



1040 Spring Street
Silver Spring, MD 20910

55 T.W. Alexander Drive
Research Triangle Park, NC 27709

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

The 2019 annual meeting of shareholders of United Therapeutics Corporation will be held at our co-headquarters located at 1110 Spring Street, Silver Spring, Maryland 20910, on Wednesday, June 26, 2019, at 8:00 a.m. local time for the following purposes:

1. To elect the four Class II directors named in the Proxy Statement and nominated by our Board of Directors to serve three-year terms until the 2022 annual meeting of shareholders and until their successors are duly elected and qualified or until their office is otherwise vacated;
2. To vote on an advisory resolution to approve executive compensation;
3. To approve the amendment and restatement of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan;
4. To ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for 2019;
5. To consider a shareholder proposal requesting declassification of our Board of Directors, if properly presented; and
6. To consider and act upon such other business as may properly come before the annual meeting of shareholders and any adjournment or postponement thereof.

Only shareholders as of April 30, 2019 are entitled to notice of, and to vote at, our 2019 annual meeting of shareholders.

Important Notice Regarding the Availability of Proxy Materials for United Therapeutics Corporation's 2019 Annual Meeting of Shareholders to Be Held on Wednesday, June 26, 2019:

United Therapeutics Corporation's Proxy Statement and Annual Report on Form 10-K are available at:
<http://ir.unither.com/annual-and-proxy>

WHETHER OR NOT YOU EXPECT TO ATTEND THE MEETING, YOU ARE REQUESTED TO VOTE YOUR SHARES AS PROMPTLY AS POSSIBLE SO THAT YOUR SHARES ARE REPRESENTED AT THE MEETING. ALL SHAREHOLDERS ARE EXTENDED A CORDIAL INVITATION TO ATTEND THIS MEETING. If you wish to attend the meeting in person, you must follow the procedures to attend the annual meeting described in the Proxy Statement.

By Order of the Board of Directors,

A handwritten signature in black ink, appearing to read "Paul A. Mahon", written over a white background.

Paul A. Mahon
Corporate Secretary

May 7, 2019
Silver Spring, Maryland
Research Triangle Park, North Carolina

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UNITED THERAPEUTICS CORPORATION

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PROXY STATEMENT FOR THE 2019 ANNUAL MEETING OF SHAREHOLDERS INFORMATION ABOUT THE MEETING, VOTING AND PROXIES

General

This Proxy Statement and the accompanying proxy card are being furnished to shareholders of United Therapeutics Corporation in connection with the solicitation by our Board of Directors (Board) of proxies to be voted at our 2019 annual meeting of shareholders (Annual Meeting) and any adjournment or postponement thereof. Our Annual Meeting will be held on Wednesday, June 26, 2019, beginning at 9:30 a.m. local time at our co-headquarters located at 1110 Spring Street, Silver Spring, Maryland 20910. Proxy materials or a Notice of Internet Availability of Proxy Materials (Notice) were first sent to shareholders on or about May 7, 2019.

Record Date and Outstanding Shares

On April 30, 2019 (the Record Date), there were approximately 43,810,915 shares of our common stock outstanding and entitled to vote at our Annual Meeting. Only shareholders of record on the Record Date will be entitled to vote, either in person or by proxy, at our Annual Meeting, and each share will have one vote for each director nominee and one vote for each other matter to be voted on. If you are a beneficial owner of shares of our common stock (that is, you hold shares through a broker, bank, trust or other nominee), you must obtain a legal proxy from the broker, bank, trust or other nominee that holds your shares if you wish to vote in person at the meeting. See the section entitled *Attending the Annual Meeting* for procedures that must be followed if you plan to attend the Annual Meeting in person.

Internet Availability of Proxy Materials

As permitted by the rules of the Securities and Exchange Commission (SEC), we are making our proxy materials available to shareholders primarily via the Internet, rather than mailing printed copies of these materials to shareholders. On or about May 7, 2019, we sent to many of our shareholders a Notice containing instructions on how to access and review our proxy materials, including our Proxy Statement and the 2018 Annual Report on Form 10-K, and vote online.

This process is designed to expedite shareholders' receipt of proxy materials, lower the cost of the annual meeting, and help conserve natural resources. If you received a Notice by mail, you will not receive a printed copy of the proxy materials unless you request one. If you would prefer to receive printed proxy materials, please follow the instructions included in the Notice. Shareholders who requested paper copies of the proxy materials did not receive the Notice and will receive the proxy materials in the format requested.

Solicitation

We will bear the cost of soliciting proxies. Our directors, officers and employees may solicit proxies in person or by telephone, fax, email or regular mail, and they will receive no additional compensation for such work. Copies of solicitation materials may be furnished to brokers, custodians, nominees and other fiduciaries for forwarding to beneficial owners of shares of our common stock, and normal handling charges may be paid for such forwarding service. We have also retained Georgeson Inc. to assist in soliciting proxies for a fee of approximately \$12,000 plus customary expenses.

Voting Rights and Quorum

Shares can be voted at our Annual Meeting only by shareholders who are present in person or represented by proxy. Whether or not you plan to attend our Annual Meeting in person, you are encouraged to vote your shares. The representation in person or by proxy of at least a majority of the outstanding shares entitled to vote is necessary to achieve a quorum for the transaction of business at the Annual Meeting.

If you are a shareholder of record (that is, you hold shares in your own name), you may revoke any proxy given pursuant to this solicitation at any time before it is exercised at the Annual Meeting by delivering to the Corporate Secretary of United Therapeutics Corporation at 1735 Connecticut Avenue N.W., Washington, D.C. 20009 a written notice of revocation or a fully executed proxy bearing a later date, or by attending the Annual Meeting and voting in person. See the section entitled *Attending the Annual Meeting* for procedures that must be followed if you plan to attend the Annual Meeting in person. If you are a beneficial owner (that is, you hold shares through a broker, bank, trust or other nominee), please contact your bank or broker if you wish to revoke a previously given proxy or change your voting instructions.

If you are a beneficial owner, your broker, bank, trust or other nominee has the discretion to vote on routine corporate matters presented in the proxy materials without your specific voting instructions. Your broker, bank, trust or other nominee does not have the discretion to vote on non-routine matters. Only Proposal No. 4 (ratification of the appointment of our independent registered public accounting firm) is considered a routine matter. Proposals No. 1, 2, 3 and 5 are not considered routine matters, and without your specific voting instructions your shares will not be voted on these proposals.

Abstentions and “broker non-votes” (i.e., shares held by brokers, banks, trusts or other nominees that are represented at the meeting but with respect to which they have no discretionary power to vote on a particular matter and have received no instructions from the beneficial owners thereof) will be counted as present in determining whether the quorum requirement is satisfied.

Proxy

If the enclosed proxy card is properly executed and returned prior to the Annual Meeting, the shares represented by the proxy card will be voted in accordance with the shareholder’s directions. If the proxy card is signed and returned without any direction given, shares of our common stock represented by the proxy will be voted in accordance with our Board’s recommendations as follows: (i) **FOR** the election of each of the four director nominees named on the proxy card; (ii) **FOR** the advisory resolution to approve executive compensation; (iii) **FOR** the amendment and restatement of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan; (iv) **FOR** the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for 2019; and (v) **FOR** the shareholder proposal requesting declassification of our Board of Directors.

Voting Requirements

Election of Directors

Directors are elected by a majority of votes cast at our Annual Meeting. A majority of votes cast means that the number of votes cast for the director nominee’s election must exceed the number of votes cast against that director nominee’s election. Broker non-votes and abstentions are not considered votes cast and therefore have no impact on the election of directors. Cumulative voting is not permitted in the election of directors. Proxies may not be voted for more than four nominees.

All Other Proposals to Be Voted On

The affirmative vote of the holders of a majority of the outstanding shares of common stock present, in person or by proxy, at our Annual Meeting, and entitled to vote on the matter, is required for approval of each of the other proposals to be voted on at the meeting. Abstentions have the same effect as an “against” vote. Broker non-votes, if any, have no impact on the vote.

PROPOSAL NO. 1
ELECTION OF DIRECTORS

Our Board consists of eleven members and is divided into three classes of three or four members each. At each annual meeting of shareholders, members of one of the classes, on a rotating basis, are elected to a three-year term. This year at our Annual Meeting, Mr. Christopher Causey, Mr. Richard Giltner, Ms. Nilda Mesa and Ms. Judy Olian are nominees for election as Class II directors to serve three-year terms until our 2022 annual meeting of shareholders or until their successors are duly elected and qualified or their office is otherwise vacated. Ms. Mesa was appointed to the Board in October 2018 upon the recommendation of our Nominating and Governance Committee. She was recommended for our Nominating and Governance Committee's consideration by our Lead Independent Director.

Each of our director nominees has consented to be named herein and to continue to serve on our Board of Directors, if elected. We do not anticipate that any nominee will become unable or unwilling to accept his or her nomination or election. If such an event should occur, the persons named on the proxy card intend to vote for the election of such other person as is selected by our Board in such nominee's stead. In the alternative, the persons named on the proxy card may simply vote for the remaining nominees, leaving a vacancy that may be filled at a later date by our Board of Directors, or our Board of Directors may reduce the size of our Board.

