CELGENE CORP /DE/
Form 10-K/A
March 01, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K/A
(Amendment No. 1)
(Mark one)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
or
o 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 001-34912
CELGENE CORPORATION
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	22-2711928 (I.R.S. Employer Identification No.)
86 Morris Avenue Summit, New Jersey (Address of principal executive offices)	07901 (Zip Code)

(908) 673-9000
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value $.01 per share	NASDAQ Global Select Market
Contingent Value Rights	NASDAQ Global Market

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

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 x	Accelerated filer o	Non-accelerated filer o	Smaller reporting company o	Emerging growth company o

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. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule12b-2 of the Act). Yes o No x

The aggregate market value of voting stock held by non-affiliates of the registrant on June 29, 2018, the last business day of the registrant's most recently completed second quarter, was $55,804,979,945 based on the last reported sale price of the registrant's Common Stock on the NASDAQ Global Select Market on that date.

There were 702,355,600 shares of Common Stock outstanding as of February 27, 2019.

Documents Incorporated by Reference

None.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (this “Amendment No. 1”) amends the Annual Report on Form 10-K for the fiscal year ended December 31, 2018 (the “2018 Annual Report”) of Celgene Corporation filed with the Securities and Exchange Commission (the “SEC”) on February 26, 2019. In this Amendment No. 1, unless the context indicates otherwise, the designations “Celgene,” the “Company,” “we,” “us” or “our” refer to Celgene Corporation and its wholly-owned subsidiaries.

This Amendment No. 1 is being filed solely to include the information required by Item 10 - “Directors, Executive Officers and Corporate Governance”, Item 11 - “Executive Compensation”, Item 12 - “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters”, Item 13 - “Certain Relationships and Related Transactions, and Director Independence” and Item 14 - “Principal Accountant Fees and Services” of Part III of Form 10-K. The reference on the cover page of the 2018 Annual Report to the incorporation by reference of portions of our definitive proxy statement into Part III of the 2018 Annual Report is hereby deleted. Items 10, 11, 12, 13 and 14 of Part III of the 2018 Annual Report are amended and restated in their entirety as set forth in this Amendment No. 1. In addition, pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), we are including with this Amendment No. 1 certain currently dated certifications. Because no financial statements have been included in this Amendment No. 1 and this Amendment No. 1 does not contain or amend any disclosure with respect to Items 307 and 308 of Regulation S-K, paragraphs 3, 4 and 5 of the certifications have been omitted. We are not including the certifications under Section 906 of the Sarbanes-Oxley Act of 2002 as no financial statements are being filed with this Amendment No. 1.

Except as described above, no other amendments are being made to the 2018 Annual Report. This Amendment No. 1 does not reflect events occurring after the February 26, 2019 filing of the 2018 Annual Report or modify or update the disclosure contained in the 2018 Annual Report in any way other than as required to reflect the amendments discussed above and reflected below. Accordingly, this Amendment No. 1 should be read in conjunction with the 2018 Annual Report and our other filings with the SEC.

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ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE
Board of Directors

Listed below are our current directors with their biographies. The information concerning the directors has been furnished by them to us. In addition, we have summarized for each director the reasons why such director has been chosen to serve on our Board of Directors.

Each director is elected to hold office (subject to our By-laws) until the next annual meeting and until his or her successor has been elected and qualified.

Name	Age(1)	Position
Mark J. Alles	59	Chairman of the Board and Chief Executive Officer
Richard W. Barker, D.Phil., OBE	70	Director
Hans E. Bishop	54	Director
Michael W. Bonney	60	Director
Michael D. Casey	73	Director
Carrie S. Cox	61	Director
Michael A. Friedman, M.D.	75	Director
Julia A. Haller, M.D.	64	Director
Patricia A. Hemingway Hall	66	Director
James J. Loughlin	76	Director
Ernest Mario, Ph.D.	80	Director
John H. Weiland	63	Director

(1) As of March 1, 2019.

Mark J. Alles — Chairman and Chief Executive Officer, Celgene Corporation

Mark J. Alles was appointed Chief Executive Officer as of March 1, 2016, was elected to our Board of Directors in February 2016 and was elevated to Chairman of the Board in February 2018. Mr. Alles was our President and Chief Operating Officer from August 2014 through February 2016. Prior to that, Mr. Alles served as Executive Vice President and Global Head of Hematology and Oncology from December 2012 until July 2014, and was also Celgene's Chief Commercial Officer. Mr. Alles joined Celgene in April 2004 and was Vice President, Global Hematology Marketing until March 2009 when he was promoted to President of the Americas Region. Responsibility for commercial operations in Japan and the Asia Pacific Region was added in July 2011. Before joining Celgene, he was Vice President of the U.S. Oncology business unit at Aventis Pharmaceuticals and served in other senior commercial management roles at Aventis (Rhône-Poulenc Rorer) from 1993-2004. After earning his B.S. degree from Lock Haven University of Pennsylvania and serving as a Captain in the United States Marine Corps, Mr. Alles began his 30-year career in the pharmaceutical industry at Bayer and worked at Centocor before its acquisition by Johnson & Johnson. He is a member of the Board of Directors of the Pharmaceutical Manufacturers of America (PhRMA).

Specific Qualifications, Skills and Experience

- extensive knowledge of Celgene's business gained from his operational, commercial, and senior management positions
- substantial prior business experiences at other leading biopharmaceutical companies
- involvement in setting our long-term growth strategy
- significant contributions to our superior operating performance
- leadership skills developed while serving as an officer in the United States military

Richard W. Barker, D.Phil., OBE — Chairman of the Health Innovation Network of South London

Richard W. Barker, D.Phil., OBE has served as one of our Directors and a member of the Audit Committee of our Board of Directors since January 2012. Dr. Barker was formerly Director General of the Association of the British Pharmaceutical Industry (ABPI), a pharmaceutical industry trade association in the United Kingdom, from 2004 to 2011, and served on the Board and Executive Committee of the European Federation of Pharmaceutical Industries and Associations (EFPIA) and as a Council Member of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA). Dr. Barker is currently Chairman of the Health Innovation Network of South London, UK and Chairman of International Health Partners, a UK charity providing donated medicines to crisis situations, and serves as a Director of Image Analysis Group, a company applying advanced algorithmic analysis to medical images. Dr. Barker received a B.A. from the University of Oxford.

Specific Qualifications, Skills and Experience

- experienced healthcare sector leader and strategist
- distinguished career with more than 20 years' experience in the healthcare industry
- senior leadership roles in the United States, the United Kingdom and elsewhere internationally
- experience in the pharmaceutical, biotechnology and medical informatics sectors
- broad perspective on policies and issues facing both healthcare systems and the pharmaceutical industry

Hans E. Bishop — Co-Founder and Executive Chairman of Sana Biotechnology, Inc.

Hans E. Bishop was elected to our Board of Directors in April 2018. Mr. Bishop has been the co-Founder and Executive Chairman of Sana Biotechnology, Inc., a private biotechnology company, since January 2019. Mr. Bishop was a co-founder and served as President and Chief Executive Officer of Juno Therapeutics, Inc. from 2013 until April 2018, and was a member of its Board of Directors from 2013 until Juno's acquisition by the Company in March 2018. Mr. Bishop previously served as a member of the Board of Directors of Avanir Pharmaceutics, Inc., a publicly-traded biopharmaceutical company, from May 2012 to January 2015, when Avanir was sold to Otsuka Pharmaceuticals Co., Ltd. He worked with Warburg Pincus as an Executive in Residence from February 2012 until July 2013. Prior to this, Mr. Bishop served as Executive Vice President and Chief Operating Officer at Dendreon Corporation, a publicly-traded biopharmaceutical company, from January 2010 to September 2011. Mr. Bishop has also served as the President of the Specialty Medicine business at Bayer Healthcare Pharmaceuticals Inc. from December 2006 to January 2010, where he was responsible for a diverse portfolio of neurology, oncology and hematology products. Mr. Bishop was employed by Chiron Corporation, a global biotechnology company, from January 2004 to August 2006, with commercial responsibilities that included service as its Senior Vice President of Global Commercial Operations until its sale to Novartis Corporation. Mr. Bishop serves as a member of the Board of Directors of Agilent Technologies, Inc. (A), where he is a member of the Compensation and the Nominating/Corporate Governance committees, Lyell Immunopharma, Inc. (a privately-held healthcare company), and Grail Inc. (a privately-held healthcare company). Mr. Bishop received a B.Sc. in Chemistry from Brunel University in London in 1987.

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Specific Qualifications, Skills and Experience
- over 30 years' experience in the healthcare industry
- significant operational and executive leadership experience
- membership on public company boards
- experience in strategic, financial and operations management, risk oversight, regulatory and public policy matters, and business strategy affecting the healthcare industry

Michael W. Bonney — Executive Chair of the Board of Kaleido Biosciences, Inc.

Michael W. Bonney was elected to our Board of Directors in April 2015. Mr. Bonney was a member of the Audit Committee from April 2015 to April 2018 and was appointed as a member of the Nominating Committee and the Executive Committee in April 2018. Mr. Bonney is currently the Executive Chair of Kaleido Biosciences, Inc.'s Board of Directors, having served as CEO and Chairman of the Board from June 2017 to August 2018. From January to July 2016, Mr. Bonney was a Partner of Third Rock Ventures, LLC, a leading healthcare venture firm. Previously, Mr. Bonney served as Chief Executive Officer and a member of the Board of Directors of Cubist Pharmaceuticals Inc. (Cubist) (which was acquired by Merck & Co., Inc. in January 2015) from June 2003 until December 31, 2014. Prior to Cubist, Mr. Bonney was Vice President, Sales and Marketing at Biogen, Inc. Prior to joining Biogen, Mr. Bonney spent eleven years at Zeneca Pharmaceuticals in a range of commercial, operating and strategic roles, ending his career there as National Business Director. Mr. Bonney chairs the Board of Directors of Alnylam Pharmaceuticals, Inc. (ALNY) and Magenta Therapeutics (MGTA). He also serves as a member of the Board of Directors of Sarepta Therapeutics Inc. (SRPT) and Syros Pharmaceuticals (SYRS). Mr. Bonney previously served as a member of the Board of Directors of Global Blood Therapeutics, Inc. (GBT) and NPS Pharmaceuticals, Inc., a biopharmaceutical company. Mr. Bonney received a B.A. in Economics from Bates College and now Chairs its Board of Trustees.

