number of Securities Underlying Unexercised Options	Option Exercise Price (\$)	Option Expiration Date	Stock Award Grant Date	Number of Shares or Units Not Vested (#)	Market value of Shares or Units (\$)	Number of Unearned Share Units or Other Rights Not Vested (#)(3)	Market value of Shares or Units (\$)
Alicia Secor	7/20/2016	56,250	168,750	7.59	7/20/2023					
	3/3/2017	—	127,500	5.15	3/3/2024	3/3/2017	26,200	127,070	27,500	133,375
Jeffrey Young	1/3/2017	—	170,000	5.60	1/3/2024	3/3/2017	—	—	13,750	66,688
Dr. Nikin Patel	3/10/2014	24,000	8,000	7.05	3/10/2021					
	2/11/2015	21,999	10,001	5.56	2/11/2022					
	2/19/2016	12,500	37,500	7.82	2/19/2023					
	3/3/2017	—	53,000	5.15	3/3/2024	3/3/2017	11,000	53,350	13,750	66,688
	4/11/2017	—	10,000	4.05	4/11/2024	4/11/2017			2,750	13,338
Dr. Bridget A. Martell(4)	1/6/2015	30,000	—	5.63	3/18/2018					
	2/19/2016	12,501	—	7.82	3/18/2018					

(1) Option Awards Vesting Schedule:

<b>Grant Date</b>	<b>Vesting Schedule</b>
3/10/2014	The remaining shares vested / vest as follows: 8,000 shares on 3/10/2018.
2/11/2015	The remaining shares vested / vest in increments of 6.25% on each three-month anniversary of the grant date as follows: (ii) Dr. Patel 2,000 shares every three months through February 11, 2019.
2/19/2016	The remaining shares vested / vest as follows: (ii) Dr. Patel 12,500 shares on 2/19/2018, 12,500 shares on 2/19/2019 and 12,500 shares on 2/19/2020, and (iii) Dr. Martell 12,500 shares on 2/19/2017, 12,500 shares on 2/19/2018, 12,500 shares on 2/19/2019 and 12,500 shares on 2/19/2020.
7/20/2016	The remaining shares vest as follows: 56,250 shares on 7/20/2018, 56,250 shares on 7/20/2019 and 56,250 shares on 7/20/2020. The option is subject to full vesting acceleration upon a Change of Control as set forth in the 2015 Plan.
1/3/2017	The remaining shares vested / vest as follows: 42,500 shares on 1/3/2018, 42,500 shares on 1/3/2019, 42,500 shares on 1/3/2020 and 42,500 on 1/3/2021.
3/3/2017	The remaining shares vested / vest as follows: (i) Ms. Secor 27,021 shares on 3/3/2018, 27,021 shares on 3/3/2019, 27,021 shares on 3/3/2020 and 27,021 on 2/3/2021 and (ii) Dr. Patel 13,250 shares on 3/3/2018, 13,250 shares on 3/3/2019, 13,250 shares on 3/3/2020 and 13,250 on 2/3/2021.
4/11/2017	The remaining shares vest as follows: 2,500 shares on 4/11/2018, 2,500 shares on 4/11/2019, 2,500 shares on 4/11/2020 and 2,500 shares on 4/11/2021.

(2) Time-Based Restricted Stock Unit Award Vesting Schedule

<b>Grant Date</b>	<b>Vesting Schedule</b>
3/3/2017	The restricted stock unit awards vest as to 25% of the units on each of the first four anniversaries of the grant date.
4/11/2017	The restricted stock unit awards vest as to 25% of the units on each of the first four anniversaries of the grant date.

(3) Performance-Based Restricted Stock Unit Award Vesting Schedule

<b>Grant Date</b>	<b>Vesting Schedule</b>
3/3/2017	The outstanding performance-based restricted stock units vest upon the Compensation Committee's certification of achievement of the following performance conditions: confirmation of successful drug delivery, as measured by human clinical data, which confirms the product can deliver an adequate dose of drug with the IVR technology for a commercially relevant indication by December 31, 2018 (20% of total award); execution of the Merck KGaA extension by December 31, 2018 (20% of total award); and targeted levels of Juniper Pharma Services Limited (UK) organic revenue growth by December 31, 2019 (15% of total award).
4/11/2017	The outstanding performance-based restricted stock units vest upon the Compensation Committee's certification of achievement of the following performance conditions: confirmation of successful drug delivery, as measured by human clinical data, which confirms the product can deliver an adequate dose of drug with the IVR technology for a commercially relevant indication by December 31, 2018 (20% of total award); execution of the Merck KGaA extension by December 31, 2018 (20% of total award); and targeted levels of Juniper Pharma Services Limited (UK) organic revenue growth by December 31, 2019 (15% of total award).

At December 31, 2017, 47,250 performance-based restricted stock unit awards expired due to the non-achievement of the performance milestones.

(4) Dr. Martell resigned as Chief Medical Officer effective September 18, 2017 at which time the remaining unvested shares expired as follow: the 1/6/2015 grant for 30,000 shares and the 2/19/2016 grant for 37,499 shares. Dr. Martell's 3/3/2017 option to purchase 74,900 shares and restricted stock unit grant for 15,500 shares, none of which had vested, were cancelled on 9/18/2017 upon Dr.

Martell's separation from the Company on that date. The option expiration date reflects the last date upon which Dr. Martell could have exercised any vested options.

### Option Exercises and Stock Vested in 2017

None of our named executive officers exercised any stock options or had other equity awards vest in the year ended December 31, 2017.