We believe that our directors should possess the highest personal and professional ethics, integrity and values, and be committed to representing the best interests of our shareholders. We also endeavor to have a Board of Directors that, as a whole, represents a range of experiences in business, government, education and technology and in other areas that are relevant to our business activities. We assess the effectiveness of our efforts with respect to this commitment during the annual evaluation process conducted by our Nominating and Governance Committee. In addition, our Board believes there are certain attributes every director should possess, which are described in the *Director Nominations and Diversity* section below.

In evaluating incumbent directors for re-nomination to our Board, the members of our Nominating and Governance Committee consider a variety of factors. These include each director's independence, financial literacy, personal and professional accomplishments, tenure on our Board and experience in light of our business goals. The following presents information concerning persons nominated for election as directors at our Annual Meeting and for those of our directors whose terms of office will continue after our Annual Meeting, including their age (as of the date of this Proxy Statement), membership on committees of our Board, principal occupations or affiliations during the last five years or more, director qualifications, and certain other directorships held. For additional information concerning the director nominees, including stock ownership and compensation, see the section entitled *Non-Employee Director Compensation* and the *Beneficial Ownership of Common Stock* table below.

Nominees as Class II Directors for Election at our 2019 Annual Meeting of Shareholders

Christopher Causey, M.B.A.
Age 56
Chairman, Compensation
Committee
Member, Nominating and
Governance Committee

Mr. Causey has served as the Principal of the Causey Consortium, a professional services organization providing business strategy and marketing counsel to the healthcare industry, since 2002. Previously, Mr. Causey served as a senior marketing officer for a variety of healthcare companies. From 2001 to 2002, Mr. Causey served as the Chief Marketing Officer for Definity Health Incorporated. He was also a member of the board of directors of Data Sciences International, Inc., a private company that develops wireless physiological monitoring solutions, from 2008 to 2013. Mr. Causey has served as a United Therapeutics director since 2003.

Drawing upon nearly 30 years of experience in strategic planning and marketing for health care delivery, financing and biotechnology organizations, including as Principal of Causey Consortium, Mr. Causey brings to our Board substantial experience in the health care and biotech industries. Our Board benefits from Mr. Causey's extensive leadership experience as a senior health care marketing executive.

Richard Giltner
Age 55
Chairman, Audit Committee
Member, Nominating and
Governance Committee

From 2009 until his retirement in 2010, Mr. Giltner was a portfolio manager at Lyxor Asset Management, an asset management group at the French bank Société Générale. From 2006 until 2009, he served as a managing director of Société Générale Asset Management, an international fund management firm, and head of the European office for its fund of hedge funds group. From 2003 to 2006, Mr. Giltner was the global head of foreign exchange options for the investment banking arm of Société Générale. He also held various other managerial positions within Société Générale from 1991 until 2003. Mr. Giltner has been a private investor since his retirement from Société Générale in 2010. Our Board of Directors has determined that Mr. Giltner is an audit committee financial expert as defined under the rules and regulations of the SEC and meets the financial sophistication requirements of Nasdaq's listing standards. Mr. Giltner has served as a United Therapeutics director since 2009.

Mr. Giltner brings to our Board over 20 years of experience in the financial sector, including international financial markets, financial derivatives, alternative investments and asset management. As our business continues to grow and expand, our Board benefits from Mr. Giltner's global business and financial experience and his perspective as an institutional investor, as well as his leadership experience in international finance from his service in various management roles at Société Générale.

Nilda Mesa, J.D.
Age 59

Ms. Mesa has had a long and innovative career in environment, energy and sustainability at the city, state, national and global levels, and now writes and presents extensively on climate, energy, equity and urban systems relating to them. From 2014-2016, Ms. Mesa served as Director of the New York City Mayor's Office of Sustainability, where she led the pathbreaking OneNYC long-term sustainability plan for the city. As chief sustainability officer for New York City, she oversaw programs in climate, energy, sustainability, air quality and public health, waste, green buildings, transportation, public education and other initiatives. In 2016, she returned to Columbia University as an adjunct professor at the School of International and Public Affairs, as well as Director of the Urban Sustainability and Equity Planning Program with Columbia's Center for Sustainable Urban Development at the Earth Institute, positions she continues to hold today. In 2006, she founded Columbia's Office of Environmental Stewardship, one of the first in the United States for a university. She also served as Chief Administrative Officer at the Columbia Journalism School from 2012-2014. Before joining Columbia, Ms. Mesa served in environmental leadership roles at the White House Council on Environmental Quality, the U.S. Air Force, the U.S. Environmental Protection Agency, and the California Attorney General's office, and practiced law in both the public and private sectors. Her work has involved extensive international experience, including most recently a 2018 appointment as a visiting professor at the Paris Institute of Political Studies (Sciences Po), an international research university in France. She is the co-author of a book to be published next year on climate and collaboration, as well as a contributor to the recently published "Smarter New York City: How City Agencies Innovate." (Columbia University Press). She is a graduate of Harvard Law School and Northwestern University.

Ms. Mesa brings to our Board extensive executive leadership experience, particularly in the area of environmental stewardship. As we continue to operate and grow our business in an environmentally sustainable fashion, we expect Ms. Mesa's insights to be extremely valuable. In addition, our Board benefits from her experience working in a variety of scientific, academic, government, legal and international settings.

Judy Olian, Ph.D.
Age 67
Member, Compensation Committee

Judy Olian has served as President of Quinnipiac University since July 2018. Previously, she served as dean of the UCLA Anderson School of Management and the John E. Anderson Chair in Management from 2006 to 2018. Her research and business expertise centers on aligning organizational strategies and design with human resource systems and incentives, and managing top management teams. She began her UCLA appointment after serving as dean and professor of management at the Smeal College of Business Administration at Pennsylvania State University. Earlier, she served in various faculty and executive roles at the University of Maryland and its Robert H. Smith School of Business. Ms. Olian serves or has been a member of various advisory boards (including the U.S. Studies Centre at the University of Sydney, Peking University Business School's International Advisory Board and Catalyst, a leading global think tank for women in business) and served as Chairman of the Loeb Awards for Business Journalism. Born and raised in Australia, Ms. Olian received her B.S. in Psychology from the Hebrew University, Jerusalem and her M.S. and Ph.D. in Industrial Relations from the University of Wisconsin, Madison. She was the Chairman of AACSB International, the premier thought leadership and accreditation organization for leading global business schools, and also serves on the board of directors of Ares Management, L.P., a publicly-traded global alternative asset management firm, and Mattel, Inc., a publicly-traded multinational toy manufacturing company. She has served as a United Therapeutics director since 2015.

As the president of a prestigious university and former dean of one of the world's leading business schools, Ms. Olian brings valuable expertise in managing and leading a large organization. Her academic expertise, which centers on the alignment of organizational strategies with human resource systems and incentives, provides valuable insight to a growing biotech company like United Therapeutics. In addition, her experience as a director of Ares Management and Mattel provides valuable public company board experience.

***OUR BOARD OF DIRECTORS RECOMMENDS THAT OUR SHAREHOLDERS VOTE "FOR"
THE ELECTION OF EACH OF THE NOMINEES.***

Class III Directors Continuing in Office with Terms Ending in 2020

Raymond Dwek, C.B.E., F.R.S.
Age 77

Professor Dwek is a Fellow of the Royal Society, London, and has served as Director of the Glycobiology Institute at the University of Oxford since 1988. He also served as Professor of Glycobiology at the University of Oxford from 1988 through 2009, and currently serves as Professor Emeritus. He was President of the Institute of Biology (a professional organization) from 2008 through 2010. From 2000 to 2006, Professor Dwek served as head of the Department of Biochemistry at the University of Oxford. Professor Dwek has been serving in various positions at the University of Oxford since 1966. In 1988, Professor Dwek was the scientific founder of Oxford GlycoSciences PLC, which was publicly traded on the London Stock Exchange and Nasdaq, and he served as a member of its Board of Directors until its sale in 2003. He was the 2007 Kluge Chair of Technology and Society at the U.S. Library of Congress. Professor Dwek is the founder of glycobiology, the study of the structure, biosynthesis and biology of sugar chains attached to proteins. He has served as a United Therapeutics director since 2002.

Professor Dwek has extensive scientific experience as both the head of the Department of Biochemistry at the University of Oxford, one of the world's largest biochemistry departments, and as a biotechnology innovator at organizations such as the Glycobiology Institute and Oxford GlycoSciences PLC. In evaluating existing and potential new programs, our Board benefits from his scientific insight and experience in pharmaceutical research and development.

Christopher Patusky, J.D., M.G.A.
Age 55
Vice Chairman of the Board
Lead Independent Director
Chairman, Nominating and Governance Committee
Member, Audit Committee
Member, Compensation Committee

Mr. Patusky has more than 30 years of experience in the private, public and nonprofit sectors. After graduating from Harvard Law School, he clerked and practiced law from 1988 to 2000, focusing on litigation, intellectual property, and business startups. After receiving a master's degree in governmental administration from the University of Pennsylvania, Mr. Patusky served from 2002 to 2007 as the Executive Director and as a member of the faculty of the University of Pennsylvania's Fels Institute of Government. From 2007 to 2011, he served as the Director of the Office of Real Estate and as a member of the Senior Policy Team at the Maryland Department of Transportation, staying on in a part-time capacity until 2013. Since 2012, Mr. Patusky has served as the founding principal of Patusky Associates, LLC, which serves as a personal investment vehicle, and as an executive manager of Slater Run Vineyards, LLC, his family's farm-based vineyard and winery. Our Board of Directors has determined that Mr. Patusky meets the financial sophistication requirements of Nasdaq's listing standards. He has served as a United Therapeutics director since 2002.