Specific Qualifications, Skills and Experience
- extensive operational, commercial, and senior management experience
- experience serving on the board of directors (and certain key standing committees) of other companies and trade organizations
- significant experience in senior leadership roles in the biopharmaceutical industry
- audit committee financial expert (as that term is defined in the regulations of the SEC)

Michael D. Casey — Independent Lead Director of Celgene Corporation

Michael D. Casey has served as one of our Directors since August 2002, and has been our independent Lead Director since June 2007, the Chairman of the Nominating Committee and a member of the Executive Committee since December 2006, and a member of the Management Compensation and Development Committee (referred to as the Compensation Committee) since April 2006. Mr. Casey was a member of the Audit Committee from August 2002 through December 2006. From September 1997 to February 2002, Mr. Casey served as the Chairman, President, Chief Executive Officer and a director of Matrix Pharmaceutical, Inc. From November 1995 to September 1997, Mr. Casey was Executive Vice President at Schein Pharmaceutical, Inc. In December 1996, he was appointed President of the retail and specialty products division of Schein Pharmaceutical, Inc. From June 1993 to November 1995, he served as President and Chief Operating Officer of Genetic Therapy, Inc. Mr. Casey was President of McNeil Pharmaceutical (a unit of Johnson & Johnson) from 1989 to June 1993 and Vice President, Sales and Marketing for Ortho Pharmaceutical Corp. (a subsidiary of Johnson & Johnson) from 1985 to 1989. Mr. Casey served as a Director of Abaxis Inc. (ABAX) until it was acquired by Zoetis, Inc. (ZTS) in July 2018, Allos Therapeutics, Inc. (ALTH) through January 2010, AVI BioPharma (now Sarepta Therapeutics, Inc. (SRPT)) through June 2010 and Durect Corporation through December 2013.

Specific Qualifications, Skills and Experience

- significant experience and leadership as President, Chief Executive Officer and senior officer of several pharmaceutical companies
- previous service as a director of several pharmaceutical/biotech companies
- long standing Board member with unique in-depth knowledge of and contributions to Celgene
- Lead Director of Celgene since 2007

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Carrie S. Cox — Chairman of Humacyte, Inc.

Carrie S. Cox has served as one of our Directors since December 2009, and a member of the Audit Committee from March 2010 to April 2018. Ms. Cox was appointed as a member of the Compensation Committee in April 2018. Ms. Cox currently serves as the Chairman of Humacyte, Inc., a privately-held regenerative medicine company. From 2010 until June 2018, Ms. Cox served as Chairman of the Board of Directors and Chief Executive Officer of Humacyte, Inc. Ms. Cox served as Executive Vice President of Schering-Plough Corporation and President of Schering-Plough's Global Pharmaceutical Business from 2003 until November 3, 2009 when Schering-Plough merged with Merck & Co., Inc. Prior to joining Schering-Plough, Ms. Cox served as President of Pharmacia Corporation's pharmaceutical business until its merger with Pfizer Inc. in 2003. Ms. Cox serves as Chairman of the Board of Array BioPharma, Inc. (ARRY) and electroCore Inc. (ECOR). She also serves as a member of the Board of Directors of Texas Instruments (TXN) and has served on their Audit and Compensation Committees, and is a member of the Board of Directors of Cardinal Health, Inc. (CAH) and sits on its Compensation Committee. Ms. Cox is a graduate of the Massachusetts College of Pharmacy.

Specific Qualifications, Skills and Experience
- distinguished career in global healthcare
- significant experience and leadership serving in executive positions of some of the largest and most successful multi-national healthcare companies in the world
- responsibility for financial performance and significant capital and research and development investments

Michael A. Friedman, M.D. — Emeritus Chief Executive Officer of City of Hope

Michael A. Friedman, M.D. has served as one of our directors since February 2011 and a member of the Nominating Committee since April 2011. Dr. Friedman is the emeritus Chief Executive Officer of City of Hope, a leading cancer research, treatment and education institution, as well as Director of the organization's Comprehensive Cancer Center. From May 2003 to December 2013, Dr. Friedman served as President and Chief Executive Officer of City of Hope and holder of the Irell & Manella Cancer Center Director's Distinguished Chair. From September 2001 until April 2003, Dr. Friedman was Senior Vice President of Research and Development, Medical and Public Policy for Pharmacia Corporation and Chief Medical Officer for biomedical preparedness at PhRMA. Additionally, Dr. Friedman has served as Deputy Commissioner for the U.S. Food and Drug Administration (FDA), later serving as Acting Commissioner, and as Associate Director of the National Cancer Institute, National Institutes of Health. Since 2004, Dr. Friedman has served on the Independent Citizens' Oversight Committee which governs the California Institute for Regenerative Medicine and oversees the implementation of California's stem cell research effort. Dr. Friedman serves as a member of the Board of Directors of Intuitive Surgical, Inc. (ISRG) and MannKind Corporation (MNKD) (and a member of its Compensation Committee) and Smith & Nephew plc (SNN). He is also a member of the Board of Trustees of Tulane University. Dr. Friedman received a B.A. from Tulane University and a M.D. in Medicine from the University of Texas.

Specific Qualifications, Skills and Experience
- valuable scientific and operational expertise
- leadership skills from extensive background in cancer research and public health
- senior officer of a leading research institution
- deputy and acting commissioner of the FDA
- executive officer of a major pharmaceutical company

Julia A. Haller, M.D. — Ophthalmologist-in-Chief of the Wills Eye Hospital

Julia A. Haller, M.D. was elected to our Board of Directors in October 2015 and is a member of the Audit Committee. Dr. Haller has served as Ophthalmologist-in-Chief of the Wills Eye Hospital in Philadelphia, PA since 2007, where she holds the William Tasman, M.D. Endowed Chair. She serves as Professor and Chair of the Department of Ophthalmology at Jefferson Medical College of Thomas Jefferson University and Thomas Jefferson University Hospitals, and is Co-Director of the Wills Vision Research Center at Jefferson. In 1986, Dr. Haller served as the first female Chief Resident at the Wilmer Eye Institute at Johns Hopkins and later joined the Johns Hopkins faculty. She was named the inaugural Katharine Graham Professor of

Ophthalmology in 2002, and the inaugural Robert Bond Welch, M.D. Professor of Ophthalmology in 2006. In 2007, Dr. Haller assumed leadership of Wills Eye Hospital and serves as a member of the Compensation Committee. Dr. Haller, one of the world's most renowned retina surgeons and clinician-scientists, has received numerous academic and professional honors and awards and has published over 300 scientific articles and book chapters. Dr. Haller, who has been closely involved in the early stage development of many new vision therapies and surgical procedures. She is a member of numerous international scientific advisory boards and data and safety monitoring committees, is a past member of the Board of Trustees of Princeton University and has served as a consultant to Walter Reed Army Medical Center and The Children's Hospital of Philadelphia. Dr. Haller received her A.B. from Princeton University magna cum laude and her M.D. from Harvard Medical School.

Specific Qualifications, Skills and Experience
- valuable scientific, clinical research, managerial and operational expertise
- leadership skills from her extensive background in research, development of innovative therapies and public health
- significant insight and guidance with regard to our long-term strategy and vision

Patricia A. Hemingway Hall — Former Chief Executive Officer of Health Care Service Corporation
Patricia A. Hemingway Hall was elected to our Board of Directors in April 2018 and is a member of the Audit Committee. From 2008 until her retirement in 2015, Ms. Hemingway Hall served as President and Chief Executive Officer of Health Care Service Corporation ("HCSC"), a mutual health insurer. Previously, she held several leadership positions at HCSC since 1993, including President and Chief Operating Officer from 2007 to 2008, Executive Vice President of Internal Operations from 2006 to 2007, President of BlueCross and BlueShield of Texas, a division of HCSC, from 2001 – 2005 and Senior Vice President from 1998 – 2001. Prior to joining HCSC, Ms. Hemingway Hall held senior positions with several healthcare and health insurance companies and started her career as a critical care nurse. Ms. Hemingway Hall serves as a member of the Board of Directors, and a member of the Audit Committee, of Cardinal Health, Inc. (CAH) and ManpowerGroup Inc. (MAN) and a member of the Board of Directors of Halliburton Company (HAL). Ms. Hemingway Hall received her B.S. in Nursing from Michigan State University and an MPH. in Health Planning and Administration from the University of Michigan.

Specific Qualifications, Skills and Experience
- over 30 years' experience in the healthcare and insurance industries
- significant operational and executive leadership experience, including leading a major health insurer in the U.S.
- membership on public company boards and civic organizations
- experience in strategic, financial and operations management, risk oversight, regulatory and public policy matters, and business strategy affecting the healthcare industry

James J. Loughlin — Former National Director of the Pharmaceuticals Practice at KPMG LLP

James J. Loughlin has served as one of our Directors since January 2007, as Chairman of the Audit Committee since June 2008 and a member of the Compensation Committee since June 2008. Mr. Loughlin served as the National Director of the Pharmaceuticals Practice at KPMG LLP (KPMG), and a five-year term as member of the Board of Directors of KPMG. Additionally, Mr. Loughlin served as Chairman of the Pension and Investment Committee of the KPMG Board from 1995 through 2001. He also served as Partner in charge of Human Resources, Chairman of the Personnel and Professional Development Committee, Secretary and Trustee of the Peat Marwick Foundation and a member of the Pension, Operating and Strategic Planning Committees. Mr. Loughlin serves as a member of the Board of Directors and Chairman of the Audit Committee of Edge Therapeutics, Inc. (EDGE). Mr. Loughlin received a B.S. in accounting from St. Peter's University and is a certified public accountant.

Specific Qualifications, Skills and Experience

- valuable experiences as National Director of the Pharmaceuticals Practice at KPMG
- five-year term as member of the Board of Directors of KPMG and Chairman of the Pension and Investment Committee of KPMG Board
- service on various committees and foundations
- extensive background in accounting and financial reporting
- audit committee financial expert (as that term is defined in the regulations of the SEC)

Ernest Mario, Ph.D. — Chairman of the Board of Soleno Therapeutics, Inc.

