Jazz Pharmaceuticals plc
Form 10-K/A
April 25, 2017
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K/A

(Amendment No. 1)

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2016

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: 001-33500

JAZZ PHARMACEUTICALS PUBLIC LIMITED COMPANY

(Exact name of registrant as specified in its charter)

Ireland	**98-1032470**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

Fifth Floor, Waterloo Exchange

Waterloo Road, Dublin 4, Ireland

011-353-1-634-7800

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

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

Title of each class	Name of each exchange on which registered
Ordinary shares, nominal value $0.0001 per share	**The NASDAQ Stock Market LLC**

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 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 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, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company, and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer		Accelerated filer
Non-accelerated filer	(Do not check if a smaller reporting company)	Smaller reporting company

Emerging growth company

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, as of June 30, 2016, the last business day of the registrant s most recently completed second fiscal quarter, was approximately $5,545,347,783 based upon the last sale price reported for the registrant s ordinary shares on such date on the NASDAQ Global Select Market. The calculation of the aggregate market value of voting and non-voting common equity excludes 21,264,016 ordinary shares of the registrant held by executive officers, directors, and shareholders that the registrant concluded were affiliates of the registrant on that date. Exclusion of such shares should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant.

As of April 18, 2017, a total of 60,016,634 ordinary shares, nominal value $0.0001 per share, of the registrant were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

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EXPLANATORY NOTE

The registrant is filing this Amendment No. 1 to Annual Report on Form 10-K/A, or this Amendment (also referred to herein as this report), to amend the Annual Report on Form 10-K for the fiscal year ended December 31, 2016 (Commission File Number 001-33500), or the 2016 Annual Report on Form 10-K, as filed by the registrant with the Securities and Exchange Commission, or the SEC, on February 28, 2017. The principal purpose of this Amendment is to include in Part III the information that was to be incorporated by reference from the proxy statement for the registrant s 2017 Annual General Meeting of Shareholders, as well as to update certain of the information included on the cover page of the 2016 Annual Report on Form 10-K and in the list of exhibits included in Item 15 and the Exhibit Index of this report. This Amendment hereby amends the cover page, Part III, Items 10 through 14, and Part IV, Item 15 of the 2016 Annual Report on Form 10-K. In addition, as required by Rule 12b-15 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, new certifications by the registrant s principal executive officer and principal financial officer are filed as exhibits to this Amendment.

No attempt has been made in this Amendment to modify or update the other disclosures presented in the 2016 Annual Report on Form 10-K. This Amendment does not reflect events occurring after the filing of the original report (i.e., those events occurring after February 28, 2017) or modify or update those disclosures that may be affected by subsequent events. Accordingly, this Amendment should be read in conjunction with the 2016 Annual Report on Form 10-K and the registrant s other filings with the SEC.

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JAZZ PHARMACEUTICALS PLC

2016 ANNUAL REPORT ON FORM 10-K

Amendment No. 1

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the safe harbor created by those sections. Forward-looking statements are based on our management s beliefs and assumptions and on information currently available to our management. In some cases, you can identify forward-looking statements by terms such as may, will, should, could, would, expect, plan, anticipate, believe, estimate, project, predict, propose, intend, continue, potential, possible, foreseeable, likely, unforeseen and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and other factors in greater detail under the heading Risk Factors in Part I, Item 1A of our 2016 Annual Report on Form 10-K, as filed with the SEC on February 28, 2017. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this filing. You should read this report completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify our forward-looking statements by our cautionary statements. Except as required by law, we assume no obligation to update our forward-looking statements publicly, or to update the reasons that actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

BASIS OF PRESENTATION

In this report, unless otherwise indicated or the context otherwise requires, all references to Jazz Pharmaceuticals, the registrant, the company, we, us, and our refer to Jazz Pharmaceuticals plc and its consolidated subsidiaries, except when the context makes clear that the time period being referenced is prior to January 18, 2012, in which case such terms are references to Jazz Pharmaceuticals, Inc. and its consolidated subsidiaries. On January 18, 2012, the businesses of Jazz Pharmaceuticals, Inc. and Azur Pharma Public Limited Company, or Azur Pharma, were combined in a merger transaction, or the Azur Merger, in connection with which Azur Pharma was re-named Jazz Pharmaceuticals plc, and we became the parent company of and successor to Jazz Pharmaceuticals, Inc., with Jazz Pharmaceuticals, Inc. becoming our wholly owned subsidiary. Jazz Pharmaceuticals, Inc. was treated as the acquiring company in the Azur Merger for accounting purposes, and as a result, the historical consolidated financial statements of Jazz Pharmaceuticals, Inc. became our consolidated financial statements. In addition, on June 12, 2012, we completed our acquisition of EUSA Pharma Inc., or the EUSA Acquisition. In January 2014, we completed our acquisition of a controlling interest in Gentium S.r.l., or Gentium, and in July 2016, we completed our acquisition of Celator Pharmaceuticals, Inc., or Celator, which we refer to as the Celator Acquisition.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance

DIRECTORS AND EXECUTIVE OFFICERS

Our Board of Directors

Our board of directors is divided into three classes, designated Class I, Class II and Class III. The term of the Class I directors will expire on the date of our 2018 annual general meeting of shareholders; the term of the Class II directors will expire on the date of our 2019 annual general meeting of shareholders; and the term of the Class III directors will expire on the date of our 2017 annual general meeting of shareholders. At each annual general meeting of shareholders, successors to the directors whose terms expire at that annual general meeting are put forward for election for a three-year term.

The following is a brief biography of each member of our board of directors, including their respective ages as of April 25, 2017, with each biography including information regarding the specific experience, qualifications, attributes or skills that led the nominating and corporate governance committee and our board of directors to determine that each member of our board of directors should serve as a director.

Class I Directors Continuing in Office Until the 2018 Annual General Meeting

Peter Gray, age 62, has served as a member of our board of directors since May 2013 and was appointed as chairperson of our audit committee in April 2014. Mr. Gray currently serves as Chairman of the board of directors of UDG Healthcare plc, an international provider of healthcare services. He is also a Chairman of two privately-held companies providing outsourced services to the biopharma industry and chairs a non-profit educational establishment. In September 2011, Mr. Gray retired from his position as Chief Executive Officer of ICON plc, a global provider of outsourced development services to the pharmaceutical, biotechnology and medical device industries, which he held since November 2002. At ICON plc, Mr. Gray previously served as Group Chief Operating Officer from June 2001 to November 2002 and Chief Financial Officer from June 1997 to June 2001. From November 1983 to November 1989, Mr. Gray served as senior financial officer at Elan Corporation plc, a pharmaceutical company. Mr. Gray holds a degree in law from Trinity College Dublin and qualified as a chartered accountant in 1981. Based on his experience as Chief Executive Officer and Chief Financial Officer of ICON plc, Mr. Gray brings to our board of directors and audit committee over 20 years of experience in financial and operational management within the pharmaceutical industry.

Kenneth W. O Keefe, age 50, has served as a member of our board of directors since the closing of the Azur Merger in January 2012 and was a director of Jazz Pharmaceuticals, Inc. from 2004 until the closing of the Azur Merger. Since November 2015, he has been Chief Executive Officer of Beecken Petty O Keefe & Company, a private equity firm, which he co-founded. From January 2011 to November 2015, he was Managing Partner, and from 1997 to January 2011, he was Managing Director, of Beecken Petty O Keefe & Company. He serves on the boards of several privately-held healthcare companies. He received a B.A. from Northwestern University and an M.B.A. from the University of Chicago. As a member of Beecken Petty O Keefe & Company, Mr. O Keefe brings to our board of directors significant expertise in accounting and financial matters and in analyzing and evaluating financial statements, as well as substantial experience managing private equity investments. He serves or has served on the audit committee of several companies in the healthcare industry. As the former chairperson of our audit committee, Mr. O Keefe brings to our board of directors detailed knowledge of our financial position and financial statements.

Elmar Schnee, age 57, has served as a member of our board of directors since August 2014 and previously served as a director of Gentium (now a subsidiary of Jazz Pharmaceuticals plc) from May 2012 until April 2014. Mr. Schnee has served as Chief Operating Officer of MindMaze SA, a neuro-technology company, since June 2016. From November 2013 to August 2015, Mr. Schnee served as a non-executive director of Cardiorentis Ltd., a biopharmaceutical company, where he served as Chairman and Chief Executive Officer from October 2011 until

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November 2013. From 2003 to 2011, Mr. Schnee held various positions at Merck KGaA, a global pharmaceutical and chemical group. He joined Merck KGaA in 2003 as Managing Director of Merck Santé S.A.S. In January 2004, Mr. Schnee assumed responsibility for global operations of the ethical pharmaceuticals division of Merck KGaA, and in November 2005, Mr. Schnee was appointed as Deputy Member of the Executive Board responsible for the pharmaceuticals business. In 2006, he was appointed as a member of the Executive Board and General Partner of Merck KGaA, with responsibility for global pharmaceutical activities, and served in this position until 2011. Prior to Merck KGaA, Mr. Schnee held senior positions in strategy, business development and marketing at UCB SA, Sanofi-Synthélabo SA, Migliara/Kaplan Associates, Inc. and Fisons Pharmaceuticals PLC. In addition, Mr. Schnee currently serves on the boards of directors of two pharmaceutical companies, Stallergenes-Greer and Santhera Pharmaceuticals Holding AG, and four privately-held life sciences companies. Mr. Schnee holds both a bachelor s degree in marketing and a master s degree in marketing and general management from the Swiss Institute of Business Administration in Zurich. With his experience as Chairman and Chief Executive Officer of Cardiorentis Ltd., his operational experience at Merck KGaA and other companies and his experience serving on the boards of directors of life sciences companies, including Gentium, Mr. Schnee brings to our board of directors significant management expertise and industry knowledge.