Mr. Patuský brings to our Board extensive legal and business experience from his law career, governance experience from his former position as an administrator and faculty member at the University of Pennsylvania's Fels Institute of Government, and governmental regulatory experience gained from his leadership position with the Maryland Department of Transportation. His responsibilities at the Fels Institute and the Maryland Department of Transportation included significant budgetary management and oversight responsibilities.

Tommy Thompson, J.D.
Age 77
Member, Audit Committee

Before entering the private sector in 2005, Governor Thompson enjoyed a long and distinguished career in public service. As Secretary of the U.S. Department of Health and Human Services from 2001 to 2005, he was a leading advocate for the health and welfare of all Americans. He also served four terms as Governor of Wisconsin from 1987 to 2001. Governor Thompson served as a partner at the law firm of Akin Gump Strauss Hauer & Feld LLP (Akin Gump) in Washington, D.C. from 2005 until January 2012. Governor Thompson has served as Chairman and Chief Executive Officer of Thompson Holdings, a consulting firm, since 2012. In 2017, Governor Thompson became an Adjunct Senior Advisor to Akin Gump. From 2005 to 2009, he also served as the Independent Chairman of the Deloitte Center for Health Solutions, which researches and develops solutions to some of our nation's most pressing health care and public health related challenges. He also served as chairman of the board of directors of AGA Medical Holdings, Inc. from 2005 until 2010, and is a member of the boards of directors of public companies Centene Corporation, Physicians Realty Trust, Tyme Technologies, Inc. and TherapeuticsMD, Inc. He previously served on the boards of various other public companies, including Cancer Genetics Inc., CareView Communications, Inc., CNS Response, Inc., C.R. Bard, Inc., Cytori Therapeutics, Inc., SpectraScience and X Shares Advisors. Our Board has determined that Governor Thompson meets the financial sophistication requirements of Nasdaq's listing standards. Governor Thompson has served as a United Therapeutics director since 2010.

Governor Thompson brings to our Board significant experience in the healthcare industry, both as a public official (former Secretary of the U.S. Department of Health and Human Services) and in the private sector (Deloitte Center for Health Solutions), as well as public company board experience and knowledge of legislative affairs. Governor Thompson's legal experience from his private practice at Akin Gump also is useful in our Board's oversight of our legal and regulatory compliance.

Class I Directors Continuing in Office with Terms Ending in 2021

Katherine Klein, Ph.D.
Age 62

Professor Klein has served as the Vice-Dean of the Wharton Social Impact Initiative since July 2012, and as The Wharton School's Edward H. Bowman Professor of Management since 2005. She also served as Professor of Management of The Wharton School from 2004 to 2005. Prior to joining Wharton, Professor Klein was on the faculty of the University of Maryland and a visiting professor at the Stanford Graduate School of Business. She received her B.A. from Yale University, and her Ph.D. in Community Psychology from the University of Texas at Austin. An award-winning organizational psychologist, Professor Klein has conducted extensive field research regarding a range of topics including team leadership, climate, conflict, social networks and effectiveness; organizational change and technology implementation; employee diversity; and employee responses to stock ownership. She has taught executive education and consulted with and studied a variety of for-profit and non-profit organizations including Charles Schwab, Rohm and Haas, North American Scientific, Medtronic, The Baltimore Shock Trauma Center, Penn Vet, the U.S. Census Bureau, and the Korean Management Association. Her research has been published in numerous top journals including Administrative Science Quarterly, Journal of Applied Psychology, the Academy of Management Journal, and the Academy of Management Review. She is also a former associate editor of the Journal of Applied Psychology and Administrative Science Quarterly. Professor Klein is a Fellow of the Academy of Management, the Society for Industrial and Organizational Psychology, the American Psychological Association, and the Association for Psychological Science. She has served as a United Therapeutics director since 2014.

As a professor and Vice-Dean at one of the world's leading business schools, Professor Klein brings valuable expertise in organizational behavior and employee ownership culture, two topics that are of vital importance to a growing biotech company like United Therapeutics. As we adapt to the needs of a more mature company while balancing our goal of maintaining an entrepreneurial culture designed to foster continued high growth and innovation, Professor Klein provides valuable insight to our Board.

Ray Kurzweil
Age 71

Mr. Kurzweil is an inventor, entrepreneur and author, and has created several important technologies in the artificial intelligence field. He has received the National Medal of Technology, the MIT Lemelson Prize, twenty-one honorary doctorates, a Grammy award for his contributions to music technology, and honors from three U.S. Presidents. In 2002, Mr. Kurzweil was inducted into the National Inventors Hall of Fame. Since 1995, Mr. Kurzweil has served as the Chief Executive Officer of Kurzweil Technologies, Inc., a technology development firm. Since January 2013, he has also served as a Director of Engineering for Google, a global technology and Internet search company. He has served as a United Therapeutics director since 2002.

Mr. Kurzweil brings to our Board extensive technological experience as an inventor and technology developer. His technical experience in the areas of artificial intelligence, telemedicine, and pharmaceutical research and development, and his experience in building businesses around his inventions, provide our Board with perspective in evaluating current and proposed technologies and business opportunities. Mr. Kurzweil also brings to our Board substantial corporate leadership experience from his role as Chief Executive Officer of Kurzweil Technologies, Inc.

**Martine Rothblatt, Ph.D., J.D.,
M.B.A.**
Age 64
*Chairman of the Board
Chief Executive Officer*

Dr. Rothblatt founded United Therapeutics in 1996 and served as Chairman and Chief Executive Officer from its inception through January 2015, when she became our Chairman and Co-Chief Executive Officer. She was promoted to her current role as Chairman and *soul* CEO in June 2016. Prior to founding United Therapeutics, she founded and served as Chairman and Chief Executive Officer of Sirius XM Satellite Radio. She is a co-inventor on six of our patents pertaining to treprostinil. In 2014, Dr. Rothblatt was appointed to the Committee of Science, Technology and Law of the National Research Council. She has served as a United Therapeutics director since 1996.

Dr. Rothblatt brings to our Board extensive leadership and business experience at technology companies, as well as in-depth knowledge of our company from her service as our founder, Chairman and Chief Executive Officer. She also has substantial knowledge of medical ethics, having obtained her Ph.D. in medical ethics from the University of London.

Louis Sullivan, M.D.
Age 85
**Member, Compensation Committee
Member, Nominating and
Governance Committee**

Dr. Sullivan was the founding President of Morehouse School of Medicine, from 1981 to 1989, served as President again from 1993 to 2002, and has served as President Emeritus since 2002. Dr. Sullivan was also one of the founders and served as Chairman of Medical Education for South African Blacks, Inc., a member of the National Executive Council for the Boy Scouts of America, and a member of the Board of Trustees of Little League of America. Dr. Sullivan served as Secretary of the U.S. Department of Health and Human Services from 1989 to 1993. He is a physician certified in internal medicine with a subspecialty certification in hematology. Dr. Sullivan currently serves on the board of directors of Emergent BioSolutions, Inc. (since 2005), a publicly-traded company. He also serves as Co-Chair of the Henry Schein Cares Foundation. Dr. Sullivan previously served on the boards of directors of a wide range of public companies, including General Motors Company, BioSante Pharmaceuticals, Inc., Bristol-Myers Squibb Company, Cigna Corporation, 3M Company, Henry Schein, Inc., Household International (now HSBC), Equifax and Georgia Pacific Corporation. He has served as a United Therapeutics director since 2002.

Dr. Sullivan brings to our Board extensive experience in the healthcare industry as a public official from his service as a Secretary of the U.S. Department of Health and Human Services, physician certified in internal medicine and professor and administrator at Morehouse School of Medicine. He also has substantial public company board experience gained from his service as a director of Henry Schein, Inc. and Emergent BioSolutions, Inc., as well as his previous public company board service.

BOARD OF DIRECTORS, COMMITTEES, CORPORATE GOVERNANCE

The Role of our Board: Risk Oversight

Our Board is responsible for overseeing the risks facing our company. Our Board works directly with our executive officers and other members of our senior management team in carrying out its risk oversight function. Our directors take a proactive, interested and detailed approach to their service on our Board and set expectations to promote our success through the achievement of business objectives while maintaining high standards of responsibility and ethics. At its regularly scheduled meetings, our Board receives reports from our Chairman and Chief Executive Officer, President and Chief Operating Officer, Chief Financial Officer and General Counsel, and may also receive reports from the Committee Chairmen, outside consultants and other members of senior management, among others. These presentations often include identification and assessment of risks our company currently faces or may face in the future. Our Board is able to ask questions, discuss and provide guidance to management on the risks presented, as well as any risks that our Board identifies. Our senior management team is responsible for assessing risk on a daily basis. Our Board expects that our senior management team continually identifies, assesses and manages the short-term and long-term risks faced by our company. If members of our senior management team identify risks that are material to our company, our Board may convene a special meeting to discuss, assess and address such risks.

Our Board implements its risk oversight function both as a whole and through delegation to various committees. These committees meet regularly and report back to the full Board. Our Audit Committee's responsibilities include general oversight of our company's practices with respect to financial risk assessment and management, as well as the responsibility to review and discuss the company's practices with respect to risk assessment and risk management, and risks related to matters including the company's financial statements and financial reporting processes, and information technology and cybersecurity. Our Compensation Committee's duties include overseeing an assessment of the incentives and risks arising from or related to our compensation policies and practices, including but not limited to those applicable to our executive officers, and evaluating whether those incentives and risks are appropriate. Our Nominating and Governance Committee's responsibilities include oversight of our company's practices with respect to legal and regulatory compliance risk.