Ernest Mario, Ph.D. has served as one of our Directors since August 2007, as a member of the Nominating Committee since August 2007, as a member of the Executive Committee since June 2008, and as Chairman of the Compensation Committee since August 2014. Dr. Mario is a former Deputy Chairman and Chief Executive of Glaxo Holdings plc and a former Chairman and Chief Executive Officer of ALZA Corporation. He also serves as Chairman of the Board of Soleno Therapeutics Inc. (formerly Capnia, Inc.) and as a Director of Eyenovia Inc. (EYEN) and Kindred Biosciences, Inc. (KIN). Dr. Mario previously served as a Director of Boston Scientific Corporation (BSX), Chimerix, Inc. (CMRX), Maxygen Inc. (MAXY), Tonix Pharmaceuticals Holding Corp. (TNXP), VIVUS Inc. (VVUS) and XenoPort Inc (XNPT). In 2007, Dr. Mario was awarded the Remington Medal by the American Pharmacists Association, pharmacy's highest honor. Dr. Mario received a B.S. in Pharmacy from Rutgers University and an M.S. and a Ph.D. in Physical Sciences from the University of Rhode Island.

Specific Qualifications, Skills and Experience

- extensive executive leadership experience
- in-depth industry knowledge leading several pharmaceutical companies
- membership on public company boards and foundations
- experience in financial and operations management, risk oversight, and quality and business strategy

John H. Weiland — Former President and COO of C.R. Bard, Inc.

John H. Weiland was elected to our Board of Directors in February 2018 and is a member of the Audit Committee. Mr. Weiland was President and Chief Operating Officer of C. R. Bard, Inc. from 2003 through 2017 when Bard was acquired by Becton Dickinson. He was also a director of Bard from 2005 through 2017 and most recently served as the Vice Chairman of the Board of Directors. Mr. Weiland joined Bard in 1996 and prior to becoming President and COO held the position of Group President, with global responsibility for Bard Medical Division, Bard Urological Division, Davol Inc., Bard Endoscopic Technologies Division and Bard's Worldwide Manufacturing Operations. Mr. Weiland also had responsibility for Bard's businesses in Latin America, Mexico, Canada, the Far East and Japan. Prior to Bard, he served as Senior Vice President North America Group for Dentsply International, with general management responsibility for the eleven operating divisions of that world's leading dental products manufacturer. He serves as a director of West Pharmaceutical Services, Inc. (WST) and the Horatio Alger Association. Mr. Weiland received a B.S. from DeSales University and an M.B.A. from New York University.

Specific Qualifications, Skills and Experience

- over 40 years in healthcare industry
- significant operational and executive leadership experience
- in-depth industry knowledge leading a pre-eminent healthcare company
- membership on public company boards and foundations

• experience in financial and operations management, risk oversight, regulatory and legislative matters and business strategy affecting our industry

Executive Officers

Our current executive officers are listed in the table below along with their ages and positions. Each executive officer holds the offices set forth opposite his or her name until his or her successor is chosen and qualified at the regular meeting of the Board of Directors to be held on the date of the next annual meeting.

Name	Age [(1)]	Position
Mark J. Alles	59	Chairman of the Board and Chief Executive Officer
Nadim Ahmed	51	President, Global Hematology & Oncology
Jonathan Biller	55	Executive Vice President and General Counsel
Terrie J. Curran	49	President, Global Inflammation and Immunology
David V. Elkins	50	Executive Vice President and Chief Financial Officer
Alise Reicin, M.D.	58	President, Global Clinical Development
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	54	President, Research and Early Development

(1) As of March 1, 2019

Mark J. Alles is our Chairman and Chief Executive Officer. See “Board of Directors” above for a discussion of Mr. Alles’ business experience.

Nadim Ahmed was promoted to President, Global Hematology & Oncology Franchise in August 2017. Previously, he was President of Worldwide Markets for the Hematology & Oncology Franchise. Mr. Ahmed served as General Manager, U.S. Hematology & Oncology from August 2014 until March 2016. He joined Celgene in 2010 as Global Head of Marketing for Celgene’s Multiple Myeloma Franchise after holding positions of increasing responsibility in Clinical Development, Medical Affairs, Global and U.S. Marketing at GlaxoSmithKline. Mr. Ahmed has over 25 years of industry experience. He serves on the Board of Directors of Family Promise, a not-for-profit organization helping homeless families. Mr. Ahmed holds a B.S. degree in Pharmacology from University College London, UK and an M.S. in Information Technology from Loughborough University, UK.

Jonathan Biller was appointed Executive Vice President and General Counsel in July 2018. Mr. Biller joined Celgene in 2011, serving as Senior Vice President, Tax and Treasury responsible for Celgene’s global tax and treasury functions including the company’s capital allocation strategy and tax policy. Prior to Celgene, Mr. Biller was General Counsel, Chief Tax Officer and Secretary from 2008 to 2011 at Bunge Limited, a publicly traded agriculture and food company. Prior to Bunge, Mr. Biller held roles of increasing responsibility at Alcon, Inc during which time it was a publicly traded company. He began his legal career at Hopkins & Sutter rising to the level of partner and was also a partner at Foley & Lardner after the firms merged. Mr. Biller also serves on the Board of Junior Achievement New Jersey. He holds a B.A. degree from Brown University and a J. D. from Yale Law School.

Terrie J. Curran was promoted to President, Global Inflammation and Immunology Franchise in April 2017. Previously, she was Head of Worldwide Markets for the I&I Franchise. Ms. Curran joined Celgene in 2013 as the U.S. Commercial Head of the I&I Franchise and built the capabilities and recruited the teams that executed the successful U.S. launch of OTEZLA. Ms. Curran has over 22 years of industry experience. Before Celgene, she was at Merck where she served as Senior Vice President and General Manager — Global Women’s Health business. At Merck she was responsible for all commercial activities within the global business and led a number of successful global product launches. Prior to Merck, Ms. Curran was a General Manager at Schering-Plough where she successfully launched Remicade in Switzerland and Australia. She is a Director of Myovant Sciences Ltd, a research stage company focused on women’s health and endocrine disease and a Director of H. Lundbeck A/S, a global pharmaceutical company focused on psychiatric and neurological disorders. Ms. Curran holds a Graduate Diploma of Marketing and a Bachelor of Applied Science (BAS) from the University of Technology, Sydney.

David V. Elkins joined Celgene in July 2018 and was appointed Chief Financial Officer in August 2018. He came to Celgene from Johnson & Johnson (J&J), where he was Worldwide Vice President and Chief Financial Officer for Consumer Products, Medical Devices and Corporate Functions. Prior to J&J, Mr. Elkins was CFO for Round Rock Research, a technology investigation and patent licensing company. From 2008 to 2012, Mr. Elkins was Executive Vice President and CFO of Becton, Dickinson and Company, a public global medical technology company. From 1995 to 2008, he held roles of increasing responsibility at AstraZeneca, and he began his career in finance at the

Boeing Company in 1991. Mr. Elkins holds a B.S. degree from the University of Delaware, an M.S. from the University of Pennsylvania and an M.B.A. from Drexel University.

Dr. Alise Reicin joined Celgene as President of Global Clinical Development in November 2018. She came to Celgene from EMD Serono, the biopharmaceutical business of Merck KGaA, Darmstadt, Germany where she served as Senior Vice President and Head of Global Clinical Development in Research and Development (R&D) from May 2015 until October 2018. Prior to joining EMD Serono, from March 2011 to May 2015, Dr. Reicin served as Vice President, Project and Pipeline Leadership, Oncology Franchise at Merck, Sharp & Dohme (Merck). Earlier in her career, Dr. Reicin was a faculty member at Columbia Medical School, and a physician and researcher at Columbia Presbyterian Hospital. She has a degree in biochemistry from Barnard College of Columbia University. She received her Medical Degree from Harvard Medical School, where she was enrolled in the Health Sciences and Technology program with MIT (Massachusetts Institute of Technology).

Dr. S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil. was named President, Research and Early Development in January 2016. He joined Celgene in January 2015 as Senior Vice President, Translational Development. Before joining Celgene, Dr. Vessey was Senior Vice President of Early Development and Discovery Sciences at Merck. During his ten years with Merck, Dr. Vessey was responsible for numerous drug development programs and also served as Senior Vice President, Respiratory and Immunology Franchise and Vice President, Drug Discovery and Informatics. Prior to Merck, he spent five years at GlaxoSmithKline in drug discovery, experimental medicine and early clinical development of therapeutics for respiratory and immune diseases. Dr. Vessey graduated from Oxford University with degrees in Physiological Sciences (MA), Clinical Medicine (BM, BCh) and a D.Phil. (PhD) in Molecular Immunology. He is an elected Fellow of the Royal College of Physicians.

Family Relationships

There are no family relationships between any of our directors and executive officers.

Section 16(a) Beneficial Ownership Reporting Compliance

Pursuant to Section 16(a) of the Exchange Act, each of our directors, executive officers and any person beneficially owning more than 10 percent of the outstanding shares of common stock is required to report his, her or its ownership of common stock and any change in that ownership, on a timely basis, to the SEC. Based solely upon a review of SEC Forms 3, 4 and 5 and amendments thereto furnished to us during or with respect to fiscal 2018, we believe that all applicable acquisitions and dispositions of common stock, including grants of options and awards under our equity compensation plans, were filed on a timely basis for fiscal 2018, except for a Form 4 filed on May 17, 2018 for each of Mark Alles, Terrie Curran, Peter Kellogg and Rupert Vessey to report stock options and restricted stock units granted to such reporting person on May 8, 2018.

Financial Officer Code of Ethics

We have adopted a Financial Officer Code of Ethics that applies to our Chief Executive Officer, Chief Financial Officer and other financial professionals. This Financial Officer Code of Ethics is posted on our website at www.celgene.com and may be accessed by choosing the “Investor Relations” link and clicking on the “Corporate Governance” section. We intend to satisfy the disclosure requirements regarding any amendment to, or a waiver of, any provision of the Financial Officer Code of Ethics by posting such information on our website. We undertake to provide to any person a copy of this Financial Officer Code of Ethics upon request to our Corporate Secretary at our principal executive offices.