Catherine A. Sohn, Pharm. D., age 64, has served as a member of our board of directors since July 2012 and was appointed as chairperson of our nominating and corporate governance committee in August 2013. Since January 2014, Dr. Sohn has served as an independent director on the board of directors of Neuralstem, Inc., a publicly-traded life sciences company, where she is currently serving as Chairperson of the nominating and corporate governance committee. Since November 2012, Dr. Sohn has also served as an independent director on the board of directors of Landec Corporation, a publicly-traded life sciences company, where she is currently serving as Chairperson of the compensation committee. From 1998 to 2010, she was Senior Vice President, Worldwide Business Development and Strategic Alliances at GlaxoSmithKline Consumer Healthcare. From 1994 to 1998, she was Vice President, Worldwide Strategic Product Development at SmithKline Beecham Pharmaceuticals plc in the pharmaceutical division. From 1982 to 1994, she held a series of positions in Medical Affairs, Pharmaceutical Business Development and U.S. Product Marketing at SmithKline Beecham Pharmaceuticals plc and its predecessor, Smith, Kline & French. Dr. Sohn holds the positions of Adjunct Professor at the University of California, San Francisco and Dean s Professor at the University of the Sciences in Philadelphia. She received a Doctor of Pharmacy from the University of California, San Francisco, School of Pharmacy and a Certificate of Professional Development from the Wharton School at the University of Pennsylvania. Dr. Sohn was named Woman of the Year by the Healthcare Businesswomen s Association (2003) and Distinguished Alumnus of the Year by the University of California, San Francisco (2000) and is a Certified Licensing Professional and a National Association of Corporate Directors (NACD) Board Leadership Fellow. Dr. Sohn brings to our board of directors three decades of product development, strategic marketing and business development transaction experience in the pharmaceutical industry and a global perspective that is directly relevant to our company.

Class II Directors Continuing in Office Until the 2019 Annual General Meeting

Paul L. Berns, age 50, has served as a member of our board of directors since the closing of the Azur Merger in January 2012 and was a director of Jazz Pharmaceuticals, Inc. from 2010 until the closing of the Azur Merger. Mr. Berns is a consultant to the pharmaceutical industry. From March 2014 to June 2016, he served as the Chief Executive Officer and President of Anacor Pharmaceuticals, Inc., a biopharmaceutical company, which was acquired by Pfizer Inc. in June 2016. He also served as a member of the board of directors of Anacor Pharmaceuticals, Inc. from 2012 until 2016, including as Chairman of its board of directors from 2013 until 2016. From September 2012 to March 2014, he was a self-employed consultant to the pharmaceutical industry. From March 2006 to September 2012, he served as President and Chief Executive Officer, and as a member of the board of directors, of Allos Therapeutics, Inc., a pharmaceutical company acquired by Spectrum Pharmaceuticals, Inc. From July 2005 to March 2006,

Mr. Berns was a self-employed consultant to the pharmaceutical industry. From June 2002 to July 2005, Mr. Berns was President, Chief Executive Officer and a director of Bone Care International, Inc., a specialty pharmaceutical company that was acquired by Genzyme Corporation in 2005. From 2001 to 2002, Mr. Berns served as Vice President and General Manager of the Immunology, Oncology and Pain Therapeutics

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business unit of Abbott Laboratories, a pharmaceutical company. From 2000 to 2001, he served as Vice President, Marketing of BASF Pharmaceuticals/Knoll, a pharmaceutical company, and from 1990 to 2000, Mr. Berns held various positions, including senior management roles, at Bristol-Myers Squibb Company, a pharmaceutical company. Mr. Berns previously served on the boards of directors of Cellectar Biosciences, Inc. (formerly Novelos Therapeutics, Inc.) from November 2013 to June 2016 and XenoPort, Inc. from 2005 to May 2016. Mr. Berns received a B.S. in Economics from the University of Wisconsin. With his experience as Chief Executive Officer of Allos Therapeutics, Inc., Anacor Pharmaceuticals, Inc. and Bone Care International Inc., and his experience serving on the boards of directors of public companies, Mr. Berns provides significant management expertise and industry knowledge to our board of directors.

Patrick G. Enright, age 55, has served as a member of our board of directors since the closing of the Azur Merger in January 2012 and was a director of Jazz Pharmaceuticals, Inc. from 2009 until the closing of the Azur Merger. Since 2006, Mr. Enright has served as a Managing Director of Longitude Capital, a venture capital firm, of which he is a founder. From 2002 through 2006, Mr. Enright was a Managing Director of Pequot Ventures, a venture capital investment firm, where he co-led the life sciences investment practice. He currently serves on the boards of directors of Aimmune Therapeutics, Inc., a biopharmaceutical company, Corcept Therapeutics Incorporated, a pharmaceutical company, and several privately-held companies. Previously, Mr. Enright served on the board of directors of Esperion Therapeutics, Inc., a pharmaceutical company, from April 2013 to June 2016. Mr. Enright received a B.S. from Stanford University and an M.B.A. from the Wharton School at the University of Pennsylvania. Based on his experience as a venture capital investor focused on life sciences companies and his past work in the pharmaceutical industry, Mr. Enright brings to our board of directors over 25 years of operating experience and financial expertise in the life sciences industry.

Seamus Mulligan, age 56, has served as a member of our board of directors since the closing of the Azur Merger in January 2012 and was a founder and principal investor of Azur Pharma. Since 2014, Mr. Mulligan has served as Chairman and Chief Executive Officer of Adapt Pharma Ltd., a specialty pharmaceutical company, and since 2006, Mr. Mulligan has also served as Executive Chairman of Circ Pharma Limited and its subsidiaries, a pharmaceutical development stage group. Mr. Mulligan served as our Chief Business Officer, International Business Development from the closing of the Azur Merger until February 2013. Mr. Mulligan served as Azur Pharma s Chairman and Chief Executive Officer and as a member of its board of directors from 2005 until the closing of the Azur Merger. From 1984 until 2004, he held various positions with Elan Corporation, plc, a pharmaceutical company, most recently as Executive Vice President, Business and Corporate Development, and prior to that position, held the roles of President of Elan Pharmaceutical Technologies, the drug delivery division of Elan Corporation, plc, Executive Vice President, Pharmaceutical Operations, Vice President, U.S. Operations and Vice President, Product Development. He served as a member of the board of directors of the U.S. National Pharmaceutical Council until 2004. Mr. Mulligan received a B.Sc. (Pharm) and M.Sc. from Trinity College Dublin. As a founder of Azur Pharma and a pharmaceutical industry executive, Mr. Mulligan brings to our board of directors an expertise in business development and over 30 years of experience in the pharmaceutical industry.

Norbert G. Riedel, Ph.D., age 59, has served as a member of our board of directors since May 2013 and was appointed chairperson of our compensation committee in August 2013. Since September 2015, Dr. Riedel has served as Chief Executive Officer and President of Aptinyx, Inc., a biopharmaceutical company spun out of its predecessor company, Naurex, Inc., where Dr. Riedel served as Chief Executive Officer and President from January 2014 to September 2015. From 2001 to January 2013, he served as Corporate Vice President and Chief Scientific Officer of Baxter International Inc., a diversified healthcare company, where from 1998 to 2001, he also served as President and General Manager of the recombinant therapeutic proteins business unit and Vice President of Research and Development of the bioscience business unit. From 1996 to 1998, Dr. Riedel served as head of worldwide biotechnology and worldwide core research functions at Hoechst-Marion Roussel, now Sanofi, a global

pharmaceutical company. Dr. Riedel served on the board of directors of Ariad Pharmaceuticals, Inc., an oncology company, from May 2011 until the company was acquired in February 2017. Dr. Riedel serves on the board of directors of the Illinois Biotechnology Industry Organization. Dr. Riedel is also a member of the Austrian Academy of Sciences. Dr. Riedel is an Adjunct Professor at Boston University School of Medicine and an Adjunct Professor

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of Medicine at Northwestern University s Feinberg School of Medicine. Dr. Riedel holds a Diploma in biochemistry and a Ph.D. in biochemistry from the University of Frankfurt. Dr. Riedel brings significant scientific, drug discovery and development, and commercial expertise to our board of directors with over 20 years of experience in the biotechnology and pharmaceutical industries.

Class III Directors Continuing in Office Until the 2017 Annual General Meeting

Bruce C. Cozadd, age 53, has served as our Chairman and Chief Executive Officer since the closing of the Azur Merger in January 2012. He co-founded Jazz Pharmaceuticals, Inc. and has served (and continues to serve) as Chairman and Chief Executive Officer of Jazz Pharmaceuticals, Inc. since April 2009. From 2003 until 2009, he served as Jazz Pharmaceuticals, Inc. s Executive Chairman and as a member of its board of directors. From 1991 until 2001, he held various positions with ALZA Corporation, a pharmaceutical company acquired by Johnson & Johnson, most recently as Executive Vice President and Chief Operating Officer, with responsibility for research and development, manufacturing and sales and marketing. Previously at ALZA Corporation, he held the roles of Chief Financial Officer and Vice President, Corporate Planning and Analysis. He serves on the boards of directors and compensation committees of Cerus Corporation, a biomedical products company, and Threshold Pharmaceuticals, Inc., a clinical stage biopharmaceutical company, and on the boards of The Nueva School, a non-profit organization, and SFJAZZ, a non-profit organization. He received a B.S. from Yale University and an M.B.A. from the Stanford Graduate School of Business. As our Chief Executive Officer, he brings to our board of directors a detailed knowledge of our business.

Heather Ann McSharry, age 55, has served as a member of our board of directors since May 2013. Ms. McSharry currently serves as a non-executive director on the boards of directors of several public and private companies, including CRH plc, an international building materials group, and Greencore Group plc, an international manufacturer of convenience foods, where she also serves as Chair of its remuneration committee. From 2006 to 2009, Ms. McSharry was Managing Director Ireland of Reckitt Benckiser, a multinational health, home and hygiene consumer products company. From 1989 to 2006, she held various positions at Boots Healthcare, a leading global consumer healthcare company, most recently as Managing Director of Boots Healthcare Ireland Limited. From 2007 to 2011, Ms. McSharry served on the board of directors of the Bank of Ireland, where she was a member of its audit committee from 2009 to 2011. Ms. McSharry served on the board of the Industrial Development Agency in Ireland from 2010 to 2014, where she was Chair of the audit and finance committee. Ms. McSharry holds a Bachelor of Commerce and a Master of Business Studies degree from University College Dublin. Ms. McSharry brings to our board of directors almost 30 years of experience in multiple international industries, including healthcare, consumer goods and financial services.