In April 2019, our Compensation Committee reviewed a risk assessment conducted by management and our Compensation Committee's independent compensation consultant, Radford, a part of Aon plc (Radford), to determine whether the design of our employee compensation programs and the amounts and components of employee compensation might create incentives for excessive risk-taking by our employees. Based on this review, our Compensation Committee concluded that the risks arising from our employee compensation programs are not reasonably likely to have a material adverse effect on our company. Our Compensation Committee believes that our compensation programs encourage employees, including our executives, to remain focused on a balance of the short-term and long-term operational and financial goals of our company, thereby reducing the potential for actions that involve an excessive level of risk. See the section entitled *Compensation Discussion and Analysis—Key Governance Features of Our Executive Compensation Program* for information regarding certain risk-mitigating features of our compensation programs.

Board of Directors Leadership

Our Board believes that it is important for it to evaluate and determine the most appropriate Board leadership structure so that our Board can both provide effective, independent oversight of management and facilitate its understanding of the company's business. To carry out this responsibility, our Corporate Governance Guidelines empower our Board to periodically evaluate and determine the appropriate leadership structure for our Board. In doing so, our Board considers our company's specific circumstances at any given time, such as the evolving needs of our company.

Our Board has determined that at this time the leadership structure best suited to support the dynamic demands of our business is to have Dr. Rothblatt, who founded our company, serve as Chairman of our Board and Chief Executive Officer, and to appoint a Lead Independent Director with robust, defined responsibilities. Our Board believes that Dr. Rothblatt serving the combined roles of Chairman and Chief Executive Officer provides an efficient and effective leadership model for a growing entrepreneurial company like ours, as it fosters clear accountability, effective decision-making, and alignment on corporate strategy. In addition, because our Board works closely with our executive officers and members of senior management, there is a natural synergy in the combined Chairman and Chief Executive Officer roles that facilitates our Board's guidance of management.

Our Board also believes that independent leadership is an important aspect of the Board's leadership structure. As a result, the independent directors on our Board have designated Mr. Patusky as Lead Independent Director. The Lead Independent Director is selected annually by the independent directors. Among other responsibilities, our Lead Independent Director coordinates the activities of our independent directors, approves Board meeting schedules and agendas, chairs all meetings of our Board when the Chairman is not present, including executive sessions of our independent directors, and serves as principal liaison between our independent directors and our Chairman and senior management. The Lead Independent Director also has the authority to call executive sessions of the independent directors and is available for consultation and communication with major shareholders. A more detailed description of the responsibilities of the Lead Independent Director is included in our Corporate Governance Guidelines, which are available on our website at <http://ir.unither.com/corporate-governance>.

Director Nominations and Diversity

The Nominating and Governance Committee of our Board does not have a formal policy with respect to considering director candidates or director diversity. Once our Nominating and Governance Committee identifies a potential director nominee, it screens the candidate, performs reference checks and conducts interviews with the assistance of our General Counsel. If the outcome of that process is favorable, our Nominating and Governance Committee may recommend the candidate to our Board for consideration.

Our Nominating and Governance Committee considers candidates recommended by shareholders and evaluates them using the same criteria as it uses to evaluate all other candidates. Our Nominating and Governance Committee seeks to recommend director candidates who will enhance the quality of our Board's deliberations and decisions, who will take their duties seriously and who will promote the values and ethics to which we subscribe.

A shareholder who wishes to recommend a prospective nominee for our Nominating and Governance Committee's consideration should submit the candidate's name and qualifications to our Corporate Secretary at the address set forth under *Shareholder Communication with Directors* below.

Minimum Criteria for Director Candidates

To be considered by our Nominating and Governance Committee, a director candidate must meet the following minimum criteria:

- Personal and professional integrity;
- A record of exceptional ability and judgment;
- Ability and willingness to participate fully and work constructively in Board activities, including active participation in meetings of our Board and any committees to which he or she is assigned;

- Interest, capacity and willingness, in conjunction with the other members of our Board, to serve the interests of our shareholders;
- Reasonable knowledge of the fields of our operations, as well as familiarity with the principles of corporate governance;
- Expertise to serve on one or more committees of our Board; and
- Absence of any personal or professional relationships that would adversely affect his or her ability to serve our best interests and those of our shareholders.

Additional Qualities and Skills for Director Candidates

In addition, our Nominating and Governance Committee is interested in candidates who possess the following skills:

- The ability to contribute to the variety of opinions, perspectives, personal and professional experiences and backgrounds, as well as other characteristics that differ among members of our Board;
- A desire to contribute positively to the existing tone and collaborative culture among our Board members; and
- Professional and personal experiences and expertise relevant to achievement of our strategic objectives.

Our Nominating and Governance Committee’s evaluation of director nominees considers their ability to contribute these qualities and skills to our Board, and our Nominating and Governance Committee reviews its effectiveness in balancing these considerations when assessing the composition of our Board.

Director Independence

Our Board has determined that: (i) Christopher Causey, Raymond Dwek, Richard Giltner, Katherine Klein, Ray Kurzweil, Nilda Mesa, Judy Olian, Christopher Patusky, Louis Sullivan and Tommy Thompson are independent in accordance with the Nasdaq listing standards; (ii) Martine Rothblatt is not independent due her employment as our Chief Executive Officer; (iii) Richard Giltner, Christopher Patusky and Tommy Thompson meet the heightened independence standards for audit committee members set forth in rules promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act); and (iv) Christopher Causey, Judy Olian, Christopher Patusky and Louis Sullivan meet the heightened independence standards for compensation committee members under the Nasdaq listing standards.

Prior to 2011, Professor Dwek was regarded as one of our independent directors. In 2011, our Board determined not to designate Professor Dwek as an independent director under the Nasdaq listing standards, after considering our relationship with the University of Oxford, which included a research agreement related to glycobiological antiviral agents (the Research Agreement). At the time, our Board believed that Professor Dwek brought significant and valuable independent insight to our Board and did not believe that our relationship with Oxford University fell within any of the categorical prohibitions against a finding of independence under the Nasdaq listing standards. However, in an abundance of caution and in light of our historical relationship with Oxford, our Board did not designate Professor Dwek as an “independent director” within the meaning of the Nasdaq listing standards beginning in 2011. In December 2015, we sold our glycobiological antiviral business to another company, and as a result we were no longer a party to the Research Agreement. In April 2019, based upon the recommendation of our Nominating and Governance Committee, following more than

three years since the sale of our glycobiological antiviral business, our Board concluded once again that Professor Dwek is an independent director.

Committees of our Board of Directors

Our Board has three standing committees: the Audit Committee, the Compensation Committee and the Nominating and Governance Committee. A summary of each committee's duties can be found below, and additional detail can be found in each committee's charter. The current composition of each committee is as follows:

	Audit	Compensation	Nominating and Governance
Christopher Causey		Chair	Member
Raymond Dwek			
Richard Giltner	Chair		Member
Katherine Klein			
Ray Kurzweil			
Nilda Mesa			
Judy Olian		Member	
Christopher Patusky ⁽¹⁾	Member	Member	Chair
Martine Rothblatt ⁽²⁾			
Louis Sullivan		Member	Member
Tommy Thompson	Member		

Notes:

- (1) Lead Independent Director
- (2) Management (Non-Independent) Director

Audit Committee

Our Audit Committee's primary responsibilities include:

- Representing and assisting our Board in its oversight responsibilities regarding our accounting and financial reporting processes, the audits of our financial statements and system of internal controls over financial reporting, including the integrity of our financial statements, and the qualifications and independence of Ernst & Young LLP, our independent registered public accounting firm;
- Retaining and terminating our independent auditors;
- Approving in advance all audit and non-audit services to be performed by our independent auditors;
- Approving related party transactions (as defined under the rules of the SEC); and
- General oversight of our practices with respect to risk assessment and risk management.

For additional information regarding the processes and procedures used by our Audit Committee, see the section entitled *Report of our Audit Committee and Information on our Independent Auditors* below.

Compensation Committee

Our Compensation Committee oversees our compensation plans and policies, reviews and approves compensation for our executive officers, oversees the administration of our equity incentive and share tracking awards plans and our Supplemental Executive Retirement Plan (SERP), reviews and approves grants of stock options to our executive officers and the methodology and formulae for granting stock options and restricted stock units to other employees. Our Compensation Committee's primary responsibilities include:

- Creating a system for awarding long-term and short-term performance-oriented incentive compensation to attract and retain senior management, and reviewing our compensation plans to confirm that they are appropriate, competitive and properly reflect our goals and objectives; and
- Assisting our Board in discharging its responsibilities regarding compensation of our executive officers.

Our Compensation Committee's charter provides that it may delegate responsibilities to subcommittees if it determines such a delegation would be in the best interest of our company. For additional information regarding the processes and procedures used by our Compensation Committee, see the section entitled *Compensation Discussion and Analysis* below.