The Audit Committee

The Audit Committee consists of Richard W. Barker, Julia A. Haller, Patricia Hemingway Hall, James J. Loughlin, and John H. Weiland, each of whom is “independent” within the meaning of Rule 5605(a)(2) of the Nasdaq Listing Rules and within the meaning of the rules of the SEC. Mr. Loughlin chairs the Audit Committee and qualifies as an “audit committee financial expert” within the meaning of the rules of the SEC and, as such, under Rule 5605(c)(2)(A) of the Nasdaq Listing Rules, he is presumed to satisfy that rule’s requirement regarding financially sophisticated audit committee members. The Audit Committee oversees our financial reporting process on behalf of the Board of Directors. In fulfilling its responsibility, the Audit Committee appoints, subject to advisory stockholder ratification, our independent registered public accounting firm. The Audit Committee also reviews our consolidated financial statements and the adequacy of our internal controls. The Audit Committee meets at least quarterly with our management and our independent registered public accounting firm to review and discuss the results of audits or reviews of our consolidated financial statements, the evaluation of the effectiveness of our internal control over financial reporting and disclosure controls and procedures, the overall quality of our financial reporting and appropriate application of our critical accounting policies and to approve any related person transactions (as defined below). The Audit Committee's responsibility is to monitor and oversee these processes, including the activities of our internal audit function. The Audit Committee meets separately, at least quarterly, with the independent registered public accounting firm. In addition, the Audit Committee oversees our existing procedures for the receipt, retention and handling of complaints related to auditing, accounting and internal control issues, including the confidential, anonymous submission by employees, vendors, customers or others with concerns on accounting and auditing matters, as well as, other matters relating to the Company.

ITEM 11. EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

This Compensation Discussion and Analysis (CD&A) provides an overview of our compensation philosophy and practices for the following individuals whom we refer to as our Named Executive Officers (NEOs) for fiscal 2018.

Name	Title
Mark J. Alles[1]	Chairman and Chief Executive Officer
David V. Elkins[2]	Executive Vice President and Chief Financial Officer
Peter N. Kellogg[2]	Executive Vice President and Chief Corporate Strategy Officer
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	President, Research & Early Development
Alise Reicin, M.D.[3]	President, Global Clinical Development
Terrie J. Curran	President, Global Inflammation & Immunology

(1) Effective February 5, 2018, Mr. Alles was appointed Chairman of the Board of Directors.

(2) Effective August 1, 2018, Mr. Elkins was appointed Chief Financial Officer and Mr. Kellogg was appointed Chief Corporate Strategy Officer. Prior to August 1, 2018, Mr. Kellogg served as our Chief Financial Officer.

(3) Effective November 1, 2018, Dr. Reicin was appointed President, Global Clinical Development.

Each of our NEOs is fully engaged in company-wide strategic planning and decision-making aimed at ensuring our long-term success through delivering on annual and long-term financial goals and through continuing to innovate, develop and commercialize life-changing drugs for our patients. The full biographies for Messrs. Alles and Elkins, Ms. Curran and Drs. Vessey and Reicin are provided elsewhere in this Annual Report on Form 10-K/A under "Item 10. Directors, Executive Officers and Corporate Governance."

2018 Key Performance Highlights

In 2018, we continued to execute our strategy of delivering industry-leading growth, while continually expanding and advancing a diverse pipeline of future innovative therapies for patients with high-unmet medical needs. We advanced several priority programs while exceeding our guidance on Revenue and Earnings Per Share (EPS), achieving $15.28 billion in revenue and $8.87 in Adjusted (non-GAAP) EPS[1]. Approximately 750,000 patients were treated with a Celgene medicine in 2018, and we continue to significantly invest in research and development and strategic business development to increase our opportunities to bring forward transformative therapies to patients. During 2018, we acquired Impact Biomedicines, Inc. and Juno Therapeutics, Inc., both transactions immediately adding new late-stage assets to our portfolio.

Total Revenue of $15.28B, a 17.5% increase year-over-year through our key commercial products:

Sales of $9.7 billion, an increase of 18.3%	Sales of $2.0 billion, an increase of 26.4%	Sales of $1.6 billion, an increase of 25.7%	Sales of $1.1 billion, an increase of 7.1%

GAAP Earnings Per Share of $5.51, a 51.4% increase year-over-year

Adjusted (non-GAAP) Earnings Per Share[1] of $8.87, a 19.2% increase year-over-year

(1) For the reconciliation of the adjusted (non-GAAP) financial measures to the most comparable GAAP financial measures, see Exhibit 99.1 in this Annual Report on Form 10-K/A.

Five-Year Cumulative Total Shareholder Return

The below chart sets forth a comparison of cumulative total returns per share for the periods indicated:

	Cumulative Total Return ($)					
	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Celgene Corporation	100.00	132.40	141.75	137.01	123.53	75.86
S&P 500	100.00	113.68	115.24	129.02	157.17	150.27
NASDAQ Composite	100.00	114.83	122.99	134.02	173.86	168.98
NASDAQ Biotechnology	100.00	134.40	150.22	118.15	143.74	131.00

* Represents a value of $100 invested on 12/31/2013 in each applicable stock or index – including reinvestment of dividends (if applicable) for each subsequent fiscal year ended December 31.

Compensation Philosophy

Our executive compensation programs are designed to reward progress in advancing our drug development pipeline and achievement of financial and operational results while aligning the annual and long-term interests of our executives with those of our stockholders. This approach enables us to structure a program that drives the creation of long-term value to patients and our stockholders while maintaining a balanced and appropriate risk profile. Our executive compensation philosophy focuses on four core principles as a framework for which the Compensation Committee approves objectives, measures performance and determines compensation actions for our NEOs:

Value Creation:

- In setting target pay and making compensation decisions, the Compensation Committee balances the historical and sustained performance of each NEO with expected future contributions to his/her functional areas and to the broader management of the Company.

Pay for Performance:

- Our practice of directly linking compensation to achievement of both annual and long-term financial and strategic goals is intended to drive strong performance, align the interest of our executives with the interests of our stockholders and result in increased stockholder value. Our Compensation Committee believes in an appropriate mix of long-term versus annual objectives and has designed our annual and long-term programs to overlap financial metrics to highlight the importance of achieving both annual and long-term goals. We believe this approach reduces the risks that actions might be taken to sacrifice long-term growth to meet annual targets.

Team-Based:

- The Compensation Committee reviews and approves objectives and makes compensation decisions based on the NEO's performance not only against the specific strategy and objectives of the function(s) for which he/she is responsible, but also against each NEO's engagement in broader, long-term enterprise-wide management. Aligning each NEO's variable pay to the Company’s overall strategic objectives reinforces a team-based management approach and encourages holistic results. As part of this team-based approach, we also strive to create and maintain internal fairness in our compensation arrangements.

Market Competitiveness:

- We operate in a highly complex and competitive business environment that requires attracting, retaining and engaging executives capable of leading our business. For compensation purposes, the Compensation Committee does not target a specific percentile within our peer group; rather, benchmark data is used as a reference point when making compensation determinations. The Compensation Committee, with the input of Radford (its independent compensation consultant), periodically reviews and selects our peer group. The companies in our peer group have comparable revenue and market capitalization, and constitute our primary competitors for executive talent. We also consider various surveys, including the Radford Global Life Sciences Survey, SIRS Executive Compensation Survey and Willis Towers Watson U.S. CDB Pharmaceutical Executive Database. Our peer group used for compensation decisions consists of:

Current Peer Group

Abbvie Inc.	Eli Lilly and Company
Alexion Pharmaceuticals	Gilead Sciences Inc.
Allergan plc.	Merck & Company
Amgen Inc.	Regeneron Pharmaceuticals
Biogen Inc.	Vertex Pharmaceuticals (added in 2018)
Bristol-Meyers Squibb Company	

Highlights of our Compensation Practices

We maintain high governance standards pertaining to the oversight of our executive compensation programs. As in prior years, the following compensation policies and practices were in effect during 2018:

What We Do

ü	Pay for Performance	On average 88% of our NEOs' compensation is tied to performance with clearly articulated financial, strategic and Relative Total Shareholder Return (R-TSR) objectives.
ü	Equitable Pay and Inclusive Workforce	We pay our employees equitably based on the work they do, the capabilities and experience they possess and the performance and behaviors they demonstrate. We promote a non-discriminatory and inclusive work environment that enables us to benefit from the diversity of thought that comes from a diverse and inclusive workforce.
ü	Compensation Recovery	In the event of an executive's fraud or misconduct that results in a material negative restatement of our financial statements, we may recoup any or all of the incentive compensation paid to that executive in excess of the amounts that would have been paid based on the restated results. We may also cancel unvested equity compensation or require the executive to repay any gains realized in excess of the amount that would have been paid to that executive based on the restated results.
ü	Risk Mitigation	Our executive compensation programs include controls that promote a responsible and balanced risk profile: • Multiple metrics within each incentive plan that are balanced and weighted so as not to encourage focus on a single metric to the exclusion of others; • Caps on payouts under our annual and long-term incentive award programs; • Stock ownership and holding requirements; and • Pre-established grant schedule for NEOs' equity awards as set by our Compensation Committee
ü	Minimum Vesting	Our annual equity awards provide for a minimum vesting period of one year.
ü	Proactive Shareholder Engagement	We maintain a robust investor outreach program that enables us to obtain ongoing feedback concerning our compensation programs and other governance matters.
ü	Share Ownership Requirements	We maintain rigorous stock ownership requirements for our Board members and NEOs as described below: • During 2018, our Chairman and CEO had a share ownership requirement equal to a value of six times annual base salary, and he exceeded this requirement. • Each of our other NEOs' share ownership requirement is equal to a value of three times annual base salary. Mr. Kellogg and Ms. Curran exceed this requirement while Dr. Vessey (who was hired in 2015) and Mr. Elkins and Dr. Reicin (who were both hired in 2018) do not yet meet the requirement. • Each Board member's share ownership requirement is five times the current annual retainer. See "Director Compensation — Stock Ownership Requirements for Non-Employee Directors" for more information.
ü	Holding Period	In addition to share ownership requirements, there is a holding period on all shares issued on vested PSUs of at least one year and one day after the applicable vesting date (except in the case of certain qualifying terminations of employment). These holding periods further align compensation and value delivered to stock performance and long-term value to our stockholders.
ü	Securities Trading Policy	We maintain a comprehensive securities trading policy which provides, among other things, that our employees who possess material non-public information regarding Celgene may not disclose or trade while in possession of such information or buy or sell our securities during any designated blackout period. Individuals classified as "insiders" (which include our NEOs) and related persons (as defined in the policy) generally may not buy or sell our securities at any time without prior approval, except under approved Rule 10b5-1 trading plans.
ü	Change in Control Double	In 2011, we amended our Stock Incentive Plan to eliminate the "single trigger" change in control vesting provision for equity awards granted on or after July 1, 2011 and to provide that, unless

Trigger	otherwise determined at grant, such equity awards vest upon an involuntary termination of employment without cause that occurs within two years following a change in control (i.e. “double trigger”).