### Payments upon Termination or Change of Control

We have entered into employment agreements with each of Ms. Secor, Mr. Young and Dr. Patel that provide for cash compensation, benefits, and/or the acceleration of the vesting of equity awards in the event of their termination of employment under certain circumstances, as described below. The severance payments described below are subject to the executive's execution of a general release in favor for Company.

In addition, our 2015 Plan provides for the acceleration and vesting of equity awards granted under the plan in the event of a Change of Control. The acceleration is either single-trigger or double-trigger depending on when the award was granted, and whether any provision is made for the assumption or substitution of awards in the event of a Change of Control. The terms of the restricted stock unit award agreements governing the performance-based restricted stock units held by the named executive officers provide for accelerated vesting upon a Change of Control.

### Alicia Secor

Ms. Secor's employment agreement, as amended and restated effective November 1, 2017, provides for the following payments and/or benefits upon termination of her employment:

Type of Termination	Description of Payments/Benefits
<i>Death</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Resignation by employee without Good Reason</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Termination by the Company with Cause</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Termination by the Company without Cause</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; (iii) target bonus set at no less than 60% of base salary, and (iv) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected.
<i>Resignation by the employee with Good Reason</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; (iii) target bonus set at no less than 60% of base salary, and (iv) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected.
<i>Upon a Change of Control:</i>	Full acceleration of new hire inducement grant and full acceleration of the performance-based restricted units held by her.
<i>Termination by the Company without Cause or Resignation by the Employee with Good Reason within 24 months after a Change of Control</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 18 months of base salary; (iii) 1.5x target bonus set at 60% of base salary, (iv) an amount equal to 18 months of the Company's portion of medical and dental benefits if these benefits were elected; (v) full vesting of all equity awards granted to her by the Company.

The following table describes the potential payments and benefits that Ms. Secor would have been entitled to receive under the terms of her employment agreement had her employment terminated on December 31, 2017 or had a Change of Control occurred on December 31, 2017, in connection with her termination date on such date.

	Cash Severance Payment(1) (\$)	Vacation Pay(2) (\$)	Continuation of Medical/ Welfare Benefits (present value) \$	Acceleration of Equity Awards (3)	Total (\$)
Death	N/A	4,225	N/A	N/A	4,225
Resignation by employee without Good Reason	N/A	4,225	N/A	N/A	4,225
Termination by Company with Cause	N/A	4,225	N/A	N/A	4,225
Termination by the Company without Cause or	734,720	4,225	15,109	N/A	754,054
Resignation by employee with Good Reason	734,720	4,225	15,109	N/A	754,054
Termination by the Company without Cause or Resignation by employee for Good Reason within 24 months after a Change of Control	1,102,080	4,225	15,109	127,070	1,248,484
Change of Control	N/A	N/A	N/A	133,375	133,375

N/A—Not Applicable

- (1) Payment of the amount of base salary for 12 months following the date of termination and target bonus set at no less than 60% of base salary.
- (2) Assumes five vacation days. Unused and accrued vacation benefits are paid in a lump sum.
- (3) Represents the intrinsic value of both vested and unvested stock options on December 31, 2017, based on the difference between the closing market price of the Company's Common Stock on December 29, 2017, the last trading day of 2017 (\$4.85), and the applicable exercise price of all such stock options as well as the intrinsic value of unvested restricted stock units on December 29, 2017. Upon vesting, these stock options would be exercisable for 180 days after the date of termination (along with any previously vested stock option awards). The exercise price of Ms. Secor's stock options exceeded the closing market price of the Company's Common Stock on December 29, 2017.

#### Dr. Nikin Patel

Dr. Patel's employment agreement, as amended and restated effective November 1, 2017, provides for the following payments and/or benefits upon termination of her employment:

Type of Termination	Description of Payments/Benefits
<i>Death</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Resignation by employee without Good Reason</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Termination by the Company with Cause</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Termination by the Company without Cause</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; and (iii) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected.
<i>Resignation by the employee with Good Reason</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; and (iii) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected.

### Change of Control

Full acceleration of the performance-based restricted units held by him and, pursuant to the terms of the 2015 Plan, full acceleration of option grants made prior to July 25, 2016.

### Termination by the Company without Cause or Resignation by the Employee with Good Reason within 24 months after a Change of Control

(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; (iii) 12 months of target bonus; (iv) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected and (v) full vesting of all equity granted to him by the Company on or after March 3, 2017.

The following table describes the potential payments and benefits that Dr. Patel would have been entitled to receive under the terms of his employment agreement had he employment terminated on December 31, 2017 and under the terms of our 2015 Plan had a Change of Control occurred on December 31, 2017, in connection with her termination on such date.

	Cash Severance	Vacation	Continuation of Medical/Welfare Benefits (present value)	Acceleration of Equity Awards(3)	Total
	Payment(1)(4) (\$)	Pay(2)(4) (\$)	(4) (\$)		(\$)
Death	N/A	5,963	N/A	N/A	5,963
Resignation by employee without Good Reason	N/A	5,963	N/A	N/A	5,963
Termination by Company with Cause	N/A	5,963	N/A	N/A	5,963
Termination by the Company without Cause or Resignation by employee with Good Reason	310,088	5,963	594	N/A	316,646
Termination by the Company without Cause or Resignation by employee for Good Reason within 24 months after a Change of Control	449,628	5,963	594	82,967	539,152
Change of Control	N/A	N/A	N/A	80,025	80,025

N/A—Not Applicable

(1) Payment of the amount of base salary for twelve months following the date of termination.