Independent Compensation Consultant

Our Compensation Committee has the authority to engage advisors to assist it in carrying out its responsibilities. In accordance with this authority, our Compensation Committee directly engaged Radford as its compensation consultant during 2018 to provide advice to our Compensation Committee on our executive and non-employee director compensation practices and policies. Our Compensation Committee, in its discretion, may replace its independent compensation consultant or hire additional consultants at any time. Radford performed additional services during 2018, namely consulting services for non-executive employee compensation matters and broad-based compensation survey data, and was paid fees for these services totaling approximately \$32,195. In addition, Radford affiliates (Aon plc and its related entities) performed actuarial services relating to our SERP, insurance advisory services, stock plan administration and retirement plan advisory services, along with risk management consulting and insurance brokerage services for United Therapeutics during 2018, for which we paid approximately \$440,492 during 2018. Additional insurance premiums and related fees were paid to Aon plc and passed through to insurance companies not affiliated with Aon plc. Our Compensation Committee approved these services and did not find that they impaired Radford's independence. Our Compensation Committee considered the independence of Radford in light of SEC rules regarding conflicts of interest involving compensation consultants and Nasdaq listing standards regarding compensation consultant independence. Based on its review, our Compensation Committee determined that Radford was independent, and that Radford's work did not raise any conflicts of interest. In making the foregoing determination, our Compensation Committee considered the following six factors, as well as other factors it deemed relevant: (i) the provision of other services to us by Radford; (ii) the amount of fees Radford received from us, as a percentage of their total revenue; (iii) the policies and procedures of Radford that are designed to prevent conflicts of interest; (iv) the lack of any business or personal relationships of the Radford consultants with any member of our Compensation Committee; (v) the lack of any United Therapeutics stock owned by the Radford consultants performing services for our Compensation Committee; and (vi) the lack of any business or personal relationships of the Radford consultants or Radford itself with any of our executive officers.

Our Compensation Committee engaged Radford during 2018 to review and advise our Compensation Committee on all principal aspects of executive and non-employee director compensation. This included base salaries, cash incentive awards and long-term incentive awards for our executive officers, as well as cash compensation and long-term incentive awards for non-employee

directors. Radford performed the following tasks for our Compensation Committee in 2018, among others:

- Reviewing and advising on the structure of our compensation arrangements (i.e., base salary levels, cash incentive award target levels and the size of long-term incentive award targets) for our Chairman and Chief Executive Officer and our other executive officers;
- Reviewing and advising on the structure of our compensation arrangements for our non-employee directors;
- Providing recommendations regarding the composition of our peer group;
- Analyzing publicly available proxy data for companies within our peer group and survey data relating to executive compensation;
- Conducting pay and performance analyses relative to our peer group;
- Updating our Compensation Committee on industry trends and best practices with respect to executive long-term incentive compensation program design, including types of long-term incentive compensation awards, size of long-term incentive compensation grants, and aggregate long-term incentive compensation grant usage;
- Reviewing our equity incentive awards against our design/cost targets and against industry norms;
- Reviewing the Compensation Discussion and Analysis for our Proxy Statement;
- Advising our Compensation Committee in connection with its risk assessment relating to our compensation programs; and
- Working on special or ad-hoc projects for, or at the request of, our Compensation Committee as they arose.

In the course of fulfilling these responsibilities, Radford regularly communicated with our Compensation Committee Chairman outside of and prior to most Compensation Committee meetings. Our Compensation Committee regularly invites its independent compensation consultant to attend its meetings. In 2018, Radford representatives attended each of our Compensation Committee's six meetings.

While our Compensation Committee considered its independent consultant's recommendations in 2018, our Compensation Committee's decisions, including the specific amounts paid to our executive officers and directors, were its own and may reflect factors and considerations in addition to the information and recommendations provided by its independent consultant.

Nominating and Governance Committee

In addition to the responsibilities described in the section entitled *Director Nominations and Diversity* above, our Nominating and Governance Committee's primary responsibilities include:

- Proposing nominees for election to our Board;
- Proposing nominees to fill vacancies on our Board and newly created directorships;
- Reviewing candidates for election to our Board recommended to us by our shareholders;
- Recommending committee membership and chairmen;
- Reviewing management succession plans;

- Evaluating and overseeing issues and developments with respect to corporate governance, and recommending to our Board and monitoring all matters with respect to corporate governance; and
- Overseeing our compliance program.

Corporate Governance Guidelines and Committee Charters

Upon the recommendation of our Nominating and Governance Committee, our Board has adopted Corporate Governance Guidelines as a framework for the governance of our company. Our Corporate Governance Guidelines, along with the charter for each Board committee, are available electronically in the “Corporate Governance” section of the “Investors” page of our website, located at <http://ir.unither.com/corporate-governance>, or by writing to us at United Therapeutics Corporation, Attention: Corporate Secretary, 1735 Connecticut Avenue N.W., Washington, D.C. 20009.

Stock Ownership Guidelines

In 2011, our Board adopted Stock Ownership Guidelines applicable to our directors and Named Executive Officers (as defined below) in order to further align the financial interests of our directors and Named Executive Officers with those of our shareholders, to foster a long-term management orientation, and to promote sound corporate governance. For non-employee members of our Board, our Stock Ownership Guidelines provide an ownership target equal to the lesser of 5,000 shares or a value equivalent to five times the annual cash Board retainer. The policy includes procedures for granting exemptions in the case of hardship. Ownership targets for our Named Executive Officers (including those serving on our Board) are described below under *Compensation Discussion and Analysis—Stock Ownership Guidelines*.

Meetings of our Board of Directors and Board Attendance at Annual Meetings of Shareholders

Our full Board held four meetings during 2018. In addition, during 2018, our Audit Committee held five meetings, our Compensation Committee held six meetings, and our Nominating and Governance Committee held six meetings. Each of our directors attended more than 75 percent of the total number of meetings of our Board and the committees on which he or she served during 2018. In accordance with applicable Nasdaq listing standards, the independent members of our Board met without management present four times during 2018.

Although attendance is not mandatory, our Board encourages all of its members to attend the annual meeting of shareholders. All of our incumbent directors attended our 2018 annual meeting of shareholders.

Shareholder Communication with Directors

Shareholders are encouraged to address any director communications to our Corporate Secretary by overnight or certified mail, signature acceptance or return receipt required, at: United Therapeutics Corporation, Attention: Corporate Secretary, 1735 Connecticut Avenue N.W., Washington, D.C. 20009. Our Corporate Secretary has the authority to disregard or take other reasonable action with respect to any inappropriate shareholder communications. After confirming the stock ownership of the author of the communication, our Corporate Secretary will review the appropriateness of a shareholder communication based on the relevance of the communication to Board decisions. If deemed an appropriate communication, our Corporate Secretary will submit the shareholder communication to our Lead Independent Director, who may share it with the Nominating and Governance Committee or the full Board.

Proxy Access

We amended our By-laws in 2015 to implement proxy access, which allows shareholders to nominate and include in our Proxy Statement their own director nominees, provided that the shareholder(s) and the nominee(s) satisfy the requirements in our By-laws. Our Board carefully considered feedback we received from our shareholders in creating a thoughtfully designed and balanced approach to proxy access that mitigates the risk of abuse and protects the interests of all of our shareholders, while affording a meaningful proxy access right. Shareholders who wish to nominate directors for inclusion in our Proxy Statement in accordance with the procedures in our By-laws should follow the instructions under *Shareholder Proposals and Director Nominations* in this Proxy Statement.

Majority Voting

In June 2015, as part of our Board's ongoing review of our corporate governance policies, we amended our By-laws to provide that director nominees shall be elected by a majority of votes cast in uncontested director elections. A majority of votes cast means that the number of votes cast for the director nominee's election must exceed the number of votes cast against that director nominee's election. In connection with this By-law amendment, our Board also adopted a director resignation policy set forth in our Corporate Governance Guidelines, providing that any director who is not elected by a majority of the votes cast is expected to tender his or her resignation to our Nominating and Governance Committee. Our Nominating and Governance Committee will recommend to the Board whether to accept or reject the resignation offer, or whether other action should be taken, considering all factors that the Nominating and Governance Committee believes are relevant. Our Board will act on our Nominating and Governance Committee's recommendation within 90 days following certification of the election results. Any director who tenders his or her resignation pursuant to our director resignation policy will not participate in the proceedings of either the Nominating and Governance Committee or the Board with respect to his or her own resignation offer.

NON-EMPLOYEE DIRECTOR COMPENSATION

In 2018, our non-employee director compensation program was comprised of three main elements:

- an annual cash retainer (payable quarterly) for service as a member of our Board;
- additional annual cash retainers (payable quarterly) for service on Board committees and for service as Lead Independent Director; and
- stock options or restricted stock units (in either case, granted initially upon joining our Board, and thereafter on an annual basis) for service as a member of our Board.

Directors may also be compensated for special assignments from our Board. In 2018, no such special assignments occurred that involved compensation to a director. Employee directors do not receive any compensation for service on our Board in addition to their regular compensation as employees.