What We Do

ü	NEO Compensation Cost Analysis	To ensure that our compensation programs remain aligned with the interests of our stockholders and to further reinforce a team-based approach to management, the Compensation Committee considers the stockholder advisory vote on executive compensation and measures our NEOs' collective compensation in relation to the collective compensation paid to named executive officers of companies within our peer group.
ü	Independent Compensation Consultant	The independent compensation consultant, Radford, is retained directly by the Compensation Committee.

What We Don't Do

x	No Hedging or Pledging	Board members, executives, employees and their related persons (as defined in our Securities Trading Policy) are prohibited from hedging, pledging, or engaging in any derivatives trading with respect to Company stock, without the prior approval of the CEO in extraordinary circumstances.
x	No Backdating or Repricing	Stock options are never backdated or issued with below-market exercise prices. Re-pricing of stock options under our 2017 Stock Incentive Plan without stockholder approval is expressly prohibited. In connection with our acquisition of Juno Therapeutics in March 2018, we assumed the Juno Therapeutics Inc. 2014 Equity Incentive Plan (which does not explicitly prohibit repricing without shareholder approval).
x	No Share Recycling or Evergreen Provisions Under 2017 Stock Incentive Plan	Our 2017 Stock Incentive Plan prohibits share recycling and does not contain an evergreen renewal provision. In connection with our acquisition of Juno Therapeutics in March 2018, we assumed the Juno Therapeutics Inc. 2014 Equity Incentive Plan (which plan permits share recycling and contains an evergreen renewal provision).
x	No Dividends Payable on Options, SARs or Unvested Equity Under 2017 Stock Incentive Plan	Our 2017 Stock Incentive Plan provides that the holder of any stock option or stock appreciation right may not receive dividends with respect to the underlying shares and that the holder of any other equity award will not receive dividend payments unless the underlying shares have vested. The Juno Therapeutics Inc. 2014 Equity Incentive Plan assumed by the Company generally does not condition dividend payments in respect of other equity awards on the vesting of the underlying shares.

Say on Pay – Advisory Vote on Executive Compensation – 94%

At the 2018 Annual Meeting of Stockholders, we conducted our eighth annual non-binding advisory vote on executive compensation paid to our NEOs. Approximately 94% of the votes cast were in favor of our NEO compensation as described in the 2018 proxy statement. The Compensation Committee reviewed these final vote results, which reinforced our pay for performance philosophy, and the Compensation Committee also determined that the structure of our executive compensation policies continues to be appropriately aligned to the achievement of Company goals and objectives and stockholder best interests.

2018 Pay for Performance Alignment

A significant percentage of compensation awards to our NEOs is variable, performance-based compensation which is "at risk." Each NEO's compensation is designed to reward the achievement of financial objectives, progress in advancing our drug development pipeline and achievement of other operational goals, while aligning the annual and long-term interests of our executives with those of our stockholders.

Our NEOs' total target compensation consists of three elements: base salary, annual incentives and long-term incentives. The Compensation Committee also believes in minimal use of perquisites as they do not reinforce our pay-for-performance philosophy. For our NEOs who were employed for all of 2018, the mix of compensation is weighted toward long-term, performance-based pay, as reflected in the 2018 charts below:

Approximately 91% of our Chairman and CEO’s target compensation is performance-based.

Approximately 88% of our other NEOs' target compensation is performance-based.

Compensation Element		Description	Performance Measurements/Considerations
Base Salary		• Fixed cash-based compensation that is reflective of each NEO's contributions, experience, responsibilities and potential to contribute to our future success	• Reviewed annually and adjusted as appropriate
	Annual Incentives: Management Incentive Plan (MIP)	• Variable cash-based compensation • Focuses executives on achieving annual financial and strategic results and builds the foundation for long-term value creation	• 56% Financial objectives • 28% Total Revenue • 28% Adjusted EPS(1) • 44% Strategic corporate objectives
Performance-Based	Long-Term Incentives (LTI) - Equity	• Designed to motivate and reward for sustained, evidenced, high-value contributions that drive on-going success and provide direct alignment to stockholders • LTI granted in the form of equity via: • 50% Stock Options • 30% Performance Stock Units (PSUs) • 20% Restricted Stock Units (RSUs) • PSUs reward three-year financial and R-TSR results • Opportunity for additional grants based on achievement of performance objectives and value creation. Employee Board members are not eligible for grants for director service.	• Stock Options • Performance-based, providing value only if there is future stock price appreciation • PSUs • 37.5% - Three-year Total Revenue • 37.5% - Three-year Adjusted EPS(1) • 25% - Three-year R-TSR • RSUs • Promotes retention and stock ownership, and focuses NEOs on enhancing stockholder value
	Long-Term Incentives (LTI) - Cash	• Changed to PSUs in fiscal 2015, except for Dr. Vessey, who received an award under our 2016–2018 LTIP cycle and Ms. Curran who received awards under our 2016-2018 LTIP and 2017-2019 LTIP cycles before becoming executive officers • Payable in cash or restricted shares, at discretion of Compensation Committee	• 37.5% - Three-year Total Revenue • 37.5% - Three-year Adjusted EPS(1) • 25% - Three-year R-TSR
Other		• Health and Welfare Benefits • 401(k) Match • Reimbursement for tax and financial services up to $15,000 annually	

(1) In addition to financial information prepared in accordance with U.S. GAAP, this document also contains adjusted financial measures based on management's view of performance. For the reconciliation of the adjusted (non-GAAP) financial measures to the most comparable GAAP financial measures see Exhibit 99.1 to this Annual Report on Form 10-K/A.

Roles and Responsibilities

Role of the Compensation Committee

The Compensation Committee oversees and administers our executive compensation and benefit programs, establishing base salary, incentive compensation, including equity awards, and any other compensation for our NEOs, including reviewing and approving the CEO's recommendations for the compensation of NEOs and other officers of the Company (other than the CEO) who are determined to be subject to the reporting requirements of Section 16 of the Exchange Act. In addition, the Compensation Committee, in conjunction with the Board of Directors, reviews and approves the CEO's performance and compensation levels. The detailed roles and responsibilities of the Compensation Committee are set forth in its written charter adopted by our Board of Directors, which can be found on our website, www.celgene.com, under the "Corporate Governance" section of the site. The Compensation Committee also ensures that the total compensation paid to our NEOs is reasonable, competitive and achieves the goal of delivering results and enhancing the long-term value to our stockholders.

Role of the Chairman and CEO

As Chairman, Mr. Alles leads the Company's Board of Directors, and in his role as CEO makes recommendations to the Compensation Committee regarding the setting of performance objectives for the Company. After the Company's objectives are established, the CEO works with each NEO to determine how his respective function(s) will contribute to the overall annual and long-term goals of the Company. To this end, at the beginning of each fiscal year, the CEO establishes goals and objectives with each NEO that are designed to advance his functional areas, while promoting achievement of overall corporate performance goals. At the conclusion of each fiscal year, the CEO evaluates the actual performance of each NEO via our performance management process and recommends appropriate salary adjustments and incentive awards to the Compensation Committee via our compensation review process. The final salary adjustments and incentive awards to NEOs are approved solely by the Compensation Committee.

Role of the Compensation Consultant

The Compensation Committee has retained Radford as its independent compensation consultant to assist in the continual development and evaluation of compensation plans and programs and the Compensation Committee's determinations of compensation awards. The Compensation Committee's consultant attends Compensation Committee meetings if requested by the Compensation Committee, and provides third-party and benchmarking data, independent analyses, advice and industry expertise on plan design, best practices and compensation regulations. The Compensation Committee's consultant also proposes executive compensation levels within our plans.

At the request of the Compensation Committee, Radford reviews briefing materials prepared by management and outside advisors to management and advises the Compensation Committee on matters covered in the materials, ensuring the consistency of proposals with the Compensation Committee's compensation philosophy and comparisons to programs at peer companies. Also at the request of the Compensation Committee, Radford prepares its own analyses and reports, including positioning of plans and programs within the context of competitive market analyses designed to ensure that our plans and programs reinforce the principles within our compensation philosophy.

The Compensation Committee has assessed the independence of Radford pursuant to SEC rules and concluded that no conflict of interest exists that would prevent it from serving as an independent consultant to the Compensation Committee.

Elements of Our Compensation Programs for NEOs & 2018 Compensation Actions

Base Salary

Base salaries provide fixed cash compensation to each of our NEOs. As a reflection of our performance culture, base salary adjustments are reviewed annually by the Compensation Committee. In its capacity as consultant, each year, at the request of the Compensation Committee, Radford provides an analysis of the competitive landscape within our industry and our peer group as additional context in which the Compensation Committee makes base salary decisions.

The Compensation Committee considers the following factors when determining base salaries:

- scope of responsibilities and experience
- annual and sustained performance
- expected future contribution and ability to deliver value to stockholders
- analysis of internal pay alignment, external market conditions and competitive positioning

Base Salary for Fiscal 2018

The base salary increase for each of our NEOs who was employed with us during the entire year is as follows:

NEO	2017 Salary ($)	2018 Salary ($)	Effective Date of Salary Adjustment	% Increase	Reason
Mark J. Alles	1,300,000	1,365,000	3/1/2018	5 %	Merit and performance increase
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	695,300	800,000	3/1/2018	15 %	Reflects merit increase, performance increase and continued movement toward a more competitive level of base salary
Peter N. Kellogg	875,500	920,000	3/1/2018	5 %	Merit and performance increase
Terrie J. Curran	600,000	625,000	3/1/2018	4 %	Merit and performance increase

No percentage increases are presented for Mr. Elkins and Dr. Reicin since they commenced employment with us in 2018. Pursuant to the terms of their letter agreements, Mr. Elkins and Dr. Reicin received salaries in 2018 at an annual rate of $850,000 and $760,000, respectively.