(2) Assumes five vacation days. Unused and accrued vacation benefits are paid in a lump sum.

(3) Represents the intrinsic value of both vested and unvested stock options on December 31, 2017, based on the difference between the closing market price of the Company's Common Stock on December 29, 2017, the last trading day of 2017 (\$4.85), and the applicable exercise price of all such stock options as well as the intrinsic value of unvested restricted stock units on December 29, 2017. Upon vesting, these stock options would be exercisable for 180 days after the date of termination (along with any previously vested stock option awards). The exercise price for any of Dr. Patel's stock options which exceeded the closing market price of the Company's Common Stock on December 29, 2017 have been excluded.

(4) The amounts shown in the table above for Dr. Patel's possible payouts under non-equity incentive plan awards have been converted from British pounds to U.S. dollars using an exchange rate as of February 28, 2018 of 1.3841 U.S. dollars for each British pound.

### Jeffrey Young

Mr. Young's employment agreement, amended and restated effective November 1, 2017, provides for the following payments and/or benefits upon termination of his employment:

Type of Termination	Description of Payments/Benefits
Death	Base salary through the effective date of termination together with any accrued but unused vacation pay.
Resignation by employee without Good Reason	Base salary through the effective date of termination together with any accrued but unused vacation pay.



<i>Termination by the Company with Cause</i>	Base salary through the effective date of termination together with any accrued but unused vacation pay.
<i>Termination by the Company without Cause</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; (iii) six months of target bonus and (iv) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected.
<i>Resignation by the employee with Good Reason</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; (iii) six months of target bonus and (iv) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected.
<i>Change of Control</i>	Full acceleration of the performance-based restricted units held by him.
<i>Termination by the Company without Cause or Resignation by the Employee with Good Reason within 24 months after a Change of Control</i>	(i) Base salary through the effective date of termination together with any accrued but unused vacation pay; (ii) 12 months of base salary; (iii) 12 months of target bonus; (iv) an amount equal to 12 months of the Company's portion of medical and dental benefits if these benefits were elected; and (v) full vesting of all equity granted by him to the Company.

The following table describes the potential payments and benefits that Mr. Young would have been entitled to receive under the terms of his employment agreement had he employment terminated on December 31, 2017 and under the terms of our 2015 Plan had a Change of Control occurred on December 31, 2017 in connection with his termination on such date.

	Cash Severance Payment(1) (\$)	Vacation Pay(2) (\$)	Continuation of Medical/Welfare Benefits (present value) (\$)	Acceleration of Equity Awards(3)	Total (\$)
Death	N/A	6,827	N/A	N/A	6,827
Resignation by employee without Good Reason	N/A	6,827	N/A	N/A	6,827
Termination by Company with Cause	N/A	6,827	N/A	N/A	6,827
Termination by the Company without Cause or Resignation by employee with Good Reason	434,875	6,827	N/A	N/A	441,702
Termination by the Company without Cause or Resignation by employee for Good Reason within 24 months after a Change of Control	514,750	6,827	N/A	—	521,577
Change of Control	N/A	N/A	N/A	66,688	66,688

N/A—Not Applicable

- (1) Payment of the amount of base salary for twelve months following the date of termination.
- (2) Assumes 5 vacation days. Unused and accrued vacation benefits are paid in a lump sum.
- (3) Represents the intrinsic value of both vested and unvested stock options on December 31, 2017, based on the difference between the closing market price of the Company's Common Stock on December 29, 2017, the last trading day of 2017 (\$4.85), and the applicable exercise price of all such stock options as well as the intrinsic value of unvested restricted stock units on December 29, 2017. Upon vesting, these stock options would be exercisable for 180 days after the date of termination (along with any previously vested stock option awards). The exercise price of Mr. Young's stock options exceeded the closing market price of the Company's Common Stock on December 29, 2017.

#### **Dr. Bridget A. Martell**

Dr. Bridget A. Martell resigned from the Company as of September 18, 2017. Pursuant to the terms of a separation agreement and release entered into between Dr. Martell and the Company, Dr. Martell was eligible to receive six months of base salary continuation and six months of COBRA continuation medical benefits subsidized by the Company following her departure. In addition, the period during which Dr. Martell had the right to exercise stock options held by her that were vested as of her termination

date was extended from 90 days to 180 days following termination (or the expiration date of the option if earlier). Payments made to Dr. Martell pursuant to the terms of her separation agreement are reported in the All Other Compensation column of the 2017 Summary Compensation Table above.

#### Director Compensation Program for 2017

The Company provides to non-employee directors reimbursement for expenses and the following compensation. A Board Chair who also serves as a committee Chair does not receive the committee Chair retainer.

	Chair	Member
Annual Retainer	\$ 80,000	\$ 40,000
Audit Committee Retainer	\$ 20,000	\$ 10,000
Compensation Committee Retainer	\$ 15,000	\$ 6,250
Nominating & Governance Committee Retainer	\$ 10,000	\$ 5,000
Annual Equity Award (1)	\$ 78,750	\$ 45,000
New Director Equity Award (2)	\$ —	\$ 67,500

- (1) Consists of a grant of the number of shares of restricted stock under the Company's Long-Term Performance Plan determined by dividing \$45,000 (\$78,750 for the Board Chair) by the fair market value of the Company's Common Stock on the date of grant. Provided, however, if an insufficient number of shares of restricted stock are available for issuance under the Company's 2015 Plan, the balance of the value will consist of a grant of stock options to purchase shares of the Company's Common Stock with a grant date fair value equal to the amount set forth above using the Black-Scholes option pricing model. The equity awards vest in full at the annual meeting of stockholders following the date of grant.
- (2) Consists of a grant of the number of shares of restricted stock under the Company's Long-Term Performance Plan determined by dividing \$67,500 by the fair market value of the Company's Common Stock on the date of grant. The equity award vests equally on the anniversary date over three years.