Our Compensation Committee generally reviews non-employee director compensation levels approximately once every two years, and final decisions with respect to any changes in non-employee director compensation levels are made by our Board upon the recommendation of our Compensation Committee. In 2017, our Compensation Committee’s independent consultant reviewed the market competitiveness of our non-employee director compensation program relative to our compensation peer group (as described in more detail below under *Compensation Discussion and Analysis—Executive Compensation Framework—Compensation Peer Group*). Based on this review, our Compensation Committee did not recommend any changes to the non-employee director compensation program in 2017. Our current non-employee director compensation levels were established by the Board in February 2016. The following table outlines the non-employee director compensation levels in effect for 2018:

	Annual Cash	Value of Equity-Based Awards ⁽³⁾	
		Initial	Annual
Board Membership	\$60,000	\$400,000	\$400,000
Lead Independent Director ⁽¹⁾	\$35,000	—	—
Committee Chairmanship ⁽²⁾ :			
Audit Committee	\$25,000	—	—
Compensation Committee	\$25,000	—	—
Nominating and Governance Committee	\$25,000	—	—
Committee Membership ⁽²⁾ :			
Audit Committee	\$15,000	—	—
Compensation Committee	\$15,000	—	—
Nominating and Governance Committee	\$15,000	—	—

- (1) Compensation for service as Lead Independent Director is paid in addition to amounts paid for membership on our Board and for any committee chairmanship or membership.
- (2) Committee chairmen receive the compensation indicated for committee chairmanship in lieu of the compensation for committee membership. Compensation for committee chairmanship and committee membership is paid in addition to amounts paid for Board membership.
- (3) Annual awards are generally granted once per year on the date of the first meeting of our Board following our annual meeting of shareholders or for newly appointed directors, on or shortly following appointment to our Board.

Equity-Based Awards

Non-employee directors are eligible to receive equity-based awards under the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan (the 2015 SIP), as follows:

- **Form of Awards:** Initial Grants and Annual Grants are paid in the form of stock options, restricted stock units (RSUs) or a combination of the two. For each grant, directors may elect to receive awards in any one of the following forms:
 - 100 percent stock options;
 - 100 percent RSUs; or
 - 50 percent stock options / 50 percent RSUs.
- **Value of Awards:** The aggregate value of each director's annual equity-based award is \$400,000. The aggregate value of an initial equity-based award upon joining the Board is \$400,000, plus a pro-rata portion of the annual equity-based award value based on the number of months remaining in the Board service year at the date of grant.
- **Deferral for RSUs:** For directors who elect RSUs, our Compensation Committee has implemented a deferral program enabling directors to defer delivery of shares of common stock following vesting of the RSUs.
- **Calculation Methodology:** Our Compensation Committee also sets the methodology for determining the precise numbers of stock options and/or RSUs for each grant. For the annual grants, generally occurring in June of each year, the following applies (subject to modification by our Compensation Committee in its discretion):
 - *Stock Options:* The number of stock options is calculated by dividing the equity value (\$400,000, or \$200,000, if the director has elected 50 percent options and 50 percent RSUs) by the fair value of each stock option, calculated in accordance with the Black-Scholes-Merton methodology utilized in calculating share-based compensation for financial reporting purposes. Black-Scholes-Merton inputs are the same as those used in our most recent quarterly report on Form 10-Q, except that the stock price input is the average closing price of our Common Stock over a recent time period prior to the date of grant (May 10 through June 10, in the case of annual grants).
 - *RSUs:* The number of RSUs is calculated by dividing the equity value (\$400,000, or \$200,000, if the director has elected 50 percent options and 50 percent RSUs) by the average closing price of our Common Stock over a recent time period prior to the date of grant (May 10 through June 10, in the case of annual grants).
 - *Rounding:* The resulting number of stock options or RSUs, calculated as above, is rounded to the nearest 10 shares.
- **Exercise Price:** Stock options granted to non-employee directors have an exercise price equal to the closing price of our common stock as reported on the Nasdaq Global Select Market on the date of grant, or on the preceding trading day if the award is granted on a date when the Nasdaq is not open.
- **Grant Timing:**
 - The date of grant for a new non-employee director's initial award, consisting of the initial membership award and a pro-rated amount of the annual award for the remainder of the board service year, is the date of a director's appointment or election to our Board.

- The date of grant for annual awards is the date of the first meeting of our Board following our annual meeting of shareholders in the year of grant.
- **Vesting:** Non-employee director awards become fully vested on the one-year anniversary of the grant date, but only if the director attends at least 75 percent of the regularly scheduled meetings of our Board and his or her committee meetings from the date of grant until the date of our next annual meeting of shareholders.

Previously, non-employee directors were also eligible to receive awards under the 2011 United Therapeutics Corporation Share Tracking Awards Plan (collectively with its predecessor plan adopted in 2008, the STAP), which settle only in cash. However, since the approval of our 2015 SIP on June 26, 2015, all equity-based awards for non-employee directors have been granted in the form of stock options and RSUs.

The following table lists the compensation earned in 2018 by each non-employee director:

2018 Non-Employee Director Compensation

<u>Name</u>	<u>Fees Earned or Paid in Cash⁽¹⁾</u>	<u>Restricted Stock Units⁽²⁾</u>	<u>Stock Options⁽²⁾</u>	<u>Total</u>
Christopher Causey	\$100,000	\$ —	\$418,757	\$518,757
Raymond Dwek	\$ 60,000	\$420,525	\$ —	\$480,525
Richard Giltner	\$100,000	\$420,525	\$ —	\$520,525
Katherine Klein	\$ 60,000	\$ —	\$418,757	\$478,757
Ray Kurzweil	\$ 60,000	\$209,702	\$209,378	\$479,080
Nilda Mesa	\$ 10,109	\$294,888	\$295,659	\$600,656
Judy Olian	\$ 75,000	\$209,702	\$209,378	\$494,080
Christopher Patusky	\$150,000	\$ —	\$418,757	\$568,757
Louis Sullivan	\$ 90,000	\$420,525	\$ —	\$510,525
Tommy Thompson	\$ 75,000	\$209,702	\$209,378	\$494,080

- (1) Includes (as applicable) annual cash retainer and fees for serving on our Board, the committees of our Board, as a committee chairman and as Lead Independent Director.
- (2) On June 26, 2018, each of our non-employee directors (other than Ms. Mesa, who was appointed to the Board on October 31, 2018) was granted a combination of stock options and/or RSUs. Each stock option had an exercise price of \$112.14 per share and a grant date fair value of \$45.32 per share, and each RSU had a grant date fair value of \$112.14 per share. Upon her appointment to the Board on October 31, 2018, Ms. Mesa was awarded a combination of stock options and RSUs. Each stock option had an exercise price of \$110.86 per share and a grant date fair value of \$45.07 per share, and each RSU had a grant date fair value of \$110.86 per share. Amounts shown in these columns represent the aggregate grant date fair value of these stock options and RSUs, which were the only awards granted to non-employee directors in 2018, computed in accordance with applicable accounting standards. For a discussion of the valuation assumptions for stock options, see Note 10—*Share-Based Compensation* to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2018. We note that the aggregate grant-date fair value of equity awards in 2018 differed from the annual equity-based award value of \$400,000 because the actual number of options and RSUs granted was based on an average stock price over a defined time period, rather than the closing stock price on the date of grant, which is used to calculate the fair value of the awards.

The following table shows the number of stock options, STAPs and RSUs outstanding for each non-employee director as of December 31, 2018:

<u>Name</u>	<u>Stock Options</u>	<u>STAP Awards</u>	<u>RSUs</u>
Christopher Causey	28,450	30,000	—
Raymond Dwek	15,000	65,000	3,750
Richard Giltner	55,000	60,000	3,750
Katherine Klein	42,470	29,375	—
Ray Kurzweil	28,740	33,750	1,870
Nilda Mesa	6,560	—	2,660
Judy Olian	39,620	—	1,870
Christopher Patusky	33,360	45,000	—
Louis Sullivan	24,120	54,000	3,750
Tommy Thompson	54,340	53,059	3,620

PROPOSAL NO. 2
ADVISORY RESOLUTION TO APPROVE EXECUTIVE COMPENSATION

We are asking our shareholders to vote on an advisory resolution, commonly known as a “Say-on-Pay” proposal, to approve executive compensation as reported in this Proxy Statement. Our Board and our Compensation Committee strongly value the opinions of our shareholders, and we have made substantial modifications to our executive compensation program specifically to address concerns raised by shareholders in previous years. Our Compensation Committee, which is responsible for designing and administering our executive compensation program, has designed our executive compensation program to provide a competitive and internally equitable compensation and benefits package that reflects company performance, job complexity and the value provided, while also promoting long-term retention, motivation and alignment with the long-term interests of our shareholders.

We are pleased that changes to our compensation programs over recent years, in response to shareholder feedback, resulted in the approval of our 2016, 2017 and 2018 Say-on-Pay proposals.

In connection with your vote on this proposal, we urge you to read *Compensation Discussion and Analysis* section of this Proxy Statement and the *Summary Compensation Table* and other related compensation tables and narratives that follow, which provide detailed information on the compensation of our Named Executive Officers. Our Compensation Committee and our Board of Directors believe that the policies and procedures articulated in the *Compensation Discussion and Analysis*, including the modifications we have made to our executive compensation programs, are effective in achieving our goals and that the compensation of our Named Executive Officers reported in this Proxy Statement has supported and contributed to both our recent and long-term success.

In accordance with Section 14A of the Exchange Act, and as a matter of good corporate governance, we are asking shareholders to approve the following advisory resolution at the Annual Meeting:

RESOLVED, that the shareholders of United Therapeutics Corporation (our “Company”) approve, on an advisory basis, the compensation of our Company’s Named Executive Officers disclosed in the *Compensation Discussion and Analysis*, the *Summary Compensation Table* and the related compensation tables, notes and narrative in the Proxy Statement for our Company’s 2019 Annual Meeting of Shareholders.