Annual Bonus

Annual incentives are determined under our Corporate Management Incentive Program (MIP). The MIP is a variable pay plan designed to focus NEOs on annual goals and objectives that are established to drive the annual and long-term success of our business. The Compensation Committee reviews and approves each plan year's targets and performance metrics under the MIP to ensure that they are challenging and commensurate with our annual and long-term business plan. The target annual incentive award opportunity for each of our NEOs represents a percentage of base salary earned in the fiscal year. Each year, Radford, in its capacity as consultant, at the request of the Compensation Committee, provides an analysis of the competitive landscape within our industry and our peer group as additional context in which the Compensation Committee makes individual bonus target decisions. In 2018, the bonus target range for NEOs employed with us during the entire year was 75% – 150% of base salary earned in the fiscal year. For all of our NEOs employed with us during the entire year, actual payments made under the MIP are calculated based 100% on our corporate performance objectives as approved by the Compensation Committee. The maximum potential bonus payout was 200% of their respective annual bonus target. For 2018, the offer letters of Mr. Elkins and Dr. Reicin provided them with a minimum guaranteed cash bonus payment of $722,500 and $608,000, respectively. The Compensation Committee determined that these one-time minimum payments were appropriate and necessary in order to recruit high-level executives in a competitive market for their talent and to compensate them for forfeited bonus opportunities with their prior employers. Other than Mr. Elkins and Dr. Reicin, with respect to fiscal 2018, the minimum payout for all NEOs was zero. Awards generally are payable at the end of February following the year to which the performance goals relate.

Setting Fiscal 2018 Corporate MIP Targets

In December 2017, the Compensation Committee determined that Adjusted EPS(1), total revenue and certain non-financial measures continued to be appropriate measures for use in connection with the fiscal 2018 MIP. In January 2018, the Compensation Committee finalized and approved these targets for the fiscal 2018 MIP. The Compensation Committee believes that these measures, balanced with our long-term objective of maintaining a significant research and development reinvestment rate, fuel our long-term growth, best serve our patients and reflect true operating performance. The corporate performance measures for fiscal 2018 were based on the following components and associated weights with a max of 200% of achievement:

56% Financial Objectives

- 28% on total revenue — Target range of $14.4 – $14.8 billion
- 28% on Adjusted EPS(1) — Target range of $8.70 – $8.90 per share

44% Non-Financial Objectives (Selected Strategic Corporate Objectives)

- execution on near-term clinical and regulatory milestones across our hematology/oncology portfolio: REVLIMID® in non-Hodgkin's lymphoma and in combination with bortezomib in multiple myeloma; POMALYST® in combination with bortezomib in multiple myeloma; and other marketed and late-stage pipeline assets including ABRAXANE® and fedratinib

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- execution on near-term clinical and regulatory milestones across our inflammation/immunology portfolio: OTEZLA® in Behçet’s disease and scalp psoriasis; and ozanimod in relapsing multiple sclerosis
- acceleration of mid-stage pipeline assets: luspatercept in MDS and beta thalassemia; bb2121 in multiple myeloma; ozanimod in inflammatory bowel disease; liso-cel (JCAR017) in lymphoma; tislelizumab in solid tumors; marizomib in glioblastoma; CC-220 in lupus and multiple myeloma; and other mid-stage assets
- expansion of long-term growth opportunities: business development focused on late-stage assets and advancing the early-stage pipeline through IND submissions, first-in-human studies, lead optimization and other research activities

(1) In addition to financial information prepared in accordance with U.S. GAAP, this document also contains adjusted financial measures based on management’s view of performance. Further information relevant to the interpretation of adjusted financial measures may be found in Exhibit 99.1 of this Annual Report on Form 10-K/A.

Under the MIP, the Compensation Committee may provide for the adjustment, modification or amendment of the performance measures and targets in the plan to reflect certain events that affect such performance measures and targets, including (i) restructurings, discontinued operations, items or events, corporate transactions (including dispositions or acquisitions) and other unusual or non-recurring items, and (ii) changes in tax law or accounting standards required.

Fiscal 2018 MIP Payments

Based on our full year results, the Compensation Committee determined that the MIP score for fiscal 2018 was 137.5% of target, which includes both financial and non-financial performance. Our fiscal 2018 financial achievements include Adjusted EPS for MIP purposes of $9.06 and total revenue of $15.28 billion. Among the achievements in clinical and regulatory were on-time data readouts and EU submission for POMALYST plus bortezomib and low-dose dexamethasone (PVd) in relapsed refractory multiple myeloma; on-time data readout for OTEZLA in scalp psoriasis and US submission for OTEZLA in Behcet’s disease; clinical progress for mid-stage assets including bb2121, liso-cel (JCAR017), marizomib, CC-92480 and CC-93269; and advancing key early research programs through IND/CTA/CTN filings and initiating first-in-human studies. Additionally, the strategic acquisitions of Impact Biomedicines and Juno Therapeutics expanded and deepened our pipeline notably. For the reconciliation of the adjusted (non-GAAP) financial measures to the most comparable GAAP financial measures, see Exhibit 99.1 in this Annual Report on Form 10-K/A.

NEO	Bonus Target from 1/1/2018 to 2/28/2018 as % of Earned Salary	Bonus Target from 3/1/2018 to 12/31/2018 as % of Earned Salary[1]	Corporate Weighting X Corporate Score	Bonus Paid[2] ($)
Mark J. Alles	150 %	150 %	100% x 137.5%	2,792,969
David V. Elkins	n/a	85 %	100% x 137.5%	993,438
Peter N. Kellogg	80 %	90 %	100% x 137.5%	1,109,039
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	80 %	80 %	100% x 137.5%	860,805
Alise Reicin, M.D.	n/a	80 %	100% x 137.5%	836,000
Terrie J. Curran	75 %	75 %	100% x 137.5%	640,234

(1) Bonus target changes reflect continued movement towards more competitive target incentive levels.

(2)

Bonus paid is based on salary earned multiplied by each bonus target over the relevant time period in fiscal 2018. For Mr. Elkins and Dr. Reicin, their offer letters provided them with a minimum target bonus payment for 2018 equal to their respective target bonus percentages of their base salaries.

For 2018, the offer letters of Mr. Elkins and Dr. Reicin provided them with a minimum guaranteed cash bonus payment of $722,500 and $608,000, respectively. The Compensation Committee determined that these one-time minimum payments were appropriate and necessary in order to recruit high-level executives in a competitive market for their talent and to compensate them for forfeited bonus opportunities with their prior employers. Based on achievement of bonus targets, Mr. Elkins and Dr. Reicin received 2018 annual cash bonuses in the amount of $993,438 and $836,000, respectively.

Long-Term Incentives — Equity Grants

Our equity awards are intended to align the interests of our NEOs with those of our stockholders through rewarding exceptional corporate performance and stockholder returns and by ensuring that decisions made in the short-term solidify a strong future for our Company. Awards granted pursuant to our equity plans are an essential component of our total compensation strategy. The equity pool of awards available to grant to all employees (including our NEOs) in any given year is approved at the end of the prior year by the Compensation Committee, subject to the overall maximum number of shares of our stock available under our equity plans.

As part of the ongoing review of our compensation strategy and practices, the Compensation Committee approves equity awards based in part on recommendations from Radford. The Compensation Committee approves targets and actual award amounts based upon relative contribution to our Company performance, individual performance, demonstrated leadership, and expected future contributions to the achievement of Company goals and objectives.

The Compensation Committee determined that, beginning in fiscal 2015, PSUs would be added to the annual equity program for our NEOs, as they are a common equity type among our peers and reflect the Compensation Committee's intent to provide significant at-risk pay via long-term incentives. This philosophy further aligns our compensation programs to financial performance and the long-term performance of our Company. Awards granted to NEOs in fiscal 2018 were a mix of 50% stock options, 30% PSUs and 20% RSUs.

The Compensation Committee has weighted 80% of NEO equity awards to be based on performance with an emphasis on stock options, as these awards deliver value only when the market price of our Common Stock is above the exercise price, and PSUs, thereby aligning executive compensation with future stockholder value and focusing our NEOs on the overall long-term financial success of the Company. The current mix of equity awards maintains a balance between each NEO's ability to drive attainment of key financial metrics (e.g., Total Revenue and Adjusted EPS) and delivery of value to our stockholders (as measured primarily through Relative Total Shareholder Return (R-TSR)). Shares issued on vested PSUs are subject to a holding period of one year and one day from the vesting date of the applicable performance grant cycle (except in the case of certain qualifying terminations of employment). For the reconciliation of the adjusted (non-GAAP) financial measures to the most comparable GAAP financial measures, see Exhibit 99.1 in this Annual Report on Form 10-K/A.

The Compensation Committee chose to benchmark R-TSR relative to the combined constituents of the S&P 500 Biotechnology Index and the S&P 500 Pharmaceutical Index due to their strong correlation over time with Celgene stock price performance and the fact that these indices are used by many of our institutional investors for comparison. The R-TSR achievement under the 2016–2018, 2017–2019 and 2018–2020 performance cycles will be measured relative to the top 36 public U.S. biotechnology and pharmaceutical companies with a sustained market cap above $700M for the last 3 years as measured in August prior to the commencement of each plan cycle.

Active PSU Performance Cycle	Measurements	Weight	Threshold, Target & Maximum of Financial Measures
2016–2018	Total Revenue	37.5%	90%–100%–110%
2017–2019	Adjusted EPS(1)	37.5%	90%–100%–110%
2018–2020	R-TSR	25%	35th–50th–80th (percentiles)

(1) In addition to financial information prepared in accordance with U.S. GAAP, this document also contains adjusted financial measures based on management's view of performance. Further information relevant to the interpretation of adjusted financial measures may be found in Exhibit 99.1 of this Annual Report on Form 10-K/A.