#### 2017 Director Compensation

Directors who are employees receive no additional compensation for serving on the Board. In 2017, we provided the following annual compensation to our non-employee directors.

Name of Director	Fees Earned and Paid in Cash(1) (\$)	Stock Awards(2) (\$)	Total (\$)
Cristina Csimma	47,833	45,000	92,833
James A. Geraghty	80,000	78,750	158,750
Dr. Mary Ann Gray	60,000	45,000	105,000
Ann Merrifield	55,854	45,000	100,854
Jennifer Good (3)	20,480	67,500	87,980
Dr. Frank M. Armstrong(4)	48,667	45,000	93,667
Frank C. Condella, Jr. (5)	20,000	—	20,000

- (1) This column reports the amount of cash compensation earned or paid in 2017 for Board and committee service.
- (2) This column represents the aggregate grant date fair value of awards of restricted stock granted during the fiscal year ended December 31, 2017, computed in accordance with ASC Topic 718. The aggregate grant date fair value for the restricted stock awards granted to each director upon his or her reelection to the Board at the 2017 Annual Meeting was \$44,996 (\$78,750 for the Board Chair). The number of shares underlying each such award was determined by dividing \$45,000 (\$78,750 for the Board Chair) by the fair market value of the Company's Common Stock on the date of the grant.
- (3) Ms. Good joined the Board of Directors in September 2017.
- (4) Mr. Armstrong resigned as a director effective September 7, 2017.
- (5) Mr. Condella resigned as the Company's President and Chief Executive Officer effective August 1, 2016 and his employment with the Company terminated August 15, 2016 and he was entitled to compensation for services on the Board thru June 30, 2017 following his termination.

The aggregate total number of shares underlying stock option awards and restricted stock awards outstanding at December 31, 2017 for the non-employee directors are shown below:

Name	Number of Shares Underlying Options	Number of Restricted Shares
Cristina Csimma	—	8,910
James A. Geraghty	100,000	15,594
Dr. Mary Ann Gray	—	8,910
Ann Merrifield	—	8,910
Jennifer Good (1)	—	15,000
Dr. Frank M. Armstrong(2)	—	8,910

- (1) Ms. Good was appointed to the Board in September 2017.  
(2) Dr. Armstrong resigned from the Company's Board of Directors in September 2017 upon which time he entered into a consulting agreement as a non-employee. His unvested stock options continue to vest.

#### CEO Pay Ratio

Pursuant to Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 402(u) of Regulation S-K, we are required to disclose the ratio of our principal executive officer's annual total compensation to the annual total compensation of our median employee.

During fiscal 2017, the principal executive officer of Juniper was our Chief Executive Officer, Ms. Alicia Secor. For 2017, the annual total compensation of Ms. Secor, as disclosed in the Summary Compensation Table was \$1,124,324. The annual total compensation for our median employee (identified as disclosed below) was approximately \$41,241, resulting in a pay ratio of approximately 27:1.

In accordance with Item 402(u) of Regulation S-K, we identified the median employee by (i) aggregating for each applicable employee as of December 31, 2017 (the median employee determination date) (A) annual base salary for permanent salaried employees (or hourly rate multiplied by estimated 2017 work schedule, for hourly employees), (B) the target bonus for 2017 and, (ii) ranking this compensation measure for our employees from lowest to highest. This calculation was performed for all employees of Juniper, excluding Ms. Secor. As the median employee was located in the United Kingdom, the annual average exchange rate of 0.7768 GBP to 1 USD was used to convert GBP to USD.

The pay ratio reported above is a reasonable estimate calculated in a manner consistent with SEC rules based on our internal records and the methodology described above. The SEC rules for identifying the median-compensated employee and calculating the pay ratio based on that employee's annual total compensation allow companies to adopt a variety of methodologies, to apply certain exclusions, and to make reasonable estimates and assumptions that reflect their employee populations and compensation practices. Therefore, the pay ratio reported by other companies may not be comparable to the pay ratio reported above, as other companies have different employee populations and compensation practices and may utilize different methodologies, exclusions, estimates and assumptions in calculating their own pay ratios.

**Compensation Committee Interlocks and Insider Participation**

During 2017, Ann Merrifield (Chair), Dr. Cristina Csimma and Jennifer Good served as members of the Compensation Committee. Dr. Frank Armstrong served as the Compensation Committee chair until the date of his resignation from the Board of Directors in September 2017. No member of the Compensation Committee has ever served as an executive officer or employee of the Company. None of the Company's executive officers served, during the fiscal year ended December 31, 2017, as a member of the Board or compensation committee of any entity (other than the Company) that has one or more executive officers serving on the Company's Board or the Compensation Committee.

**Compensation Committee Report**

The Compensation Committee evaluates and establishes compensation for executive officers and oversees the Company's compensation policies, the Incentive Plan, and other benefit programs. Management has the primary responsibility for the Company's financial statements and reporting process, including the disclosure of executive compensation. We have reviewed and discussed with management the Compensation Discussion and Analysis. Based on the review and discussion with management, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis should be included in this report.