This advisory resolution is non-binding on our Board of Directors. Although non-binding, our Board and our Compensation Committee will review and consider the voting results when making future decisions regarding our executive compensation program. Based on the results of our 2017 shareholder advisory vote on the preferred frequency of holding future advisory votes to approve executive compensation, our Board of Directors has adopted a policy providing for an annual advisory resolution to approve executive compensation. Unless our Board modifies its policy on the frequency of future “Say-on-Pay” advisory votes, the next “Say-on-Pay” advisory vote will be held at our 2020 annual meeting of shareholders.

***OUR BOARD OF DIRECTORS RECOMMENDS THAT YOU VOTE “FOR”
THE ADVISORY RESOLUTION TO APPROVE EXECUTIVE COMPENSATION.***

COMPENSATION DISCUSSION AND ANALYSIS

This *Compensation Discussion and Analysis* describes the compensation objectives and policies set by our Compensation Committee for our Named Executive Officers, including executive pay decisions and processes and all elements of our executive compensation program. In this *Compensation Discussion and Analysis*, the term “Compensation Committee” refers to the Compensation Committee of our Board of Directors, and the terms “we” and “our” refer to United Therapeutics. Our Named Executive Officers in 2018 consisted of the following individuals: Martine Rothblatt, Ph.D., Chairman and Chief Executive Officer; James Edgemon, Chief Financial Officer and Treasurer; Michael Benkowitz, President and Chief Operating Officer; and Paul Mahon, J.D., Executive Vice President, General Counsel and Corporate Secretary.

Our 2018 Performance in Review

2018 was a transformative year for United Therapeutics with a number of major milestones for our patients and our shareholders, including:

- \$1.6 billion in revenues (\$1.9 million per employee, ranked second in our compensation peer group and 8th out of the 200+ companies in the Nasdaq Biotech Index), and \$778 million in net cash provided by operating activities, both of which exceeded analyst consensus estimates.
- We reached a record number of PAH patients being treated with our treprostinil-based therapies.
- We entered into agreements to acquire several key technologies to build our pipeline, including:
 - Trevyent[®], a drug-device combination product for treatment of PAH, with an NDA submission planned for 2019;
 - Ralinepag, a phase III drug candidate for pulmonary arterial hypertension;
 - Treprostinil Technosphere[®], a phase III drug device combination product for treatment of PAH; and
 - SM04646, a phase I drug candidate for treatment of idiopathic pulmonary fibrosis.
- We continued to execute on our existing research and development plans, which includes several late-stage clinical trials. A few examples include:
 - FDA approval of the Implantable System for Remodulin[®] for PAH;
 - Successful completion and unblinding of our phase IV *FREEDOM-EV* study of Orenitram[®] in combination with other therapies for PAH, which met its primary endpoint;
 - Significantly progressed our phase III *INCREASE* study of Tyvaso[®] in patients with pulmonary hypertension associated with interstitial lung disease, with the study now over two-thirds enrolled; and
 - Completed enrollment of our phase III *DISTINCT* study of Unituxin[®] for treatment of small cell lung cancer.

Although we are disappointed that our stock price underperformed the market in 2018 (26.4 percent decline, versus a decline in the Nasdaq Biotechnology Index of 9.3 percent), we believe this was largely a result of the short-term focus by analysts on the potential impact that the launch of generic versions of Remodulin (which occurred in the United States in March 2019) will have on our revenues. Following this long-anticipated generic launch, we believe our existing commercial products, as well as our extensive pipeline of new products, will deliver a return to revenue growth and improved stock price performance going forward. We note that our long-term business plans have historically

delivered significant value to our shareholders, and our long-term focus on research and development does not always fit neatly into 12-month performance measurement periods. Notwithstanding our stock price performance in 2018, as of the end of the year our stock price remained approximately 808 percent above the price of our common stock in our 1999 initial public offering.

Overview of our 2018 Executive Compensation Program

Compensation Program Objectives

Our executive compensation program is designed to achieve four objectives: pay-for-performance (with performance-based compensation making up 92% of our Chief Executive Officer’s pay and 85% for our other Named Executive Officers); shareholder alignment based on delivering operating performance and stock appreciation; balanced over the short-term and long-term; and market competitiveness.

Pay Program Elements

We accomplish these objectives through the following compensation elements, as summarized in the table below:

Compensation Element	Objective			
	Pay-for-Performance	Shareholder Alignment	Balance Short- and Long-Term Perspectives	Market Competitiveness
Base Salary				✓
Cash Incentive Awards	✓	✓	✓	✓
Long-Term Incentives (Stock Options)	✓	✓	✓	✓
Benefits/Perquisites				✓
Supplemental Executive Retirement Plan (SERP)			✓	
Severance/Change-of-Control Benefits			✓	✓
Stock Ownership Guidelines		✓	✓	

For the 2018 performance period, cash incentive payments and two tranches of performance-based stock option awards were granted in March 2018. Fifty percent of the target value of the stock option grant is tied to one-year performance conditions under the 2018 Company-Wide Milestone Program, and vests (to the extent earned) in three equal installments on the first three anniversaries following the grant date. Fifty percent of the stock option grant is tied to a three-year average cash profit margin goal for the performance period from 2018 through 2020. The milestone and cash profit margin goals were deemed by our Compensation Committee to be challenging and stretch goals at the time they were established based on internal projections, analyst consensus and peer performance. The cash profit performance metric was also set at the 75th percentile of our peer group, reinforcing our pay-for-performance culture. The design of the 2018 equity plan results in 100 percent of the equity awards granted to our Named Executive Officers being performance-contingent, which is well above the level of our peer group. We have chosen to use stock options to reward operating performance as well

as stock appreciation given that the option does not have value to the executive unless the shares appreciate. We believe this further aligns our executives with value for our shareholders.

<u>Grant Type</u>	<u>Percent of Total Grant Value</u>	<u>Performance Period</u>	<u>Metrics</u>
Milestone Performance Options	50%	1 year, plus 3 years additional vesting	Revenue, cash profits, manufacturing, research and development and ethics
Cash Profit Performance Options	50%	3 years	Cash profit margin

Competitive Positioning

Our philosophy is to provide our executives with market competitive pay with a high percentage being performance-based. We achieve this through a combination of base salary and cash and equity incentives that are earned only when specific financial and operational goals are achieved. In 2018, we continued to award equity grants tied to both one-year and three-year performance metrics, which provide the opportunity for above market pay only if achieving stretch levels of performance. This continues to reinforce our commitment to align pay with performance.

Compensation Peer Group

On an annual basis, our Compensation Committee reviews Named Executive Officer compensation levels relative to a peer group of industry and labor market competitors. For purposes of making 2018 compensation decisions, as we have done for several years, we defined our peer group as the top 25 companies other than United Therapeutics, ranked by market capitalization, in the Nasdaq Biotechnology Index. This “peer group” includes only companies that are U.S. based or based in jurisdictions with similar compensation disclosure requirements as U.S. companies. Our Compensation Committee believes this is an objective metric by which to select peers and results in a peer group that includes biopharmaceutical and biotechnology companies that are similar to us in terms of financial performance, shareholder value creation and drug development and commercialization, and generally reflects the universe of companies from which we recruit, and against which we retain, executive talent.

We applied this criteria over several years, resulting in a common set of peers year over year, for pay level and policy consistency. Each year a number of peers have been added or removed from the list and replaced with other companies for various reasons, including changes in market capitalization and merger and acquisition activities.

In June 2018, we slightly modified our methodology for selecting our peer group for 2019. We selected the top 25 companies other than United Therapeutics, ranked by revenue (instead of market capitalization), in the Nasdaq Biotechnology Index to capture companies that are commercializing products and generating product revenue, and therefore have executives with roles that more directly reflect the roles of our Named Executive Officers. This change in methodology resulted in a peer group that more closely approximated United Therapeutics across a number of measures than would have resulted if we had continued relying on market capitalization criteria to select our peer group. By focusing on revenue in selecting our peers, our Compensation Committee relied on a metric commonly used by institutional governance groups when making external peer-based comparisons.

We have provided below for reference the profile of our compensation peer group for 2018, as well as the peer group that has been selected for 2019:

<u>Company</u>	<u>2018</u>	<u>2019</u>
Acorda Therapeutics		✓
Akorn		✓
ACADIA	✓	
Alexion Pharmaceuticals	✓	✓
Alkermes	✓	✓
Alnylam Pharmaceuticals	✓	
AMAG Pharmaceuticals		✓
Amgen	✓	✓
Biogen	✓	✓
BioMarin Pharmaceutical	✓	✓
Bio-Techne	✓	✓
Bruker		✓
Celgene	✓	✓
Endo International		✓
Exelixis	✓	
Gilead Sciences	✓	✓
Horizon Pharma		✓
Illumina	✓	✓
Incyte	✓	✓
Ionis Pharmaceuticals	✓	
Jazz Pharmaceuticals	✓	✓
Kite Pharma	✓	
Mylan N.V.	✓	✓
Myriad Genetics		✓
Neurocrine	✓	
Opko Health	✓	✓
PRA Health Sciences	✓	✓
Regeneron Pharmaceuticals	✓	✓
Seattle Genetics	✓	
Shire	✓	✓
Syneos		✓
Tesaro	✓	
Vertex Pharmaceuticals	✓	✓
Median Revenue (\$MM)	\$1,227	\$1,948
United Therapeutics Revenue (\$MM)	\$1,600	\$1,725
United Therapeutics Percentile Rank⁽¹⁾	57th	45th
Median Market Cap (\$MM)	\$9,284	\$9,070
United Therapeutics Market Cap (\$MM)	\$5,817	\$4,848
United Therapeutics Percentile Rank⁽¹⁾	31st	34th

(1) The percentile rank shown above reflects values at the time of approval by our Compensation Committee. Revenue figures reflect trailing twelve-month revenues and a trailing average market capitalization as of May of the preceding year (when the peer group was approved).