The Compensation Committee may adjust the mix of award types or approve different award types as part of the overall long-term incentive award strategy. Awards made in connection with a new, extended or expanded employment relationship may involve a different mix of equity awards, depending on the Compensation Committee's assessment of the total compensation package being offered.

The table below provides an overview of our equity award types and selected terms granted to our NEOs:

Type	General Terms
Stock Options	• Granted upon hire, then annually on a quarterly pre-set schedule determined by the Compensation Committee • Service-based vesting over four years (25% per year) • Ten-year term • Subject to recovery
PSUs	• Granted annually on a pre-set schedule determined by the Compensation Committee • Three-year performance and measurement period, subject to attainment of defined, weighted metrics approved by the Compensation Committee prior to the grant as follows: • 37.5% Total Revenue • 37.5% Adjusted EPS[(1)] • 25% R-TSR • Shares issued on vested PSUs must be held for one year and one day from the vesting date of the applicable performance grant cycle (except in the case of certain qualifying terminations of employment) • Subject to recovery
RSUs	• Granted upon hire, then annually on pre-set schedule determined by the Compensation Committee • Service-based cliff vesting for our annual grants (generally, 100% vested on third anniversary of grant date) • Subject to recovery
General Provisions for Death, Disability, Termination as a result of Change in Control and Retirement for Stock Options, RSUs and PSUs	• In the event of (i) death, (ii) permanent disability or (iii) involuntary termination without cause within two years as a result of a change in control (i.e. a double-trigger) (a "CiC Termination"), the vesting of stock options, RSUs and PSUs will accelerate, except that shares issued on vested PSUs will be based on actual plan performance as of the last day of the calendar quarter preceding the date of death, disability or CiC Termination (but shares issued on vested PSUs in case of a CiC Termination will not be less than the target payout amount, pro-rated based on service during performance period) • If the NEO attains retirement as defined in our equity plans and has given at least six months' notice of the intent to retire, as of the date of retirement: • RSUs will vest on retirement, but will be payable on the earliest of death, disability or the originally scheduled vesting date • PSUs will continue to vest and a pro rata portion (based on number of completed months of employment during the performance period) will be payable at the end of the performance period based on actual results • Stock options will continue to vest and will remain exercisable until the earlier of three years after retirement or the original expiration date

(1) In addition to financial information prepared in accordance with U.S. GAAP, this document also contains adjusted financial measures based on management's view of performance. Further information relevant to the interpretation of adjusted financial measures may be found in Exhibit 99.1 of this Annual Report on Form 10-K/A.

Equity Grants for Fiscal 2018

During fiscal 2018, Radford recommended, and the Compensation Committee approved, the following equity awards for our NEOs:

			PSUs for the 2018–2020 Performance Cycle[1]		
Name	Stock Options (#)	RSUs (#)	Threshold (#)	Target (#)	Max (#)
Mark J. Alles	211,583	30,079	22,560	45,119	90,238
David V. Elkins[2]	103,913	74,842	5,544	11,088	22,176
Peter N. Kellogg	74,233	10,301	7,726	15,452	30,904
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	66,155	9,271	6,953	13,906	27,812
Alise Reicin, M.D.[3]	42,500	35,710	4,464	8,927	17,854
Terrie J. Curran	45,725	6,593	4,945	9,889	19,778

(1) In addition to the PSUs granted to Mr. Elkins and Dr. Reicin for 2018-2020 performance cycle, they were granted PSUs in 2018 for the 2017-2019 performance cycle as follows:

Name	Threshold (#)	Target (#)	Max (#)
David V. Elkins	3,326	6,652	13,304
Alise Reicin, M.D.	2,149	4,298	8,596

(2) Pursuant to his offer letter with us, Mr. Elkins received a new hire grant in 2018 having a total value of $11,350,000, granted to him in the form of stock options ($3,000,000), RSUs ($6,750,000) and PSUs ($1,600,000). A portion of the PSU value ($600,000) was granted under the 2017 – 2019 Long-Term Incentive Plan (“LTIP”) cycle, and the remaining portion of the PSU value ($1,000,000) was granted under the 2018 – 2020 LTIP cycle.

(3) Pursuant to her offer letter with us, Dr. Reicin received a new hire grant in 2018 having a total value of $4,700,000, granted to her in the form of stock options ($1,000,000), RSUs ($2,700,000) and PSUs ($1,000,000). A portion of the PSU value ($325,000) was granted under the 2017 – 2019 LTIP cycle, and the remaining portion of the PSU value ($675,000) was granted under the 2018 – 2020 LTIP cycle.

PSU Awards for Fiscal 2018

The PSU cycle for the 2016 – 2018 PSU awards was completed on December 31, 2018. Messrs. Alles and Kellogg are the only NEOs who participated in this PSU cycle. The Compensation Committee approved the performance achievement of 144.41% of target in relation to the pre-established measures, consisting of three performance objectives: (1) Total Revenue (weighting of 37.5%), (2) Adjusted EPS[1] (weighting of 37.5%), and (3) R-TSR (weighting of 25%). The 2016-2018 PSU awards vest on March 1, 2019 and the threshold, target, maximum and final payouts are as follows:

Name	Threshold (#) 50%	Target (#) 100%	Maximum (#) 200%	2016–2018 Payout (#)
Mark J. Alles	11,706	23,412	46,824	33,809
Peter N. Kellogg	5,122	10,243	20,486	14,792

(1) In addition to financial information prepared in accordance with U.S. GAAP, this document also contains adjusted financial measures based on management’s view of performance. Further information relevant to the interpretation of adjusted financial measures may be found in Exhibit 99.1 of this Annual Report on Form 10-K/A.

Long-Term Incentives — Cash

Dr. Vessey and Ms. Curran are the only NEOs who currently participate in the Long Term Incentive Plan (LTIP) cash plan. The other NEOs receive long-term equity awards as noted in the section above which are granted as a combination of stock options, RSU and PSU awards. However, Dr. Vessey was not an NEO at the time of grant of the awards under the 2016-2018 LTIP plan cycle so he became a participant in the cash LTIP for this cycle. Similarly, Ms. Curran was not an NEO at the time of grant of awards under the 2016-2018 and 2017-2019 LTIP plan cycles so she became a participant in the cash LTIP for these cycles. The targets for Dr. Vessey and Ms. Curran under the cash LTIP are expressed as a percentage of their respective annual base salaries at the time of their participation as approved by the Compensation Committee.

The LTIP is a three-year plan designed to focus executives on achievement of longer-term objectives that are intended to ensure our long-term success financially, commercially and in our research and development programs. Prior to the commencement of each three-year plan (a "performance cycle"), the Compensation Committee establishes three key corporate-wide metrics against which performance will be measured. These objectives are weighted and awards earned under the LTIP are calculated based on actual performance in relation to these weighted objectives. The threshold, target and maximum cash payout levels under the current LTIP performance cycle ending in December of each plan cycle are calculated as a percentage of each NEO's base salary at the time the LTIP was approved by the Compensation Committee.

The LTIP measurements for each performance cycle are listed below:

Active LTIP Performance Cycle	Measurements	Weight	Threshold, Target & Maximum of Financial Measures
2016–2018	Total Revenue	37.5%	90%–100%–110%
2017–2019	Adjusted EPS[(1)]	37.5%	90%–100%–110%
2018–2020	R-TSR	25%	35th–50th–80th (percentiles)

(1) In addition to financial information prepared in accordance with U.S. GAAP, this document also contains adjusted financial measures based on management's view of performance. Further information relevant to the interpretation of adjusted financial measures may be found in Exhibit 99.1 of this Annual Report on Form 10-K/A.

LTIP Awards for Fiscal 2018

For the 2016–2018 LTIP cycle, the Compensation Committee approved the performance achievement of 144.41% of target in relation to the pre-established measures, consisting of three financial performance objectives: (1) Total Revenue (weighting of 37.5%), (2) Adjusted EPS (weighting of 37.5%), and (3) R-TSR (weighting of 25%). We have not disclosed the specific performance targets under the LTIP because these targets represent confidential business information that could place us at a competitive disadvantage by providing insight into our long-term performance and financial goals. For the 2016–2018 LTIP plan cycle, Dr. Vessey and Ms. Curran were the only NEOs to receive a cash payment in this plan. Dr. Vessey's cash payout under this plan was $830,358. Ms. Curran's cash payout under this plan was $324,767.

Other Elements of Compensation

Retirement Benefits

We do not offer pension benefits to our U.S.-based employees, including our NEOs. Instead, we provide the opportunity to accumulate retirement income through:

- Nonqualified Deferred Compensation Plan (Nonqualified Plan): An unfunded plan to which certain U.S.-based management-level employees and each of our NEOs may elect to defer up to 90% of their base salary and up to 100% of their MIP and LTIP payments. Our NEOs were not eligible to receive matching contributions under the Nonqualified Plan.

- 401(k) Plan: Our 401(k) Plan is a tax-qualified retirement savings plan available to all of our eligible employees, including our NEOs. We make matching contributions under our 401(k) Plan in the form of shares of our Common Stock to the Plan accounts of all eligible employees (up to 6% of their eligible earnings or the maximum permitted by law) who participate in the 401(k) Plan and are active employees on the final day of the Plan calendar year or terminated under our qualified retirement requirements during the plan year, including our NEOs. Matching contributions for all employees, including our NEOs, vest 20% per year for the first five years of employment, after which all current and future contributions are 100% vested. For fiscal 2018, we made matching contributions to our NEOs (deposited in the first quarter of 2019) under the 401(k) Plan as follows:

Name	Matching Contributions under the 401(k) Plan[(1)]	
Mark J. Alles	195.23932 shares of Common Stock (fair value of	$12,512.89)
David V. Elkins	195.23932 shares of Common Stock (fair value of	$12,512.89)
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	195.23932 shares of Common Stock (fair value of	$12,512.89)
Alise Reicin, M.D.	0 shares of Common Stock (fair value of $0)	
Terrie J. Curran	195.23932 shares of Common Stock (fair value of	$12,512.89)
Peter N. Kellogg	195.23932 shares of Common Stock (fair value of	$12,512.89)

(1) The matching 401(k) Plan amounts reflect the fair value of the shares issued as of December 31, 2018 and are included in the Summary Compensation Table, column (i), which is included elsewhere in this Annual Report on Form 10-K/A. These contributions are expected to be made by mid-March 2019.