Rick E Winningham, age 57, has served as a member of our board of directors since the closing of the Azur Merger in January 2012 and was a director of Jazz Pharmaceuticals, Inc. from 2010 until the closing of the Azur Merger. In May 2014, Mr. Winningham was appointed as Lead Independent Director of our board of directors. Mr. Winningham has served as Chairman of the board of directors of Theravance Biopharma, Inc., a biopharmaceutical company, since July 2013. He has served as Chief Executive Officer of Theravance Biopharma, Inc. since its spin-off from Innoviva, Inc. in June 2014. From October 2001 to August 2014, Mr. Winningham served as Chief Executive Officer of Innoviva, Inc., where he also served as Chairman of the Board of Directors from April 2010 to October 2014. From 1997 to 2001, he served as President of Bristol-Myers Squibb Oncology/Immunology/Oncology Therapeutics Network and, from 2000 to 2001, as President of Global Marketing. Mr. Winningham is a member of Biotechnology Industry Organization s board of directors and serves on the Health Section Governing Board Standing Committee on Reimbursement. He served as a member of the board of directors of the California Healthcare Institute, or CHI, from November 2011 to March 2015 and served as its Chairman from January 2014 until CHI merged with Bay Area Bioscience Association to become the California Life Sciences Association, or CLSA, in March

2015. Mr. Winningham was Chairman of CLSA from March 2015 until November 2015. Mr. Winningham is also a member of the board of directors of OncoMed Pharmaceuticals, Inc., a clinical stage biotechnology company. Mr. Winningham holds an M.B.A. from Texas Christian University and a B.S. from Southern Illinois University. Mr. Winningham s experience in senior management positions in the

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pharmaceutical industry provides significant industry knowledge and operational and management expertise to our board of directors.

Committee Membership

The following table provides membership information for 2016 for each of the audit committee, compensation committee and nominating and corporate governance committee of our board of directors:

Name	Audit	Compensation	Nominating and Corporate Governance
Paul L. Berns		M	
Patrick G. Enright		M	
Peter Gray	C		
Heather Ann McSharry	M		M
Kenneth W. O Keefe	M		
Norbert G. Riedel, Ph.D.		C	
Elmar Schnee			M
Catherine A. Sohn, Pharm. D.			C
Rick E Winningham			M

C = committee chairperson; M = committee member

Our Executive Officers

The following table provides information regarding our executive officers as of April 25, 2017.

Name	Age	Position
Bruce C. Cozadd	53	Chairman and Chief Executive Officer
Russell J. Cox	53	Executive Vice President and Chief Operating Officer
Suzanne Sawochka Hooper	51	Executive Vice President and General Counsel
Matthew P. Young	47	Executive Vice President and Chief Financial Officer
Iain McGill	44	Senior Vice President, Jazz Pharmaceuticals Europe and Rest of World
Michael P. Miller	60	Senior Vice President, U.S. Commercial
Karen Smith, M.D., Ph.D.	49	Global Head of Research & Development and Chief Medical Officer
Paul Treacy	56	Senior Vice President, Technical Operations
Karen J. Wilson	53	Senior Vice President, Finance and Principal Accounting Officer

Bruce C. Cozadd. Biographical information regarding Mr. Cozadd is set forth above under *Our Board of Directors*.

Russell J. Cox was appointed our Executive Vice President and Chief Operating Officer as of May 2014 and served as our Executive Vice President and Chief Commercial Officer from March 2012 until May 2014 and our Senior Vice President, Sales and Marketing from the closing of the Azur Merger in January 2012 until March 2012. Prior to the

closing of the Azur Merger, he served in a variety of senior management roles since joining Jazz Pharmaceuticals, Inc. in 2010. From January 2009 to January 2010, he was Senior Vice President and Chief Commercial Officer of Ipsen Group, a pharmaceutical company, and from 2007 until December 2008, he was Vice President of Marketing at Tercica, Inc. (acquired by Ipsen Group), a biotechnology company. From 2003 to 2007, he was with Scios Inc. (acquired by Johnson & Johnson in 2003), where he also held the role of Vice President, Marketing. Prior to 2003, Mr. Cox was with Genentech, Inc. for 12 years, where he was a Product Team Leader responsible for the Growth Hormone franchise and led numerous product launches as a Group Product Manager. In 2015, Mr. Cox joined the board of directors of Aeglea BioTherapeutics, Inc., a biotechnology company. Mr. Cox received a B.S. in Biomedical Science from Texas A&M University.

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Suzanne Sawochka Hooper was appointed our Executive Vice President and General Counsel as of March 2012. From 1999 through early 2012, she was a partner in the law firm Cooley LLP. Ms. Hooper served for several years as a member of Cooley s Management Committee and as Vice Chair of the firm s Business Department. While at Cooley, Ms. Hooper practiced corporate and securities law, primarily with companies and investors in the life sciences industry. Ms. Hooper received a J.D. from the University of California, Berkeley, Boalt Hall School of Law and a B.A. in Political Science from the University of California, Santa Barbara. Ms. Hooper is a member of the State Bar of California.

Matthew P. Young was appointed our Executive Vice President and Chief Financial Officer as of February 2015 and previously served as our Senior Vice President and Chief Financial Officer from March 2014 to February 2015 and as our Senior Vice President, Corporate Development from April 2013 to March 2014. Prior to joining us, Mr. Young worked in investment banking for approximately 20 years. From February 2009 to April 2013, Mr. Young served as a managing director in global healthcare of Barclays Capital Inc., an investment banking firm, where his role included acting as the co-head of life sciences at Barclays Capital. From 2007 to 2008, Mr. Young served as a managing director of Citigroup Global Markets Inc., an investment banking firm, and from 2003 to 2007, as a managing director of Lehman Brothers Inc., an investment banking firm. From 1992 to 2003, Mr. Young served in various capacities at other investment banking firms. In 2015, he joined the board of directors of PRA Health Sciences, Inc., a contract research company, where he currently serves on the compensation and audit committees. He is also a member of the board of directors and Chairman of the audit committee of CytomX Therapeutics, Inc., a biopharmaceutical company. Mr. Young received a B.S. in Economics and an M.B.A. from the Wharton School of the University of Pennsylvania.

Iain McGill was appointed our Senior Vice President, Jazz Pharmaceuticals Europe and Rest of World as of March 2015. He served as Head of EUSA International and Senior Vice President, Jazz Pharmaceuticals from March 2014 to March 2015 and our Chief Commercial Officer, EUSA Pharma, from June 2012, when he joined Jazz Pharmaceuticals in connection with the EUSA Acquisition. From October 2011 until he joined Jazz Pharmaceuticals, Mr. McGill served as Chief Commercial Officer at EUSA Pharma (Europe) Ltd., where he previously served from August 2010 to September 2011 as President Europe, International & Global Marketing and from January 2010 to July 2010 as President of Europe. From 2006 to 2009, Mr. McGill served as Vice President and Global Business Manager at Wyeth, a pharmaceutical company acquired by Pfizer Inc. In 2016, he joined the board of directors and the audit committee of Otonomy Inc., a biopharmaceutical company. Mr. McGill began his pharmaceutical career in sales and over 20 years, held various positions in sales management, market research, marketing, business development and general management at Syntex Corporation (acquired by Roche Holding Ltd.), Roche Holding Ltd. and Novartis AG. Mr. McGill received a B.Sc in Biochemistry from the University of London.

Michael P. Miller was appointed our Senior Vice President, U.S. Commercial as of April 2014. From April 2010 to January 2014, Mr. Miller was Senior Vice President and Chief Commercial Officer of Vivus, Inc., a biopharmaceutical company. From February 2006 to April 2010, Mr. Miller served as Vice President, Sales and Marketing, leading the HER Family Oncology Franchise, of Genentech, Inc., a biotechnology company and wholly owned subsidiary of Roche Holding Ltd. From January 2003 to December 2005, Mr. Miller served as the Senior Vice President, Chief Commercial Officer of Connetics Corporation, a specialty pharmaceutical company acquired by Stiefel Laboratories, Inc. Previously, from 1997 to 2001, he served as Vice President of the Urology Business Unit of ALZA Corporation, a pharmaceutical company acquired by Johnson & Johnson. Prior to 1997, Mr. Miller served 13 years in various sales and marketing positions at Syntex Corporation, a pharmaceutical company acquired by Roche Holding Ltd. Mr. Miller received a B.S. in Business Administration and Finance from the University of San Francisco and an M.B.A. in Information and Computer Systems from San Francisco State University.

Karen Smith, M.D., Ph.D., was appointed our Global Head of Research and Development and Chief Medical Officer as of April 2015. From January 2011 to March 2015, she was Senior Vice President, Global Medical Affairs and

Global Therapeutic Area Head (Dermatology) for Allergan, Inc., a multi-specialty health care

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company. From October 2007 to December 2010, Dr. Smith served initially as Vice President, External Medical Relations and then Vice President, Global Development at AstraZeneca LP, a global innovation-driven biopharmaceutical company. From 2002 to 2007, Dr. Smith held a variety of management and medical roles with Bristol-Myers Squibb Company, a global biopharmaceutical company, in Australia, Canada, and the United States, most recently as the Head of U.S. Clinical Operations. In 2001, Dr. Smith was the Chief Executive Officer of Boron Molecular, a specialist fine chemicals manufacturing company. Dr. Smith is also a member of the board of directors of Forward Pharma A/S, a biotechnology company, and serves on the Women s Advisory Board for Ironman Corporation. Dr. Smith holds a B.A.Sc. and a B.Sc. from the Curtin University of Technology, an M.D. from the University of Warwick, a Ph.D. in oncology molecular genetics from the University of Western Australia, an M.B.A. from the University of New England (Australia) and an L.L.M. in medical law from the University of Salford.