## COMPENSATION COMMITTEE:

Ann Merrifield  
Dr. Cristina Csimma  
Jennifer Good

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

**Common Stock.** The following table sets forth, as of April 20, 2018, information with respect to the beneficial ownership of Juniper's Common Stock by:

- each person known to us to be the beneficial owner of more than 5% of Juniper's Common Stock;
- each of Juniper's directors and director nominees;
- each of the individuals included in the Summary Compensation Table (collectively, the "named executive officers"); and
- all of Juniper's current directors and executive officers as a group.

The number of shares beneficially owned by each person, director, director nominee, or named executive officer is determined under rules of the Securities and Exchange Commission ("SEC"); this information is not necessarily indicative of beneficial ownership for any other purpose. Under these rules, beneficial ownership includes any shares for which the individual has sole or shared voting power or investment power and also any shares with respect to which the person has the right to acquire sole or shared voting or investment power on or before June 19, 2018 (60 days after April 20, 2018) through the conversion of shares of convertible preferred stock or the exercise of any stock option, warrant or other right. Unless we indicate otherwise, each person has sole investment and/or voting power with respect to the shares set forth in the table below.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned(1)	
<b>5% Stockholders:</b>		
BlackRock, Inc.(2)	709,413	6.4%
<b>Directors and Named Executive Officers:</b>		
Alicia Secor (4)(6)	104,330	*%
Dr. Cristina Csimma (4)	27,199	*%
James A. Geraghty(3)(4)	145,153	1.3%
Dr. Mary Ann Gray (4)	7,334	*%
Ann Merrifield (4)	15,193	*%
Richard Messina (4) (5)	219,108	1.9%
Dr. Nikin Patel(3) (4)	296,883	2.6%
Jeffrey Young (4)	45,763	*%
<b>All Current Directors, Nominees and Executive Officers as a Group (8 persons)(3)</b>	<b>860,963</b>	<b>7.8%</b>

\* Signifies less than 1%

- (1) Based on 11,101,007 shares outstanding at April 20, 2018. In calculating the percentage of ownership, all shares of Common Stock of which the identified person or group has the right to acquire beneficial ownership on or before June 19, 2018 (60 days after April 20, 2018) are deemed to be outstanding for the purpose of computing the percentage of the shares of Common Stock owned by that person or group. These shares are not, however, deemed to be outstanding for the purpose of computing the percentage of the shares of Common Stock owned by any other person or group.
- (2) Based upon information contained in a Schedule 13G filed with the SEC on January 24, 2018 by BlackRock, Inc. According to the Schedule 13G, BlackRock, Inc. has sole voting power with respect to 709,401 shares and sole dispositive power with respect to 709,413 shares. The address of BlackRock, Inc. is 55 East 52nd Street, New York, NY 10055.
- (3) Includes shares of Common Stock that may be acquired upon the exercise of options exercisable within 60 days after April 20, 2018, as follows: Ms. Secor, 88,125 shares; Mr. Geraghty, 80,000 shares; Dr. Patel, 98,749 shares and Mr. Young, 42,500.
- (4) Address: c/o Juniper Pharmaceuticals, Inc., 33 Arch Street, Suite 3110, Boston, Massachusetts 02110.
- (5) Includes 199,826 shares indirectly held in other investment portfolios.
- (6) Include 5,000 shares of Common Stock held in Ms. Secor's husband's, James McGorry's, self-directed IRA.

**Series B Preferred Stock.** During the quarter ending June 30, 2017, the Company issued a Notice of Conversion to the holders of Series B and a Notice of Redemption to the holders of Series B Preferred Stock giving notice that on June 30, 2017 all outstanding shares of the Series B would be automatically converted into of common stock. On that date, each share of the 130 shares of Series B outstanding converted into 2.78 shares of common stock resulting in an issuance of 361 shares. No Series B Preferred Stock was outstanding following this action.

### Equity Compensation Plan Information

The following table sets forth aggregate information for the fiscal year ended December 31, 2017, regarding the Company's compensation plans, including individual compensation agreements, under which equity securities of the Company are authorized for issuance:

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights</u>	<u>Weighted average exercise price of outstanding options, warrants and rights</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</u>
	(a)	(b)	(c)
Equity compensation plans approved by security holders	1,407,050	7.20	1,861,142
Equity compensation plans not approved by security holders	395,000 (1) (2)	6.73	—
<b>Total</b>	<b>1,802,050</b>	<b>6.59</b>	<b>1,861,142</b>

- (1) Effective July 20, 2016, the Company granted Ms. Secor an inducement non-qualified stock option to purchase 225,000 shares of the company's common stock at an exercise price per share of \$7.59, the closing price of the Company's common stock on the date of grant. The stock option vests over four years from the grant date, with of 25% of the shares vesting on each of the first four anniversaries of the grant date. The option vests in full upon a Change of Control (as defined in the 2015 Plan).
- (2) Effective January 3, 2017, the Company granted Mr. Young an inducement non-qualified stock option to purchase 170,000 shares of the company's common stock at an exercise price per share of \$5.60, the closing price of the Company's common stock on the date of grant. The stock option vests over four years from the grant date, with of 25% of the shares vesting on each of the first four anniversaries of the grant date. The option vests in full upon a Change of Control resulting in his termination (as defined in the 2015 Plan) and terminates within 24 months upon a change in control.