Other Benefits

- Health & Welfare Benefits: We provide our NEOs health and welfare benefits that are consistent with the plans, programs and eligibility provided to other employees. In addition, we provide an excess liability insurance policy to certain senior-level eligible employees. The premiums for such policies are reported as income for our employees, including our NEOs. For fiscal 2018, we made premium payments of $3,336 on behalf of Messrs. Alles and Kellogg and Ms. Curran and $2,632 on behalf of Dr. Vessey. If applicable, attributed amounts of the perquisites and other personal benefits described above for our NEOs for fiscal 2016, fiscal 2017 and fiscal 2018 are included in column (i) of the Summary Compensation Table included elsewhere in this Annual Report on Form 10-K/A.
- Professional Tax and Financial counseling: Each of our NEOs is eligible for reimbursement of reasonable expenses incurred in obtaining professional tax and financial counseling, up to a maximum of $15,000 annually. If applicable, attributed amounts of the perquisites and other personal benefits described above for our NEOs for fiscal 2016, fiscal 2017 and fiscal 2018 are included in column (i) of the Summary Compensation Table included elsewhere in this Annual Report on Form 10-K/A.

Policy with respect to Compensation Deductibility

Internal Revenue Code Section 162(m) limits the deductibility of executive compensation paid by publicly held companies to certain of their executive officers to $1,000,000 per year, but has historically contained an exception for performance-based compensation. Our policy with respect to the deductibility limit of Section 162(m) of the Code generally has been to preserve the federal income tax deductibility of compensation paid when appropriate and in our best interest to do so. However, we have always reserved the right to authorize the payment of non-deductible compensation if we deemed it appropriate to do so under the circumstances. As part of the Tax Cuts and Jobs Act enacted in December 2017, the exemption from Code Section 162(m)'s deduction limit for performance-based compensation has been repealed, effective for taxable years beginning after December 31, 2017, such that compensation paid to our covered executive officers in excess of $1 million will not be deductible unless it qualifies for transition relief applicable to certain arrangements in place as of November 2, 2017. The Tax Cuts and Jobs Act also expands the definition of covered employees to include the CFO, in addition to the CEO and the three other highest paid officers, and the $1 million deduction limitation will apply to any person who was a covered employee in any tax year after 2016, not solely to individuals who were covered employees in the year compensation is paid. Despite our efforts to structure certain performance-based awards for executives granted prior to November 2, 2017 in a manner generally intended to be exempt from Code Section 162(m) and therefore not subject to its deduction limits, because of ambiguities and uncertainties as to the application and interpretation of Code Section 162(m) and the regulations issued thereunder, including the uncertain scope of the transition relief under the Tax Cuts and Jobs Act repealing Code Section 162(m)'s exemption from the deduction limit, no assurance can be given that such compensation intended to satisfy the requirements for exemption from Code Section 162(m) in fact will, and, as with most tax matters, it is possible that our deductions may be challenged or disallowed. Further, we reserve the right to modify compensation that was initially intended to be exempt from Code Section 162(m) if we determine that such modifications are consistent with our business needs.

Compensation Committee Report

The Compensation Committee of our Board of Directors has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Annual Report on Form 10-K/A.

February 26, 2019 Respectfully submitted,

THE COMPENSATION COMMITTEE

Ernest Mario, Ph.D., Chairman
Michael D. Casey
Carrie S. Cox
James J. Loughlin

Compensation Committee Interlocks and Insider Participation

Each member of the Compensation Committee is an independent director within the meaning of the Nasdaq Listing Rules. There were no interlocks among any of the members of the Compensation Committee and any of our executive officers.

Summary Compensation Table

The following table sets forth information regarding compensation earned by our NEOs for the fiscal years ended December 31, 2018, 2017, and 2016.

Name and Principal Position (as of 12/31/2018)	Year	Salary ($)	Bonus (1) ($)	Stock Awards (2) ($)	Option Awards (2) ($)	Non-Equity Incentive Plan Compensation (3) ($)	Change in Pension Value and Nonqualified Deferred Compensation Earnings (4) ($)	All Other Compensation (5) ($)	Total ($)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Mark J. Alles(6) Chief Executive Officer	2018	1,354,167	—	6,341,784	5,716,594	2,792,969	—	18,409	16,223,923
	2017	1,266,667	—	5,452,454	4,235,469	2,144,623	—	16,772	13,115,985
	2016	1,062,583	—	4,257,765	3,164,081	3,689,654	—	18,334	12,192,417
David V. Elkins (7) Executive Vice President and CFO	2018	425,000	1,372,500	8,150,960	2,893,426	270,938	—	21,994	13,134,818
Peter N. Kellogg Former Executive Vice President and CFO	2018	912,583	—	2,171,867	2,015,790	1,109,039	—	29,903	6,239,182
	2017	871,250	—	2,522,768	2,212,952	800,352	—	28,196	6,435,518
	2016	845,667	—	2,435,987	2,118,031	2,707,912	—	29,677	8,137,274
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil. Executive Vice President, Research & Early Development	2018	782,550	—	1,954,624	1,792,776	1,691,163	—	33,663	6,254,776
	2017	691,917	—	2,147,079	1,945,100	957,442	—	25,359	5,766,897
	2016	673,141	—	1,255,157	1,904,017	1,063,826	—	23,850	4,919,991
Alise Reicin, M.D.(7) President, Global Clinical Development	2018	134,583	1,008,000	3,647,756	1,028,662	228,000	—	—	6,047,001
Terrie J. Curran President, Global Inflammation & Immunology	2018	620,833	—	1,390,003	1,231,694	965,001	—	28,170	4,235,701

(1) Amounts reflect sign-on bonuses and minimum guaranteed annual target bonuses for 2018 to Mr. Elkins and Dr. Reicin paid to them under the terms of their respective offer letters in connection with their commencement of employment with us. All other bonuses are reportable as non-equity incentive plan compensation under column (g).

(2) The value of RSU awards in column (e) and stock options in column (f) equals the fair value at date of grant, disregarding for this purpose the estimate of forfeitures related to service-based vesting conditions. The value of PSUs in column (e) equals the fair value at date of grant determined based on the probable outcome of the award, excluding the effect of estimated forfeitures. These values are calculated in accordance with FASB ASC 718. The

assumptions used in determining the grant date fair values of these RSU, PSU and option awards for their respective years are set forth in Note 15 to our Consolidated Financial Statements included in the Annual Report on Form 10-K. For each of the applicable fiscal years, the value of the PSUs on the grant date assuming the maximum award is shown below. The amounts shown for Mr. Elkins and Dr. Reicin in the table below comprise the value of the PSUs they were granted in 2018 with respect to the 2017-2019 performance cycle (i.e., $970,294 and $616,005, respectively) and the 2018-2020 performance cycle (i.e., $1,831,627 and $1,279,441, respectively).

NEO	2016 PSU ($)	2017 PSU ($)	2018 PSU ($)
Mark J. Alles	4,916,520	6,654,365	7,682,634
David V. Elkins	—	—	2,801,921
Peter N. Kellogg	2,151,030	2,627,188	2,631,089
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	2,151,030	2,235,927	2,367,852
Alise Reicin, M.D.	—	—	1,895,446
Terrie J. Curran	—	—	1,683,854

(3) The amounts in column (g) reflect the aggregate cash awards to the NEOs under the fiscal 2018, fiscal 2017 and fiscal 2016 MIP and the 2014–2016, 2015–2017 and 2016–2018 performance cycles under the LTIP. The 2016–2018 performance cycle under the LTIP was granted in PSUs and the grant date value of such PSUs is included in the amount shown in column (e) for 2016 except for Dr. Vessey and Ms. Curran who received a cash payout under the 2016–2018 LTIP which is included in the amount shown in column (g) for 2018. The payouts under the fiscal 2018 MIP and the 2016–2018 LTIP performance cycle were approved by the Compensation Committee on January 28, 2019 and paid shortly after approval. The MIP and the 2016–2018 LTIP (for Dr. Vessey and Ms. Curran only) are discussed in further detail under the heading "Elements of Our Compensation Programs for NEOs & 2018 Compensation Actions" and, for purposes of this Summary Compensation Table, have been characterized as "Non-Equity Incentive Plan Compensation" under column (g) rather than "Bonus" under column (d). The amounts in column (g) represent the 2018 MIP bonus for all NEOs with respect to 2018 and for Dr. Vessey, includes both his 2018 MIP bonus of $860,805 and the value of his 2016–2018 LTIP cash payout of $830,358, and for Ms. Curran, includes both her 2018 MIP bonus of $640,234 and the value of her 2016–2018 LTIP cash payout of $324,767.

(4) We do not have a pension plan for our NEOs. Under our Nonqualified Plan, there are no above-market or preferential earnings.

(5) The amounts in column (i) reflect the following:

Name	Year	Value of Employer Contributions to the Nonqualified Plan ($)	Value of Matching Contributions To the 401(k) Plan in Shares of Common Stock* ($)	Professional Tax and Financial Counseling ($)	Excess Liability Insurance Premiums ($)	Contributions to Health Savings Account ($)	Gross-up for Taxes ($)	Other ($)	Total ($)
Mark J. Alles	2018	—	12,513	—	3,336	—	2,560	—	18,409
	2017	—	13,789	—	2,983	—	—	—	16,772
	2016	—	17,382	—	952	—	—	—	18,334
David V. Elkins	2018	—	12,513	4,300	—	1,008	4,173	—	21,994
Peter N. Kellogg	2018	—	12,513	12,776	3,336	—	1,278	—	29,903
	2017	—	13,789	11,424	2,983	—	—	—	28,196
	2016	—	17,382	9,591	2,704	—	—	—	29,677
S. J. Rupert Vessey, MA, BM BCh, FRCP, D.Phil.	2018	—	12,513	10,787	2,632	—	7,731	—	33,663
	2017	—	13,789	9,959	1,611	—	—	—	25,359
	2016	—	17,382	5,938	530	—	—	—	23,850
Alise Reicin, M.D.	2018	—	—	—	—	—	—	—	—
									&