Paul Treacy was appointed our Senior Vice President, Technical Operations in July 2014. From April 2010 to May 2013, he was Head of CMC, Supply Chain and Manufacturing at Janssen Alzheimer Immunotherapy Research & Development, LLC, a biotechnology company and a subsidiary of Johnson & Johnson. From August 2005 to April 2010, he served as General Manager of Janssen Biologics Ireland, a biopharmaceutical company and a subsidiary of Johnson & Johnson. From August 2002 to August 2005, Mr. Treacy was Vice President, Manufacturing Operations at Centocor Inc., a subsidiary of Johnson & Johnson, and from February 1999 to August 2002, he served as Executive Director, Operations, at Centocor BV. Mr. Treacy received a B.S. and an M.S. in Microbiology and a Higher Diploma in Computer Science from University College Cork and a Higher Diploma in Pharmaceutical Manufacturing Technology from Trinity College Dublin.

Karen J. Wilson was appointed our Senior Vice President, Finance and Principal Accounting Officer as of February 2013 and served as our Vice President, Finance and Principal Accounting Officer from the closing of the Azur Merger in January 2012 until February 2013. Prior to the Azur Merger, she served as Jazz Pharmaceuticals, Inc. s Vice President, Finance beginning in February 2011 and was appointed Principal Accounting Officer in March 2011. From 2009 to January 2011, Ms. Wilson served as Vice President of Finance and Principal Accounting Officer at PDL BioPharma, Inc., a biotechnology company. From 2005 to 2009, she served as a principal at the consulting firm Wilson Crisler LLC. Prior to that, from 2001 to 2004, she was Chief Financial Officer of ViroLogic, Inc., a biosciences company. Prior to joining ViroLogic, Ms. Wilson served as Chief Financial Officer and Vice President of Operations for Novare Surgical Systems, Inc. from 1999 to 2001. Prior to 1999, Ms. Wilson worked for Deloitte & Touche LLP for ten years, serving clients in both the medical and technology fields. Ms. Wilson is a Certified Public Accountant in the State of California and received a B.S. in Business from the University of California, Berkeley.

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SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors and executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our ordinary shares and other equity securities. Such persons are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2016, we believe that all Section 16(a) filing requirements applicable to our executive officers, directors and greater than ten percent beneficial owners were complied with, except for one Form 4 of our executive officer Mr. Miller, which was inadvertently filed one day late on January 21, 2016, reporting the sale of shares of the company s ordinary shares on January 15, 2016 pursuant to a Rule 10b5-1 trading plan adopted by Mr. Miller.

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CERTAIN CORPORATE GOVERNANCE MATTERS

Audit Committee

We have a standing audit committee that is currently composed of three directors (Mr. Gray, Ms. McSharry and Mr. O Keefe). Our board of directors has determined that each of Mr. Gray, Ms. McSharry and Mr. O Keefe meets the independence requirements of Rule 10A-3 of the Exchange Act and the listing standards of the NASDAQ Stock Market LLC, or the NASDAQ, with respect to audit committee members. Our board of directors has also determined that each of Mr. Gray, Ms. McSharry and Mr. O Keefe qualifies as an audit committee financial expert within the meaning of SEC regulations. In making this determination, our board of directors considered the overall knowledge, experience and familiarity of each with accounting matters, analyzing and evaluating financial statements, and, in the case of Mr. O Keefe, managing private equity investments. Mr. Gray serves as chairperson of the audit committee.

Code of Conduct

Our code of conduct applies to all of our employees, directors and officers, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, and those of our subsidiaries. The code of conduct is available on our website at www.jazzpharmaceuticals.com under the section entitled About under Corporate Ethics. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of our code of conduct by posting such information on our website at the website address and location specified above.

Director Nominations

No material changes have been made to the procedures by which shareholders may recommend nominees to our board of directors.

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Item 11. Executive Compensation

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

The following Compensation Discussion and Analysis describes the material elements of compensation for the following individuals who served as our principal executive officer, principal financial officer and three other most highly compensated executive officers as of December 31, 2016. These individuals are our named executive officers, or NEOs, for 2016.

Bruce C. Cozadd	Chairman and Chief Executive Officer (CEO)
Matthew P. Young	Executive Vice President and Chief Financial Officer (CFO)
Russell J. Cox	Executive Vice President and Chief Operating Officer (COO)
Suzanne Sawochka Hooper	Executive Vice President and General Counsel (GC)
Karen Smith, M.D., Ph.D.	Global Head of Research and Development and Chief Medical Officer (CMO)

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Executive Summary

Our compensation policies and elements are intended to provide the necessary incentives to properly align our executive officers performance with the interests of our shareholders while maintaining equitable and competitive executive compensation practices that enable us to attract and retain the highest caliber of executive officers.

2016 Performance Highlights

In 2016, we delivered solid growth for two of our key products, Xyrem and Defitelio, while completing multiple corporate development transactions and advancing and expanding our product development pipeline. We continued to invest in research and development activities, which included clinical development of new product candidates, activities related to line extensions and new indications for existing products and the generation of additional clinical data for existing products, all in our sleep and hematology/oncology therapeutic areas.

(1) GAAP net income and GAAP net income per diluted share (GAAP EPS) for the 2014 and 2015 periods are attributable to Jazz Pharmaceuticals plc.

(2) For 2014, GAAP net income included, and GAAP EPS reflects, acquired in-process research and development costs of $202.6 million, primarily for the acquisition of rights to JZP-110 and rights to defibrotide in the Americas.

Financial	2016 total revenues of $1,488.0 million increased approximately 12% over 2015
	2016 GAAP net income of $396.8 million compared to $329.5 million in 2015
Xyrem	2016 net sales of Xyrem of $1,107.6 million increased approximately 16% over 2015
	U.S. Food and Drug Administration, or FDA, approval of our manufacturing facility in Athlone, Ireland, and Xyrem shipments to the U.S.
Defitelio/defibrotide	2016 net sales of Defitelio of $109.0 million increased approximately 54% over 2015
	FDA approval of Defitelio new drug application, or NDA, followed by U.S. launch
Clinical/Regulatory	Patient enrollment completed in three Phase 3 studies evaluating JZP-110, a late-stage investigational compound being developed for potential treatment of excessive sleepiness in patients with obstructive sleep apnea, or OSA, and patients with narcolepsy (with the announcement of positive efficacy results and preliminary safety findings in the two JZP-110 Phase 3 studies in patients with OSA occurring in the first quarter of 2017)
	Rolling NDA submission initiated for Vyxeos (CPX-351) for acute myeloid leukemia (which submission was completed in the first quarter of 2017)

	Patient enrollment completed in Phase 3 study of Xyrem in pediatric narcolepsy patients with cataplexy (with the announcement of positive top-line efficacy results in the second quarter of 2017)
	Clinical sites activated in Phase 3 study of defibrotide for prevention of hepatic veno-occlusive disease, or VOD, in high-risk patients following hematopoietic stem cell transplantation (with the first patient enrolled in the first quarter of 2017)
	Announced development of two late-stage oxybate product candidates, JZP-507 and JZP-258, which have the potential to offer clinically meaningful benefits to patients compared to Xyrem (with the first patient enrolled in the JZP-258 Phase 3 study in the first quarter of 2017)
Corporate Development	In July 2016, completed the Celator Acquisition, which broadened our hematology/oncology portfolio with the acquisition of worldwide development and commercialization rights to Vyxeos and the CombiPlex technology platform
	Investment in Arrivo Bioventures LLC, or Arrivo, for the opportunity to access potential innovative products and product candidates
	Agreement with Pfenex, Inc., or Pfenex, for worldwide rights to develop and commercialize multiple early-stage hematology product candidates

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Key Features of Our Executive Compensation Program

What We Do	What We Don t Do
Design executive compensation to align pay with performance	No excessive change in control or severance payments
Balance short-term and long-term incentive compensation, with the majority of executive compensation being at-risk	No single-trigger cash or equity change in control benefits
Use same performance bonus plan for all non-sales employees, including executives; base CEO s bonus 100% on pre-established corporate performance goals	No repricing of underwater stock options without prior shareholder approval
Establish maximum payout amount under performance bonus plan and require threshold level of achievement for payout with respect to financial metrics	No excessive perquisites
Maintain share ownership guidelines	No tax gross ups on severance or change in control benefits
Provide double-trigger change in control benefits	No post-termination retirement or pension benefits that are not available to employees generally
Prohibit hedging and pledging by executive officers and directors	No guaranteed bonuses or base salary increases
Have 100% independent directors on the compensation committee	
Hire independent compensation consultant who reports directly to the compensation committee	

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2016 Pay-for-Performance Overview

A significant portion of target total direct compensation for our CEO and other NEOs is structured in the form of at-risk compensation, consisting of annual performance bonus and equity incentive awards, with the performance bonus payouts and equity award values dependent upon our company performance. This aligns our executives interests with those of our shareholders for near- and long-term performance. Target total direct compensation for 2016, as shown below, reflects annual base salary paid, annual target performance bonus and the grant date fair value of equity awards granted during the year as reported in the Summary Compensation Table.

Compensation Philosophy and Objectives

Our executive compensation program is designed with the following objectives and philosophy:

Attract, incentivize, reward and retain talented individuals with relevant experience in the life sciences industry through a competitive pay structure. We reward individuals fairly over time and seek to retain those individuals who continue to meet our high expectations.

Deliver balanced total compensation package to accomplish our business objectives and mission. Our executive compensation program focuses on *total compensation*, combining short- and long-term components, cash and equity, and fixed and contingent payments, in the proportions that we believe are the most appropriate to incentivize and reward our executive officers for achieving our corporate goals while minimizing incentives for excessive risk taking or unethical conduct.

Align pay with our performance. Our annual bonus awards are not earned unless pre-determined levels of performance are achieved against annual corporate objectives approved by our board of directors at the beginning of the year. Likewise, our stock option awards will not provide realizable value and our restricted stock unit, or RSU, awards will not provide increased value unless there is an increase in the value of our shares, which benefits all shareholders. We also have executive share ownership guidelines to further support our ownership culture and align the interests of executive officers and shareholders.