The Company has three shareholder-approved equity compensation plans: the 1996 Long-Term Performance Plan, the 2008 Long-Term Incentive Plan, and the 2015 Plan.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

**Director Independence**

The Board has analyzed the independence of each director and has determined that, with the exception of Ms. Secor and Dr. Patel, each director qualifies as an “independent” director under the applicable Nasdaq Marketplace Rules, including that each such director is free (or was free) of any relationship that would interfere with his or her individual exercise of independent judgment. All of the Board committees are comprised solely of independent directors.

**Certain Relationships and Related Party Transactions**

We have a policy against our directors, officers, employees, and consultants entering into transactions that present actual or potential conflicts of interests. A conflict of interest can arise when a director, officer, employee, or consultant takes an action or has an interest that may make it difficult for him or her to perform his or her work objectively and effectively. Conflicts of interest may also arise when a director, officer, employee, or consultant (or his or her family members) receives improper personal benefits as a result of the director’s, officer’s, employee’s, or consultant’s relationship to us. This policy is reflected in our Code of Business Conduct and Ethics. In addition, the Audit Committee, pursuant to its charter, is responsible for reviewing and addressing conflicts of interest of directors and executive officers; as well as monitoring and reviewing (including discussing with management and the independent auditor) and, if appropriate, recommending to the full Board the approval or ratification of any transactions or courses of dealing with related parties that are required to be disclosed pursuant to SEC Regulation S-K, Item 404.

**Item 14. Principal Accountant Fees and Services**

The table below sets forth the aggregate fees billed to the Company by PricewaterhouseCoopers LLP for the year ended December 31, 2017 and 2016.

	<u>2017</u>	<u>2016</u>
Audit Fees(1)	\$ 1,021,960	\$ 998,384
Audit-related fees(2)	203,616	—
Tax Fees(3)	50,751	—
Total	<u>\$ 1,276,327</u>	<u>\$ 998,384</u>

- (1) Audit fees consist of fees for audit work performed in the audit of financial statements, as well as fees for quarterly reviews.
- (2) Audit-related fees consist of fees for assurance and related services that are reasonably related to the performance of the audit and the review of our financial statements and which are not reported under Audit Fees.
- (3) Tax fees consist principally of fees for work performed with respect to tax compliance and tax planning.

The Audit Committee has adopted a formal policy on auditor independence requiring the advance approval by the Audit Committee of all audit and non-audit services provided by our independent registered public accounting firm. In determining whether to approve any services by our independent registered public accounting firm, the Audit Committee reviews the services and the estimated fees, and considers whether approval of the proposed services will have a detrimental impact on the auditor’s independence. On an annual basis, our management reports to the Audit Committee all audit and non-audit services performed during the previous 12 months and all fees billed by our independent registered public accounting firm for such services. In fiscal 2017 and 2016, all audit, audit-related and non-audit services and the corresponding fees were approved by the Audit Committee.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

Exhibit	Index Description of Exhibit
2.1	<a href="#"><u>Purchase and Collaboration Agreement, dated March 3, 2010, by and between Juniper Pharmaceuticals, Inc. and Coventry Acquisition, Inc. (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on March 4, 2010)</u></a>
2.2	<a href="#"><u>Amendment No. 2 to Purchase and Collaboration Agreement, dated November 10, 2016, by and between Juniper Pharmaceuticals, Inc., Allergan Sales, LLC and Actavis, Inc. (incorporated by reference to Exhibit 2.2 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2016, filed on March 7, 2017)</u></a>
2.3	<a href="#"><u>Share Purchase Agreement, dated September 2013, between the Sellers, Juniper Pharmaceuticals, Inc. and Juniper Pharma Services Limited (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on September 18, 2013)</u></a>
2.4	<a href="#"><u>Stock Purchase Agreement, dated March 6, 2014, by and between Juniper Pharmaceuticals, Inc. and Coventry Acquisition, Inc. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on March 7, 2014)</u></a>
3.1	<a href="#"><u>Restated Certificate of Incorporation of the Company, as amended (incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2005, filed on March 13, 2006)</u></a>
3.2	<a href="#"><u>Certificate of Amendment of Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on July 6, 2010)</u></a>
3.3	<a href="#"><u>Certificate of Amendment of Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on August 8, 2013)</u></a>
3.4	<a href="#"><u>Certificate of Amendment of Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on April 3, 2015)</u></a>
3.5	<a href="#"><u>Amended and Restated By-laws of Company (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on January 12, 2015)</u></a>
3.6	<a href="#"><u>Amendment No. 1 to the Amended and Restated By-laws of the Company (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on April 3, 2015)</u></a>
4.1	<a href="#"><u>Certificate of Designations, Preferences and Rights of Series C Convertible Preferred Stock of the Company, dated as of January 7, 1999 (incorporated by reference to Exhibit 4.1 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 1998, filed on March 25, 1999)</u></a>
4.2*	<a href="#"><u>Form of Option Agreement (incorporated by reference to Exhibit 4.10 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2008, filed on March 16, 2009)</u></a>
4.3	<a href="#"><u>Amended and Restated Rights Agreement by and between Juniper Pharmaceuticals, Inc. and American Stock Transfer &amp; Trust Company, LLC dated January 28, 2015 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on January 30, 2015)</u></a>
10.1*	<a href="#"><u>1996 Long-term Performance Plan, as amended, of the Company (incorporated by reference to Annex A to the Registrant's Proxy Statement (File No. 001-10352), filed on May 10, 2000)</u></a>
10.2*	<a href="#"><u>Form of Restricted Stock Agreement under the 1996 Long-Term Performance Plan (incorporated by reference to Exhibit 10.62 of the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on May 17, 2006)</u></a>
10.3	<a href="#"><u>License Agreement, dated April 18, 2000, between the Company and Lil' Drug Store Products, Inc. (incorporated by reference to Exhibit 10.23 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-10352) for the quarter ended March 31, 2000, filed on May 15, 2000)</u></a>
10.4*	<a href="#"><u>Form of Indemnification Agreement for Officers and Directors (incorporated by reference to Exhibit 10.46 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2003, filed on March 15, 2004)</u></a>