How We Determine Executive Compensation

Role of Our Compensation Committee and Executive Officers

The compensation committee is (and was at all times during 2016) composed entirely of independent directors, as defined by Rule 5605(a)(2) of the NASDAQ listing standards. Our compensation committee meets as often as it determines necessary to carry out its duties and responsibilities through regularly scheduled meetings and, if necessary, special meetings. Our compensation committee also has the authority to take certain actions by written consent of all members. The agenda for each compensation committee meeting is usually developed by members of

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our human resources department and our CEO, with input from members of our legal department, and is reviewed with the chairperson of the compensation committee. In 2016, the compensation committee met five times and did not act by unanimous written consent. As of the date of this report, in 2017, the compensation committee has met twice and has not acted by unanimous written consent.

The compensation committee reviews and oversees our compensation policies, plans and programs and reviews and generally determines the compensation to be paid to the executive officers, including the NEOs. Either the compensation committee or the independent members of our board of directors, upon recommendation from the compensation committee, approve certain compensation of our CEO, and references in this Compensation Discussion and Analysis to our board of directors approving our CEO s compensation refer to the independent members of our board of directors. The compensation committee does not delegate any of its functions to others in determining executive compensation.

In making executive compensation determinations, the compensation committee considers recommendations from our CEO. In making his recommendations, our CEO receives input from our human resources department and from the individuals who manage or report directly to the other executive officers, and he reviews various third party compensation surveys and compensation data provided by the independent compensation consultant to the compensation committee, as described below. While our CEO discusses his recommendations for the other executive officers with the compensation committee, he does not participate in the deliberations and recommendations to our board of directors concerning, or our board of directors determination of, his own compensation. Members of our human resources and legal departments also attend compensation committee meetings.

Below are the highlights of the annual cycle our compensation committee follows in reviewing and making decisions with respect to our executive compensation program.

Role of the Independent Compensation Consultant

The compensation committee engages an independent compensation consultant each year to provide a competitive compensation assessment with respect to the executive officers to assist the compensation committee in making annual compensation decisions. Since 2010, Radford, an Aon Hewitt Company and a subsidiary of Aon plc, has been engaged by the compensation committee each year to provide peer company and industry compensation data and provide the compensation committee with advice regarding executive officers compensation, including base salaries, performance-based bonuses and long-term equity compensation, and similar advice regarding non-executive directors compensation. The compensation committee has also consulted with Radford to update the peer company and industry compensation data on an annual basis and as needed with respect to specific questions that arise and on an advisory basis with respect to addressing other responsibilities arising under the compensation committee charter, including trends and best practices regarding executive compensation and compensation committees, in order to help inform the compensation committee s decisions. Radford reports directly to the compensation committee, which maintains the authority to direct Radford s work and engagement, and advises the compensation committee and our human resources department on projects from time to time. Radford interacts with management to gain access to company information that is required to perform services and to understand the culture and policies of the organization. Radford attends compensation committee meetings, and the compensation committee and Radford meet in executive session with no members of management present, as needed, to address various compensation matters, including deliberations regarding our CEO s compensation.

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In assessing Radford s independence from management in providing executive compensation services to the compensation committee, the compensation committee considered that Radford is only engaged by, takes direction from, and reports to, the compensation committee for such services and, accordingly, only the compensation committee has the right to terminate or replace Radford as its compensation consultant at any time. The compensation committee also analyzed whether the work of Radford as a compensation consultant with respect to executive and director compensation raised any conflict of interest, taking into consideration the following factors:

- the provision of other services to our company by Radford and its affiliates;
- the amount of fees we paid to Radford and its affiliates as a percentage of Radford s total revenue;
- any business or personal relationship of Radford or the individual compensation advisors employed by it with any executive officer of our company;
- any business or personal relationship of the individual compensation advisors with any compensation committee member;
- Radford s policies and procedures that are designed to prevent conflicts of interest; and
- any ordinary shares of our company owned by Radford or the individual compensation advisors employed by it.

The compensation committee has determined, based on its analysis of the above factors, that the work of Radford and the individual compensation advisors employed by Radford as compensation consultants to our company has not created any conflict of interest.

Competitive Assessment of Compensation Peer Companies and Market Data

Because we aim to attract and retain the most highly qualified executive officers in an extremely competitive market, the compensation committee believes that it is important when making its compensation decisions to be informed as to the current practices of comparable public companies with which we compete for top talent. To this end, the compensation committee reviews market data for each executive officer s position, compiled by Radford as described below, including information relating to the mix and levels of compensation for executive officers in the life sciences industry, with a focus on target total direct compensation in line with the compensation committee s holistic approach to executive compensation.

2016 Peer Group. When developing a proposed list of our peer group companies to be used in connection with making compensation decisions for 2016, Radford reexamined our compensation philosophy and peer group criteria and companies to recommend changes to our 2015 peer group company list to reflect our growth, the increase in our revenues and market capitalization and the consolidation in our industry. Radford recommended companies:

- in the life sciences industry (specifically biotechnology and specialty bio/pharma companies) with non-generic commercial products on the market;

with revenue of approximately one-fourth (0.25x) to three times (3x) our then-projected revenue (resulting in a range of generally $300 million to $4 billion in revenue); and

with market values of approximately one-fourth (0.25x) to four times (4x) our market capitalization at the time (resulting in a range of between $2.5 billion to $40 billion in market capitalization).

Based on these criteria, in October 2015, to form our 2016 peer group, Radford recommended, and our compensation committee approved, eliminating from our peer group Cubist Pharmaceuticals, Inc., Pharmacyclics, Inc. and Salix Pharmaceuticals, Ltd. (which were acquired since the 2015 peer group company list was approved) and adding Anacor Pharmaceuticals, Inc., Horizon Pharma plc, Ionis Pharmaceuticals, Inc., Shire plc and The Medicines Company.

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2017 Peer Group. When developing a proposed list of our peer group companies to be used in connection with making compensation decisions for 2017, Radford recommended companies based on the same criteria used for the 2016 peer group, adjusted for then-current revenue and market values. Based on these criteria, in July 2016, Radford recommended and our compensation committee approved eliminating Anacor Pharmaceuticals, Inc. (which was acquired in June 2016) from our peers to form our 2017 peer group.

	Peer Group Inclusion		
Name	**2015**	**2016**	**2017**
Actelion Ltd.			
Alexion Pharmaceuticals, Inc.			
Alkermes plc			
Anacor Pharmaceuticals, Inc.			
BioMarin Pharmaceutical Inc.			
Cubist Pharmaceuticals, Inc.			
Endo International plc			
Horizon Pharma plc			
Incyte Corporation			
Ionis Pharmaceuticals, Inc.			
Mallinckrodt plc			
Medivation, Inc.			
Pharmacyclics, Inc.			
Regeneron Pharmaceuticals, Inc.			
Salix Pharmaceuticals, Ltd.			
Seattle Genetics Inc.			
Shire plc			
The Medicines Company			
United Therapeutics Corporation			
Vertex Pharmaceuticals Incorporated			
Peer Group Metrics ($ in millions)			
Peer Revenue 50th Percentile	1,121	780	1,144
Jazz Revenue	1,006	1,278	1,352
Jazz Revenue Percentile Rank	**47th**	**62nd**	**55th**
Peer Market Cap 50th Percentile	9,062	9,812	8,229
Jazz Market Cap	9,834	9,301	8,683
Jazz Market Cap Percentile Rank	**56th**	**47th**	**51st**

The Jazz percentile ranks shown above reflect trailing 12 months revenue and 30-day average market capitalization for our company and the median of each peer group, measured as of the time Radford prepared its final recommendations regarding each peer group for the compensation committee.

2016 Market Data. In early 2016, Radford completed an assessment of executive compensation based on our 2016 peer group to inform the compensation committee s determinations of executive compensation for 2016. This assessment used market data that was compiled from multiple sources, including: (i) data from the Radford Global Life Sciences Survey with respect to the 2016 peer group companies listed above, or the peer survey data; (ii) the 2016 peer group companies publicly disclosed information, or public peer data; and (iii) data from public biotechnology and pharmaceutical companies in the Radford Global Life Sciences Survey that had revenue from $300 million to $4 billion, or the general survey data, which included survey data with respect to our selected 2016

peer group companies. The components of the market data were based on the availability of sufficient comparative data for an executive officer s position. Generally, peer survey data and public peer data are used in establishing

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market data reference points, and the general survey data is used when there is a lack of peer survey data and public peer data for an executive officer s position. The peer survey data, the general survey data, and the public peer data, collectively referred to in this report as market data, were reviewed by the compensation committee, with the assistance of Radford, and used as one reference point, in addition to other factors, in setting our NEOs compensation.

Use of 2016 Market Data. The compensation committee reviews target total direct compensation, comprising both target total cash compensation and equity compensation, against the market data described above primarily to ensure that our executive compensation program, as a whole, is positioned competitively to attract and retain the highest caliber of executive officers and that the total direct compensation opportunity for the executive officer group is aligned with our corporate objectives and strategic needs. The compensation committee does not have a specific target compensation level for the NEOs and does not otherwise use a formulaic approach to setting pay at a particular positioning within the market data; rather, the compensation committee reviews a range of market data reference points (generally at the 25th, 50th, 60th and 75th percentiles of the market data) with respect to target total direct compensation, target total cash compensation (including both base salary and the target annual performance bonus) and equity compensation (valued based on an approximation of grant date fair value) as one factor before making compensation determinations. The compensation committee believes that over-reliance on benchmarking can result in compensation that is unrelated to the value delivered by our executive officers because compensation benchmarking does not take into account company to company variations among actual roles with similar titles or the specific performance of the executive officers.

Factors Used in Determining Executive Compensation

Our compensation committee sets the compensation of our executive officers at levels that the compensation committee determines to be competitive and appropriate for each NEO, using the compensation committee s professional experience and judgment. The compensation committee s pay decisions are not driven by a particular target level of compensation to market data, and the compensation committee does not otherwise use a formulaic approach to setting executive pay. Instead, the compensation committee believes that executive pay decisions require consideration of multiple relevant factors, which may vary from year to year. The figure below reflects the factors the compensation committee considers in determining and approving the amount, form and mix of pay for our NEOs.

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2016 Advisory Vote on Executive Compensation and Shareholder Engagement

At our 2016 Annual General Meeting, the shareholders approved, on an advisory basis, the compensation of the NEOs, as disclosed in the proxy statement for that meeting pursuant to the compensation disclosure rules of the SEC. The compensation committee reviewed the final vote results for the proposal, and, given the significant level of shareholder support (approximately 93% of total votes cast with respect to the advisory proposal), concluded that our compensation program continues to provide a competitive pay-for-performance package that effectively incentivizes the NEOs and encourages long-term retention. Accordingly, the compensation committee and, with respect to our CEO s compensation, our board of directors, determined not to make any significant changes to our executive compensation policies or decisions as a result of the vote. Our compensation committee and, with respect to our CEO s compensation, our board of directors, will continue to consider the outcome of our say-on-pay votes and our shareholders views when making future compensation decisions for the NEOs.

We also intend to continue to engage with our shareholders on topics of particular concern to shareholders, including executive compensation matters. Shareholder feedback, including through direct discussions and prior shareholder votes, is reported to our compensation committee throughout the year. The graphic below describes our shareholder outreach and engagement and our related discussions and actions with respect to our 2016 Annual General Meeting.

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Key Components and Design of the Executive Compensation Program

Total Direct Compensation

Our compensation program focuses on target total direct compensation, which consists of base salary, target bonus opportunity (which, together with base salary, we refer to as target total cash compensation), and long-term equity awards (valued based on an approximation of grant date fair value). We also offer our executive officers severance benefits upon certain types of involuntary terminations in connection with a change in control. The table below captioned *Components of Total Direct Compensation* provides an explanation of key features of each of the primary components of our executive compensation program and why we provide the particular compensation component.

The compensation committee takes a holistic approach to compensation and seeks to ensure that the aggregate level of pay across all of the pay elements is meeting the company s desired objectives for each executive officer. The compensation committee does not have any formal policies for allocating compensation among salary, performance bonus opportunity and equity grants. Instead, the compensation committee uses its subjective judgment to establish a total compensation program for each NEO that is a mix of current, short-term and long-term incentive compensation, and cash and non-cash compensation, which it believes appropriate to achieve the goals of our executive compensation program and our corporate goals.

Because we believe it is important to our success to pursue long-term corporate objectives, to avoid excessive risk taking, and to preserve our cash resources, a significant portion of the NEOs total direct compensation is comprised of at-risk compensation, consisting of performance-based bonus opportunities and long-term equity awards, which align the executive officers incentives with the interests of our shareholders. This allocation between at-risk and fixed compensation is consistent with our pay-for-performance philosophy.

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Components of Total Direct Compensation

Component	Key Features	Purpose
Base Salary	Fixed cash compensation No amount is guaranteed Amounts are reviewed and determined annually, and are generally effective by March 1 each year	Provides fixed level of compensation that is competitive within our industry and geographic areas
Performance Bonus Award	Cash compensation under the performance bonus plan, which is at-risk because the realized value is dependent upon achievement of performance objectives	Provides financial incentives for our executives officers to achieve key corporate objectives that drive our business
	Target bonuses are reviewed and determined annually and expressed as a percentage of base salary earned Bonus opportunity is directly dependent on achievement of specific corporate objectives derived from our annual corporate goals Actual bonuses paid shortly after the end of each year, based on the extent corporate goals are attained as determined by the compensation committee, and for executive officers other than our CEO, their individual contributions toward such achievements	Rewards our executive officers for attaining corporate objectives and, for executive officers other than our CEO, their individual contributions toward such achievements
Long-Term	Equity compensation generally in the form of stock options and RSUs granted under the	Fosters ownership culture

Incentive Compensation	2011 Equity Incentive Plan, which is at-risk because the realized value is dependent upon our share price	Links compensation to long-term success
	Awards are discretionary and reviewed and generally granted annually, early in the year, at time of hire or promotion or in other rare circumstances such as recognition of outstanding performance	Stock options are a key aspect of our pay-for-performance culture, by providing a return to our executive officers only if the market price of our ordinary shares appreciates over the stock option term
	Awards to executive officers are granted shortly after annual or quarterly financial results released to public	RSU awards cover fewer shares than the stock options that deliver a similar value to an executive officer, and as a result, RSU awards enable the company to minimize dilution to shareholders while reinforcing the importance of shareholder value creation
	Stock options and RSUs generally vest over a 4-year period subject to executive officer s continued service with us; stock option exercise price is set equal to fair market value on date of grant (i.e., closing price on NASDAQ Global Select Market)	RSU awards provide a return based on the market price of our ordinary shares; if our share price declines, RSU awards correspondingly decline in value but still maintain value, and therefore, a mix of RSU awards and stock options aligns executive officers interests with those of shareholders by minimizing incentive for short-term risk taking at the expense of realizing long-term value
	We have executive share ownership guidelines to further support our ownership culture and align the interests of executive officers and shareholders	

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Other Benefits. Executive officers based in the U.S. are eligible to participate in all of our benefit plans, such as the 401(k) Plan (see the section below *Description of Compensation Arrangements 401(k) Plan*), our medical, dental, vision, short-term disability, long-term disability and group life insurance plans and our Employee Stock Purchase Plan, or ESPP, in each case generally on the same basis as other employees. We also have a section 125 flexible benefits healthcare plan and a flexible benefits childcare plan under which employees can set aside pre-tax funds to pay for qualified healthcare expenses and qualified childcare expenses not reimbursed by insurance. We do not currently offer pension or other retirement benefits in the U.S., but do offer pension or other retirement benefits in certain other countries.

Severance Benefits upon Change in Control. Executive officers based in the U.S. are also eligible to participate in our Amended and Restated Executive Change in Control and Severance Benefit Plan, or the change in control plan, which is described below under the headings *Additional Compensation Information Change in Control Plan* and *Potential Payments upon Termination or Change in Control Amended and Restated Executive Change in Control and Severance Benefit Plan*. The change in control plan provides certain severance benefits to participants, in connection with specified involuntary termination events, including termination without cause and constructive termination, following a change in control. Certain executive officers who are not employed by our U.S. affiliates receive comparable change in control benefits pursuant to their employment agreements. The compensation committee believes these severance benefits are important from a retention perspective to provide some level of protection to our executives who might be terminated following a change in control and that the amounts are reasonable and maintain the competitiveness of our executive compensation and retention program. The compensation committee believes this structure serves to mitigate the distraction and loss of key executive officers that may occur in connection with rumored or actual fundamental corporate changes. Such payments protect the interests of our shareholders by enhancing executive focus during rumored or actual change in control activity, retaining executives despite the uncertainty that generally exists while a transaction is under consideration and encouraging the executives responsible for negotiating potential transactions to do so with independence and objectivity. We do not provide any tax gross up payments on severance benefits.

Clawback Requirement. As a public company, if we are required to restate our financial results due to our material noncompliance with any financial reporting requirements under the federal securities laws as a result of misconduct, our CEO and CFO may be legally required to reimburse our company for any bonus or other incentive-based or equity-based compensation they receive in accordance with the provisions of section 304 of the Sarbanes-Oxley Act of 2002.

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2016 Performance Bonus Program

The corporate objectives and relative weightings established by the board of directors for the 2016 performance bonus program that were communicated to the NEOs in early 2016 are described in the chart below. Product development objectives were given higher weight than in prior years, reflecting our increased focus on advancing our product candidate pipeline. The total revenue objective described below included stretch goals with the opportunity to earn up to an additional 15% bonus program funding.

Following the end of the year, after adding together the resulting bonus pool funding percentages for the quantitative and qualitative objectives based on their relative weightings of 75% and 25%, respectively, the compensation committee approved an overall bonus pool funding percentage of 99.7% of the target bonus pool for the 2016 plan year, as further described below.

The compensation committee did not set specific objectives for individual executive officers. Each executive officer is responsible for contributing to the corporate objectives, individually and as part of the leadership team, with each objective deemed to be important in determining the level of the company s performance during the year. In approving individual bonus awards, the compensation committee considers the individual contribution towards the company s achievement of the corporate objectives by each executive officer (other than our CEO). The actual bonus payments approved for each of the NEOs for 2016 are described below under *2016 Compensation Decisions for Our Named Executive Officers.*

Quantitative Objectives

Each of the three main quantitative objectives for 2016, with a total relative overall weighting of 75%, is described in the table and accompanying footnotes below, including each objective s weighting, actual results and performance multipliers, as well as the bonus pool funding percentage resulting from the level of achievement of the quantitative objectives.

The compensation committee defined an algorithm with respect to each main quantitative objective (as well as the total revenue stretch goals discussed below) for calculating the bonus pool funding attributable to the extent of achievement for each such objective. With respect to the total revenue objective, the compensation committee approved three related additional, or stretch, goals, each with its own individual weighting. The compensation committee set specific threshold and maximum levels of achievement for the total revenue objective and the related stretch goals, as well as for the adjusted net income objective, which are described in the footnotes to the table below. For the main quantitative product development objective, the compensation committee did not set a threshold performance level; rather, an overall achievement of between 0% and 200%, measured against certain unweighted criteria as described in more detail below, was determined by the compensation committee and used to calculate the applicable bonus pool funding percentage attributable to such objective.

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Quantitative Objectives	Weighting	Actual Results	Multiplier	Bonus Pool Funding[3]
1. **Total Revenue Objective**: Achieve total revenue in 2016 of $1,522 million (at budgeted foreign currency exchange rates)[1]	30%	Below target: Total revenue of $1,488 million, as reported	89%[2]	26.8%
Stretch goal: Achieve certain Xyrem year-over-year bottle volume growth[4]	7%	Below threshold	N/A	0%
Stretch goal: Exceed budgeted Defitelio U.S. sales volume[5]	4%	Below threshold	N/A	0%
Stretch goal: Exceed budgeted ex-U.S. Erwinaze and Defitelio sales[6]	4%	Below threshold	N/A	0%
2. **Product Development Objective**: Strong execution of late-stage development programs and ensure ongoing development of our drug portfolio[7]	25%	Achieved at 100% level[7]	100%	25.0%
3. **Adjusted Net Income Objective**: Achieve non-GAAP adjusted net income* in 2016 of $702 million[1]	20%	Below target: non-GAAP adjusted net income* of $627.2 million, as reported	82%[8]	16.4%
Total				68.2%

(1) If the specified threshold annual performance level was met (90% of target for the total revenue objective and the adjusted net income objective), then a pre-established scaled performance multiplier (ranging from 50% to 150% for the total revenue objective and 50% to 200% for the adjusted net income objective) would be used to calculate the applicable bonus pool funding percentage attributable to such quantitative objective. The performance multiplier would be zero if performance was below the threshold level, 50% if performance was at the threshold level, and then scaled for performance between 51% and the applicable maximum level. The performance multiplier was capped for performance above the specified maximum performance level (110% of target for the total revenue objective and 120% of target for the adjusted net income objective).