Exhibit	Index Description of Exhibit
10.5	<a href="#"><u>Packaging Agreement, dated October 28, 1993, between Juniper Pharmaceuticals (Ireland) Ltd. and Maropack AG (incorporated by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2007, filed on March 28, 2008)</u></a>
10.6*	<a href="#"><u>Juniper Pharmaceuticals, Inc. Amended and Restated 2008 Long-Term Incentive Plan (incorporated by reference to Appendix B to the Registrant's Proxy Statement (File No. 001-10352), filed on March 22, 2013)</u></a>
10.7*	<a href="#"><u>Form of Award Agreement under the Amended and Restated 2008 Long-term Incentive Plan of Juniper Pharmaceuticals, Inc. (incorporated by reference to Exhibit 4.4 to the Registrant's Registration Statement on Form S-8 (File No. 333-18647), filed on May 16, 2013)</u></a>
10.8*	<a href="#"><u>Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on July 28, 2016)</u></a>
10.9*	<a href="#"><u>Form of Nonqualified Stock Option Award Agreement under the Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Incentive Plan (incorporated by reference to Exhibit 99.2 to the Registrant's Report on Form S-8 (File No. 333-213433), filed on September 1, 2016)</u></a>
10.10*	<a href="#"><u>Form of Incentive Stock Option Award Agreement under the Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Incentive Plan (incorporated by reference to Exhibit 99.3 to the Registrant's Report on Form S-8 (File No. 333-213433), filed on September 1, 2016)</u></a>
10.11*	<a href="#"><u>Form of Restricted Stock Award Agreement under the Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Incentive Plan (incorporated by reference to Exhibit 99.4 to the Registrant's Report on Form 10-Q (File No. 333-213433), filed on September 1, 2016)</u></a>
10.12*	<a href="#"><u>Form of Performance Stock Unit Award Agreement under the Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on May 4, 2017)</u></a>
10.13*	<a href="#"><u>Form of Restricted Stock Unit Award Agreement under the Juniper Pharmaceuticals, Inc. Amended and Restated 2015 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on May 4, 2017)</u></a>
10.14*	<a href="#"><u>Form of Inducement Option Award (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on July 20, 2016)</u></a>
10.15*	<a href="#"><u>Form of Inducement Option Award (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on December 23, 2016)</u></a>
10.16*	<a href="#"><u>Form of Executive Change of Control Severance Agreement (incorporated by reference to Exhibit 10.25 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2008, filed on March 16, 2009)</u></a>
10.17	<a href="#"><u>Manufacturing and Supply Agreement, dated December 8, 2009, between Fleet Laboratories and Juniper Pharmaceuticals (Bermuda), Ltd. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on December 9, 2009)</u></a>
10.18	<a href="#"><u>Note Purchase and Amendment Agreement, dated March 3, 2010, by and between Juniper Pharmaceuticals, Inc. and holders listed on Schedule I thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on March 4, 2010)</u></a>
10.19†*	<a href="#"><u>Second Amended and Restated License and Supply Agreement, dated May 14, 2010, between Juniper Pharmaceuticals, Inc. and Ares Trading S.A. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on May 18, 2010)</u></a>
10.20†*	<a href="#"><u>Amendment No. 1 to the Second Amended and Restated License and Supply Agreement, dated April 4, 2013, between Juniper Pharmaceuticals, Inc. and Ares Trading S.A. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on April 9, 2013)</u></a>
10.21†	<a href="#"><u>Amendment No. 2 to the Amended and Restated License and Supply Agreement, dated December 12, 2016, between Columbia Laboratories (Bermuda) Limited and Ares Trading S.A. (incorporated by reference to Exhibit 10.19 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2016, filed on March 7, 2017)</u></a>