(2) To calculate the performance multiplier, the reported revenue of $1,488 million was increased by <$1 million to adjust for the impact of foreign currency exchange rates that were less favorable than the budgeted rates.

(3) The percentages in this column represent, for each quantitative corporate objective, the weight of the quantitative objective multiplied by the performance multiplier that corresponds to the actual achievement of such quantitative objective.

(4) With respect to the Xyrem bottle growth stretch goal, 9% annual bottle volume growth would have resulted in 3.5% added to the total bonus pool funding percentage, and 10% annual bottle volume growth would have resulted in another 3.5% added to the total bonus pool funding percentage. Actual achievement for 2016 was below the threshold level of achievement at 5.7% bottle volume growth.

(5) With respect to the Defitelio U.S. sales volume stretch goal, the performance levels were set at achievement above the budgeted U.S. sales volume. Exceeding the sales volume budget by 10% would have resulted in 2% added to the total bonus pool funding percentage, and exceeding the sales volume budget by 20% would have resulted in a another 2% added to the total bonus pool funding percentage. Actual Defitelio U.S. sales volume for 2016 met budget but did not exceed budget by 10% or more.

* *Non-GAAP adjusted net income is a non-GAAP financial measure that both (i) excludes certain items from our GAAP reported net income and (ii) includes certain tax-related adjustments. For 2016, the items excluded from our GAAP reported net income to arrive at non-GAAP adjusted net income consisted of intangible asset amortization, share-based compensation expense, upfront and milestone payments, transaction and integration related costs, expenses related to certain legal proceedings and restructuring, non-cash interest expense, and loss on extinguishment and modification of debt. In addition, as set forth in footnote (8) to this table, solely for purposes of calculating the performance multiplier for 2016, the impact of the Celator Acquisition was excluded completely and non-GAAP adjusted net income was determined using the same calculation as was used to establish the performance objective, which did not give effect to the modification of the company s calculation of its non-GAAP income tax provision for purposes of reporting its non-GAAP adjusted net income in 2016.*

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(6) With respect to the ex-U.S. Erwinaze and Defitelio sales stretch goal, the performance levels were set at achievement above budgeted sales. Achieving $130 million in ex-U.S. Erwinaze and Defitelio net sales would have resulted in 2% added to the total bonus pool funding percentage, and achieving $136 million in ex-U.S. Erwinaze and Defitelio net sales would have resulted in another 2% added to the total bonus pool funding percentage, in each case, based on budgeted foreign currency exchange rates. Actual achievement for 2016 ex-U.S. net Erwinaze and Defitelio sales of $111 million was below the threshold level of achievement. To calculate the level of achievement, actual sales of $111 million were increased by <$1 million to adjust for the impact of foreign currency exchange rates that were less favorable than the budgeted rates.

(7) With respect to the product development objective, the compensation committee determined that the actual achievement by the company was 100%, resulting in a performance multiplier of 100%, and therefore, a 25% bonus pool funding percentage, based on achievement with respect to the unweighted performance criteria as described below:

Performance Category	Unweighted Performance Criteria and Results
JZP-110 Clinical Activities	The performance criteria consisted of the completion of enrollment and producing top-line results from three Phase 3 clinical studies for JZP-110 by the end of 2016. Enrollment for all Phase 3 studies of JZP-110 was completed on schedule; however, top-line results were not available until the first half of 2017 and therefore, the performance criteria were not fully met.
Research and Development Activities for Our Existing Products	This performance criteria in this category required us to advance certain research and development activities related to line extensions and/or new indications for our sleep and hematology/oncology products, with the specified performance criteria consisting of: (i) progress in our JZP-507 development program; (ii) initiation of a Phase 3 study for a low-sodium oxybate formulation; (iii) progress in our oxybate once-nightly formulation program; (iv) completion of specified enrollment in our Phase 3 clinical trial of Xyrem to assess the safety and efficacy of Xyrem in pediatric narcolepsy patients with cataplexy; (v) selection of candidates in the hematology/oncology area for investigational new drug (IND)-enabling studies; and (vi) achievement of asset investment management approval for a potential new indication for defibrotide, in each case, by or before the end of 2016. We achieved each of these performance criteria.
Approval of the Defibrotide NDA and Initiation of VOD study	The performance criteria consisted of obtaining approval of our defibrotide NDA by FDA in the first quarter of 2016, and enrolling the first patient in our study of defibrotide for the prevention of VOD, in the third quarter of 2016. The defibrotide NDA was approved on schedule in March 2016. With respect to the Phase 3 clinical study for the prevention of VOD, we activated clinical sites but were not able to enroll our first patient until the first quarter of 2017.

In determining that the actual achievement by the company was 100% for the product development objective, the compensation committee employed a holistic analysis that took into account the compensation committee s assessment of the degree to which the product development objective criteria were met as a whole against the backdrop of competing development priorities. In this regard, the compensation committee took into account the fact that the addition of Vyxeos through the Celator Acquisition in the third quarter of 2016 and the initiation of the rolling NDA submission for Vyxeos in the third quarter of 2016 required dedication of significant development resources that made achieving the established performance criteria more difficult. In addition, certain of the 2016

development criteria were aggressive and set at challenging levels, including the approval of our defibrotide NDA by the FDA in the first quarter of 2016 and producing top-line results from our three Phase 3 clinical studies for JZP-110 by the end of 2016 (particularly in light of the enrollment rates in those studies at the time the performance criteria were established). After considering the extent to which the performance criteria had been met as a whole against the backdrop of competing priorities, and after factoring in the difficulty of achievement of the performance criteria that were met and that were not met, the

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compensation committee determined that on balance, the achievement by the company was at the 100% level.

(8) For purposes of calculating the performance multiplier, non-GAAP adjusted net income was determined using the same calculation as was used to establish the performance objective, which did not give effect to the modification of the company s calculation of its non-GAAP income tax provision for purposes of reporting its non-GAAP adjusted net income, which modification commenced in the second quarter of 2016. In addition, for purposes of calculating the performance multiplier, the impact of the Celator Acquisition was excluded completely, as the Celator Acquisition was completed in July 2016, after the time that the performance objective was established.

Qualitative Objectives

The qualitative corporate objectives approved by the board of directors fell into two categories: (1) progress on corporate development activities, with a relative weighting of 15%, and (2) a demonstrated commitment to and progress on certain operational, efficiency and organizational goals, with a relative weighting of 10%. Achievement of the qualitative objectives is inherently less objectively measurable than with respect to the quantitative objectives.

Corporate Development Objective. The objective relating to progress on corporate development activities consisted of executing on our corporate strategy with an emphasis on deal readiness and a view to one or more corporate development transactions in 2016 that would meaningfully diversify our business and grow revenues over time. The multiplier applied to the corporate development objective ranged from 0% to 200%, based on the compensation committee s determination of the extent to which the corporate development objective was achieved during the year. In considering the company s corporate development accomplishments in 2016, the compensation committee noted that that we had completed several transactions in 2016 that we believe will meaningfully diversity our business and grow revenues over time. In this regard, the compensation committee weighed heavily our critical and strategic acquisition of Celator, which broadened our hematology/oncology portfolio with the acquisition of worldwide development and commercialization rights to Vyxeos and the CombiPlex technology platform, and also considered our success in executing our agreements with Arrivo and Pfenex, our overall deal readiness and our robust and thoughtful corporate development process that led to the evaluation of several other opportunities during the year. In large part due to the criticality of the Celator Acquisition as well as our success in executing on transactions such as our agreements with Arrivo and Pfenex that we believe have the potential to diversify and add future revenue-generating products to our portfolio, the compensation committee determined that as whole, our overall achievement resulted in a multiplier of 150% and, therefore, a 22.5% bonus pool funding percentage for the 2016 corporate development objective.

Operational, Efficiency and Organizational Objective. With respect to the operational, efficiency and organizational objective, the compensation committee established three sub goals. Because the sub goals are not objectively measurable, they were not assigned individual weightings. The multiplier applied to the organizational corporate objective ranged from 0% to 200%, based on the compensation committee s determination of the extent to which the aggregate organizational corporate objective, including sub goals, were achieved, as whole, during the year. The organizational corporate objective sub goals were:

strengthening operations to ensure product continuity and optimize patient access and safety across all products;

creating and improving on meaningful operating efficiencies across the company; and

continuing progress towards strong performance management and accountability with a company commitment to employee development.

In evaluating the organizational corporate objective, the compensation committee determined the following accomplishments to be relevant: (i) successful and timely physician and patient enrollment in the Xyrem risk evaluation and mitigation strategy program; (ii) completion of construction (on time and according to budget), and receipt of regulatory approval, of our Athlone manufacturing facility; (iii) demonstrated, measurable progress toward

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employee development and organizational and operational improvements; and (iv) significant efforts to mitigate product supply and other operational risks. The compensation committee also balanced these accomplishments against certain challenges experienced in 2016, including supply interruptions of Erwinaze in the U.S. and other countries in the third and fourth quarters of 2016. After taking into consideration both our accomplishments and challenges with respect to these sub goals, the compensation committee determined that as whole, our overall achievement resulted in a multiplier of 90% and therefore, a 9% bonus pool funding percentage for the 2016 operational, efficiency and organizational objective.

2016 Compensation Decisions for Our Named Executive Officers

General Approach

In making compensation decisions for 2016, the compensation committee considered the factors discussed in *Factors Used in Determining Executive Compensation* above and the compensation committee s specific compensation objectives for 2016. Our compensation committee did not use a formula or assign a particular weight to any one factor in determining each NEO s target total direct compensation. Rather, our compensation committee s determination of the target total direct compensation, mix of cash and equity and fixed and at-risk pay opportunities was a subjective, individualized decision for each NEO. The compensation committee reviewed and considered each element of pay in the context of the overall target total direct compensation for each NEO. When the compensation committee made changes to one element of pay, those changes were made in the context of the levels of the other elements of pay, and the resulting target total direct compensation for each NEO. As a result, the 2016 pay decisions for each NEO are presented holistically in this section.

The compensation committee also reviewed the target total cash compensation (base salary plus target performance bonus), target equity award grants and target total direct compensation for similarly-situated executives of our peer companies. However, as described above, the compensation committee believes that over-reliance on benchmarking can result in compensation that is unrelated to the value delivered by our executive officers because compensation benchmarking does not take into account company by company variations among actual roles with similar titles or the specific performance of the executive officers.

Summary of 2016 Compensation Decisions

Target Total Cash Compensation. The compensation committee increased each NEO s base salary for 2016, and the new base salary rates were effective February 20, 2016. There were no changes to the 2016 target performance bonuses (expressed as a percentage of base salary) for any of the NEOs because the compensation committee determined the current percentages remained at appropriate levels and were consistent with our philosophy that the target percentages should generally vary based on each NEO s job level in order to promote internal equity for positions of similar scope and impact and to reinforce teamwork across the executive group. Mr. Cozadd s annual target performance bonus was set at a higher percentage than the percentages for other NEOs to reflect that he has ultimate responsibility for our company s performance. Mr. Cozadd s target bonus percentage has remained the same since 2012.

Target Equity Compensation and Impact on Target Total Direct Compensation. In determining the appropriate size of 2016 equity award grants, the compensation committee (and the board of directors, with respect to Mr. Cozadd) initially aimed to deliver equity awards to each executive officer of a similar grant date value to those delivered to each executive officer in 2015 (with the exception of Dr. Smith, whose 2015 award was made in connection with her commencement of employment and therefore included an inducement premium). The compensation committee and board of directors understood the resulting grants would generally fall at a lower

positioning within the market data for each NEO than in 2015 (with the exception of Dr. Smith because her prior grants were in connection with commencement of employment), but the compensation committee and board of directors were mindful that our share price had fallen over the previous year and believed those amounts would be appropriate to serve the retention and incentive purposes of the awards. As a result of the company s 90-day average

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share price used to calculate the size of the awards, each NEO s resulting equity award grant date value and target total direct compensation for 2016 were lower than in 2015, as shown in the tables below.

Form of Equity Awards. Approximately 50% of the potential value of each NEO s equity award was delivered in the form of stock options, and 50% of the potential value was delivered in the form of RSUs, in each case based on an approximation of grant date fair value, using an approximately 2.5 to 1 ratio of stock option grants to RSUs, in order to mitigate dilution and to reflect the increased value of receiving shares at full value without the payment of an exercise price. The 50/50 value split was consistent with our historical practices and took into consideration peer practices and market data. The actual share amounts granted to each executive officer were determined by applying the company s 90-day average share price (as of December 31, 2015) to the grant date fair value of the award, which the compensation committee and, in the case of Mr. Cozadd, the board of directors, intended to deliver (dividing such value by the average share price, in the case of RSUs and applying a Black-Scholes option pricing model calculation using the average share price, in the case of stock options). A 90-day average share price was used, rather than a single day share price, in order to provide a more stabilized share value less susceptible to possible swings in the market. The exercise price of each stock option is equal to our closing share price on NASDAQ Global Select Market on the date of grant. The shares subject to the option awards vest over four years, with 25% vesting on the one-year anniversary of the grant date and the remainder vesting in equal monthly installments thereafter over the remaining 36 months. The RSUs vest over four years in equal annual installments.

On an annual basis, the compensation committee reviews market trends, including market peer use of performance-based vesting for equity awards, which are often favored by proxy advisory firms and certain institutional investors. For 2016, the compensation committee determined that equity awards vesting over time continued to be the most appropriate incentive structure for our executive officers. Our time-based vesting schedules deliver retention incentives for the company over the long-term and, unlike awards that vest based on pre-determined operational or market goals, do not create incentives for inappropriate short-term risk taking at the expense of realizing long-term value or the potential incentive for unethical conduct. In addition, we deliver a meaningful portion of compensation in the form of annual incentive compensation that is directly tied to, and incentivizes our executives to work towards, achievement of our key corporate goals. The key purposes served by time-vesting options and RSUs for 2016 are further discussed above in the chart captioned *Components of Total Direct Compensation.*

Individual NEO Compensation Decisions

Below are summaries, for each NEO individually, of the compensation committee s decisions about 2016 target total direct compensation and the changes from each NEO s 2015 target total direct compensation. As described above, when making the 2016 compensation decisions, the compensation committee focused primarily on the target total direct compensation for each NEO while considering the factors set forth in the section titled *Factors Used in Determining Executive Compensation* and the compensation committee s specific compensation objectives for 2016. The footnotes to the tables also include the actual performance bonus paid to each of the NEOs for 2016 and how that actual bonus compared to each NEO s target bonus.

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Bruce C. Cozadd, Chairman and CEO

	2015 Pay ($)	2016 Pay ($)	Change (%)	2016 Pay Relative to Market Data (percentile) [1]
Target Total Cash Compensation	**1,744,616**	**1,842,308**	**5.6**	**<50th**
Base Salary (2)	875,000	925,000		
Target Performance Bonus (3)	869,616	917,308		
Target Equity Compensation (4)	**9,052,724**	**6,933,442**	**(23.4)**	**60th**
Options	4,182,445	3,109,285		
RSUs	4,870,279	3,824,157		
Target Total Direct Compensation (5)	**10,797,340**	**8,775,750**	**(18.7)**	**60th**

(1) Reflects where the 2016 target compensation fell within the market data at the time reviewed and approved by the compensation committee. For equity compensation, the percentile corresponds to the target equity compensation value approved by the compensation committee; the actual target equity compensation delivered (as presented in the chart) reflects the fair value of the awards as of the grant date, in accordance with FASB Accounting Standards Codification Topic 718, *Compensation Stock Compensation*, or ASC 718, which was slightly lower than the target equity compensation value approved by the compensation committee as a result of the compensation committee s methodology of using a 90-day share price average to calculate the shares to be delivered, as described above.

(2) Represents annual base salary rate for the applicable year.

(3) Target amounts are as reported in the Grants of Plan-Based Awards Table for 2015 and 2016, respectively, and reflect the target percentage of base salary earned for each year. The 2016 amount reflects a target performance bonus of 100% of base salary earned, unchanged from the target performance bonus percentage for 2015. The actual 2016 performance bonus paid was $914,600, reflecting 99.7% of the target performance bonus, based entirely on the overall 2016 bonus pool funding percentage of 99.7%. The compensation committee (with approval from the board of directors) determined that the overall 2016 bonus pool funding percentage of 99.7% was applicable to Mr. Cozadd, because, as CEO, Mr. Cozadd is responsible for the company meeting all of its objectives.

(4) Target equity compensation dollar amounts represent the grant date fair value of each stock option and RSU award, as applicable, and have been calculated in accordance with ASC 718 as reported in the Grants of Plan-Based Awards Table for 2015 and 2016, respectively. See the Grants of Plan-Based Awards Table for the number of shares subject to each award.

(5) The compensation committee and board of directors designed Mr. Cozadd s target total direct compensation to be competitive compared to the market data, appropriate from an internal equity perspective and more heavily weighted towards equity compensation, in line with our pay-for-performance philosophy. Consistent with the approach for 2016 equity award grants described above, the compensation committee and board of directors generally aimed to deliver equity awards to Mr. Cozadd of a similar grant date value to those delivered to him in 2015. Even though the compensation committee and board of directors understood the resulting grants would generally fall at a lower positioning within the market data than in 2015, the compensation committee and board of directors were mindful that our share price had fallen over the previous year and believed that a similar aggregate equity amount, taken together with Mr. Cozadd s target total cash compensation (resulting in his target total direct compensation approximating the 60th percentile of the market data) was appropriate. As described above, Mr. Cozadd s target bonus percentage remained the same as in 2015, and while the increase in his base salary resulted in a higher target performance bonus opportunity, Mr. Cozadd s target total cash compensation for 2016 was still below the median of the market data.

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Matthew P. Young, Executive Vice President and CFO

	2015 Pay ($)	2016 Pay ($)	Change (%)	2016 Pay Relative to Market Data (percentile) [1]
Target Total Cash Compensation	**731,173**	**802,192**	**9.7**	**<60th**
Base Salary (2)	475,000	520,000		
Target Performance Bonus (3)	256,173	282,192		
Target Equity Compensation (4)	**2,498,360**	**2,012,935**	**(19.4)**	**<75th**
Options	1,153,778	902,696		
RSUs	1,344,582	1,110,239		
Target Total Direct Compensation (5)	**3,229,533**	**2,815,127**	**(12.8)**	**<75th**

(1) Reflects where the 2016 target compensation fell within the market data at the time reviewed and approved by the compensation committee. For equity compensation, the percentile corresponds to the target equity compensation value approved by the compensation committee; the actual target equity compensation delivered (as presented in the chart) reflects the fair value of the awards as of the grant date, in accordance with ASC 718, which was slightly lower than the target equity compensation value approved by the compensation committee as a result of the compensation committee s methodology of using a 90-day share price average to calculate the shares to be delivered.

(2) Represents annual base salary rate for the applicable year.

(3) Target amounts are as reported in the Grants of Plan-Based Awards Table for 2015 and 2016, respectively, and reflect the target percentage of base salary earned for each year. The 2016 amount reflects a target performance bonus of 55% of base salary earned, unchanged from the target performance bonus percentage for 2015. The actual 2016 performance bonus paid was $300,000, reflecting 106.3% of target performance bonus, based on the overall 2016 bonus pool funding percentage of 99.7% and Mr. Young s significant individual contributions to such achievement. Specifically, the compensation committee considered Mr. Young s overall leadership of our finance organization and his performance with respect to execution of corporate development priorities in 2016, particularly with respect to the Celator Acquisition.