Exhibit	Index Description of Exhibit
10.22	<a href="#">Parent Guarantee of Juniper Pharmaceuticals, Inc., dated September 12, 2013 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on September 18, 2013)</a>
10.23*	<a href="#">Amended and Restated Employment Agreement, dated November 1, 2017, by and between Juniper Pharmaceuticals, Inc. and Alicia Secor (incorporated by reference to Exhibit 10.3 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on November 2, 2017)</a>
10.24*	<a href="#">Amended and Restated Employment Agreement, dated November 1, 2017, by and between Juniper Pharmaceuticals, Inc. and Jeffrey Young (incorporated by reference to Exhibit 10.1 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on November 2, 2017)</a>
10.25*	<a href="#">Amended and Restated Employment Agreement, dated November 1, 2017, by and between Juniper Pharma Services, Limited and Dr. Nikin Patel (incorporated by reference to Exhibit 10.2 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on November 2, 2017)</a>
10.26*	<a href="#">Transition and Consulting Agreement, dated July 19, 2016, between Frank C. Condella, Jr. and Juniper Pharmaceuticals, Inc. (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on July 20, 2016)</a>
10.27*	<a href="#">Addendum to Transition and Consulting Agreement, dated February 28, 2017, by and between Juniper Pharmaceuticals, Inc. and Frank C. Condella, Jr. (incorporated by reference to Exhibit 10.1 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on May 4, 2017)</a>
10.28	<a href="#">Bank Loan Agreement, dated January 6, 2012, between Juniper Pharma Services Limited and Lloyds TSB Bank plc (incorporated by reference to Exhibit 10.3 the Registrant's Quarterly Report on Form 10-Q (File No. 001-10352) for the quarter ended September 30, 2013, filed on November 7, 2013)</a>
10.29	<a href="#">Amendment letter, dated September 16, 2013, between Juniper Pharma Services Limited and Lloyds TSB Bank plc (incorporated by reference to Exhibit 10.4 the Registrant's Quarterly Report on Form 10-Q (File No. 001-10352) for the quarter ended September 30, 2013, filed on November 7, 2013)</a>
10.30	<a href="#">Amendment to Manufacturing and Supply Agreement, effective as of December 31, 2013, between Juniper Pharmaceuticals (Bermuda) Ltd., and Fleet Laboratories Limited (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on February 6, 2014)</a>
10.31*	<a href="#">Employment Agreement, dated September 23, 2014, by and between Juniper Pharmaceuticals, Inc. and George O. Elston (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-10352), filed on September 26, 2014)</a>
10.32	<a href="#">Exclusive Patent License Agreement, dated as of March 27, 2015, by and between Juniper Pharmaceuticals, Inc. (f/k/a Columbia Laboratories, Inc.) and The General Hospital Corporation, d/b/a Massachusetts General Hospital (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (File No. 001-10352), filed on May 6, 2015)</a>
10.33	<a href="#">Office Lease by and between T-C 33 Arch Street LLC and Juniper Pharmaceuticals, Inc. dated October 15, 2015 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (File No. 001-10352), filed on November 12, 2015)</a>
10.34*	<a href="#">Amended and Restated Employment Agreement, effective April 12, 2017, by and between Juniper Pharmaceuticals, Inc. and Bridget A. Martell, MD MA (incorporated by reference to Exhibit 10.3 to the Registrant's Report on Form 10-Q (File No. 001-10352), filed on May 4, 2017)</a>
10.35	<a href="#">Amendment No. 2 to the License Agreement, dated November 10, 2016, between Juniper Pharmaceuticals, Inc., Columbia Laboratories (Bermuda) Ltd. and Allergan Sales, LLC (incorporated by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K (File No. 001-10352) for the year ended December 31, 2016, filed on March 7, 2016)</a>
21	<a href="#">Subsidiaries of the Company (incorporated by reference to Exhibit 21 of the Annual Report on Form 10-K (File No. 001-10352), filed on March 9, 2018)</a>
23.1	<a href="#">Consent of PricewaterhouseCoopers, LLP, Independent Registered Public Accounting Firm (incorporated by reference to Exhibit 23.1 of the Annual Report on Form 10-K (File No. 001-10352), filed on March 9, 2018)</a>
23.2	<a href="#">Consent of BDO USA, LLP, Independent Registered Public Accounting Firm (incorporated by reference to Exhibit 23.2 of the Annual Report on Form 10-K (File No. 001-10352), filed on March 9, 2018)</a>
31(i).1	<a href="#">Certification of Chief Executive Officer of the Company (filed herewith)</a>
31(i).2	<a href="#">Certification of Chief Financial Officer of the Company (filed herewith)</a>
32.1	<a href="#">Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (incorporated by reference to Exhibit 32.1 of the Annual Report on Form 10-K (File No. 001-10352), filed on March 9, 2018)</a>

32.2

[Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(incorporated by reference to Exhibit 32.2 of the Annual Report on Form 10-K \(File No. 001-10352\), filed on March 9, 2018\)](#)

**Exhibit****Index Description of Exhibit**

101 The following materials from the Juniper Pharmaceuticals, Inc. Annual Report on Form 10-K for the year ended December 31, 2017, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets at December 31, 2017 and December 31, 2016, (ii) Consolidated Statements of Operations for the years ended December 31, 2017, 2016 and 2015, (iii) Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2017, 2016 and 2015, (iv) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2017, 2016 and 2015, (v) Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015, and (vi) Notes to Consolidated Financial Statements (incorporated by reference to Exhibit 101 of the Annual Report on Form 10-K (File No. 001-10352), filed on March 9, 2018).

† Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.  
\* Management contract or compensatory plans or arrangements

**Item 16.**      *Form 10-K Summary*

None.

**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.

JUNIPER PHARMACEUTICALS, INC.

Date: April 27, 2018

By: /s/ Jeffrey E. Young  
Jeffrey E. Young  
Senior Vice President, Finance, Chief Financial Officer  
and Treasurer

**Certification Pursuant to Rule 13a-14(a)/15d-14(a)  
of the Securities Exchange Act of 1934**

I, Alicia Secor, certify that:

1. I have reviewed this Amendment to the Annual Report on Form 10-K/A of Juniper Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

/s/ Alicia Secor

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Alicia Secor  
President and Chief Executive Officer  
(Principal Executive Officer)  
DATE: April 27, 2018

**Certification Pursuant to Rule 13a-14(a)/15d-14(a)  
of the Securities Exchange Act of 1934**

I, Jeffrey E. Young, certify that:

1. I have reviewed this Amendment to the Annual Report on Form 10-K/A of Juniper Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

/s/ Jeffrey E. Young

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Jeffrey E. Young  
Senior Vice President, Finance, Chief Financial Officer and Treasurer  
(Principal Financial and Accounting Officer)  
DATE: April 27, 2018