Our Compensation Committee's approach to peer group selection is to apply an objective external measure for selecting companies. This results in a number of peers being larger than our company based on market capitalization and/or revenue as well as a number of peers being smaller. Our goal each year is to place our company within the peer group statistics of the 25th to 75th percentile for these key metrics as close to the median as possible while managing changes each year due to sector volatility, industry consolidation and differences in business and organization models. Furthermore, our Compensation Committee views it as critical to measure ourselves against industry-leading peers

(including those that are both larger and smaller than we are) because, in addition to being companies with which we compete for talent, many of these larger and smaller companies are also our business competitors. The criteria we are using ensures that companies are larger and smaller in a balanced manner year on year. Our commercial products compete with some of the largest biotechnology and pharmaceutical companies in the world, including Gilead Sciences Inc., one of the largest companies in our peer group in terms of market capitalization. We have focused on both the revenue rank and market capitalization position given the range of companies in the peer group. By placing our company between the 30th and 60th percentile of our peer group for revenue and market capitalization, we believe our peer group reflects companies of similar scope and complexity. Due to market capitalization volatility that can occur in the sector, we consider the relative rank of our company for both revenue and market capitalization as a factor when we set actual pay levels on a per position basis.

Compensation Committee Advisor Independence

Our Compensation Committee has consistently retained nationally-recognized executive compensation consulting firms since 2004 to advise it on compensation matters relating to our Named Executive Officers, and evaluated its consultants' independence consistent with applicable requirements. For details, see the section above entitled *Board of Directors, Committees, Corporate Governance—Independent Compensation Consultant*. Our Compensation Committee also regularly meets in executive session without members of management present.

Impact of 2018 Advisory Resolution on Executive Compensation

At our 2018 annual meeting of shareholders, our shareholders voted in favor of our Say-on-Pay Proposal with a vote of 74.5%. This is the third consecutive year our shareholders have approved our Say-on-Pay Proposal and each year we have actively conducted shareholder outreach to gain feedback on the design of our executive compensation programs. Based on these discussions and changes in our business objectives, we have implemented numerous changes to our executive compensation program in recent years directly based on shareholder feedback. Over the last several years, the Chairman of our Compensation Committee has led an effort to engage with our shareholders, and in 2018 alone, we reached out to shareholders whose holdings represented approximately 70 percent of our then outstanding shares and ultimately held discussions with shareholders whose holdings represented approximately 12 percent of our then outstanding shares. The purpose of these meetings was to gather feedback regarding our executive compensation and general governance policies, and to discuss the structure and design of our equity compensation program. This information was then shared with our Compensation Committee as it considered potential changes to our executive compensation program. Our Compensation Committee Chairman and its independent compensation consultant participated in these calls, along with our head of investor relations and a member of our human resources department. Our Compensation Committee also considered the proxy voting reports from the shareholder advisory firms of Institutional Shareholder Services, Inc. and Glass, Lewis & Co., LLC with respect to our compensation programs. Our Compensation Committee held six meetings in 2018, and the Chairman of our Compensation Committee held numerous additional meetings with management and its independent compensation consultant to determine the best way to continue to address shareholder feedback as the Compensation Committee evaluated our executive compensation programs.

Our compensation program for 2018 was structured based in large part upon shareholder feedback received in 2017 and in prior years. As noted in the proxy statement for our 2018 annual meeting of shareholders, 2017 represented a transition year, during which we shifted from granting equity awards following the performance period, to a program where awards are granted at the start of the year with an inherent prospective performance-vesting feature. As a result, in 2017 equity was awarded for both the 2016 performance period (retrospective awards under the prior program) and the 2017 performance period (prospective awards under the new program). The summary compensation table for 2017 reflected this policy transition resulting in an artificially inflated level of equity compensation in the

summary compensation table. We believe that this contributed to the 2018 Say-on-Pay Proposal vote being less than 80 percent approval (74.5 percent) given the approach to evaluating executive compensation by shareholders. Based on the positive feedback we received from our shareholders through our direct outreach efforts, we did not make further modifications to the compensation program for 2018.

Key Governance Features of our Executive Compensation Program

Our Compensation Committee periodically assesses the effectiveness of our compensation policies and practices in achieving its pay-for-performance objective while aligning the interests of executive officers with those of shareholders, balancing short-term and long-term elements, and maintaining market competitiveness. Our Compensation Committee also reviews risk mitigation and governance items, which are designed to help ensure that our compensation programs are functioning to achieve such objectives. In conjunction with this assessment and review, we have adopted the following best practices:

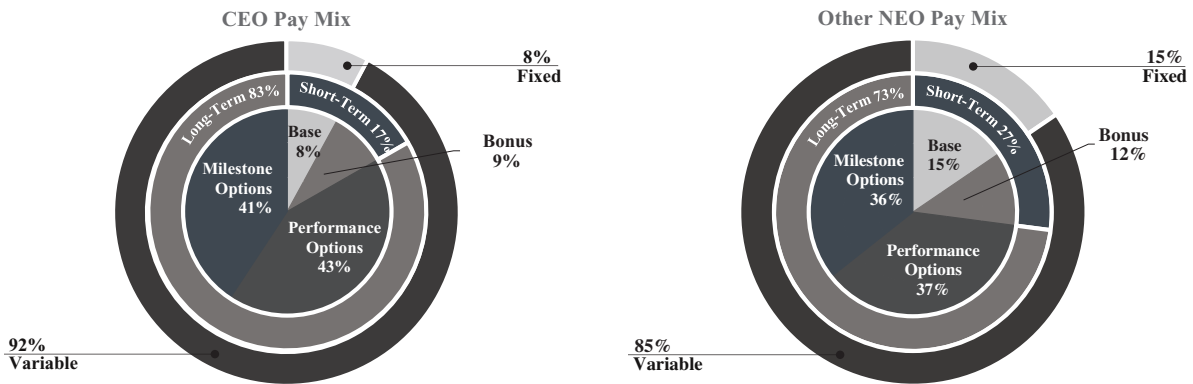
What We Do		What We Don't Do	
✓	Design our executive compensation program to align pay and performance with more than 90 percent being performance contingent for our CEO	✗	No repricing or backdating of stock options
✓	Gather market data for the specific peers examining a range of pay between the 25 th and 90 th percentiles to understand the market conditions within the industry and for our labor market	✗	No liberal share recycling under 2015 Stock Incentive Plan
✓	Maintain an appropriate balance between short-term and long-term compensation which discourages short-term risk taking at the expense of long-term results		
✓	Grant 100% of our equity as performance-contingent stock options with 50% tied to one-year company milestones and 50% tied to a three-year (multi-year) performance metric.		
✓	Establish threshold, target and stretch company goals; we require a minimum level of performance for any payment under the cash incentive plan	✗	No vesting prior to the first anniversary of grant, subject to limited exceptions
✓	Maintain stock ownership guidelines to align executive officer and share ownership with that of our directors and our shareholders	✗	No grants of equity during trading blackout periods
✓	Prohibit hedging and pledging by executives and directors	✗	No discounted or reloaded stock options
✓	Employ a compensation recovery, or clawback, policy*	✗	No excessive perquisites
✓	Conduct annual risk assessments of our compensation policies and practices	✗	No excise tax gross ups
✓	Hold Compensation Committee executive sessions without management	✗	No guaranteed base salary and/or bonus payments
✓	Engage an independent compensation consultant who reports directly to the compensation committee		

* Our Board has the authority, to the extent permitted by governing law, to make retroactive adjustments to any cash award or equity award-based incentive compensation paid to our Named Executive Officers and certain other senior managers where the payment was predicated upon the achievement of certain financial results that were subsequently the subject of a restatement.

Review of 2018 Executive Compensation

Pay-for-performance and a focus on total direct compensation are fundamental to our compensation philosophy. The compensation program for our Named Executive Officers is structurally tied to performance, on a one-year and a three-year basis. This results in over 92% of our Chief Executive Officer’s pay being at risk, and 85% of our other Named Executive Officers’ pay being at risk, in the form of performance-based cash and equity incentives. We rely on our one-year Company-Wide Milestone Program to focus decisions on actions that drive a combination of both near-term results (e.g., one-year revenue and cash profit targets) and long-term results (e.g., research and development targets intended to build future revenue streams). Our three-year cash profit margin-based equity grant is intended to focus on longer-term decisions that impact our investment in new innovations and growth strategies that typically cross fiscal years. We believe that by using multiple metrics, across one and three-year periods is in the best interest of our shareholders. Our Compensation Committee takes a holistic approach to compensation and seeks to ensure that the aggregate level of pay across all pay elements is meeting the stated objectives. Our Compensation Committee does not use a formulaic approach to allocate pay between the various elements. Instead, our Compensation Committee applies its business judgment and experience to establish a total compensation package for each Named Executive Officer, which it believes is appropriate to manage fixed cost and motivate performance via variable, performance based, incentive pay.

The following charts illustrate the extent to which pay for our Chief Executive Officers (left-hand chart) and the other Named Executive Officers (right-hand chart) is at risk, as payout levels are based entirely on performance. For each chart, the amounts shown represent 2018 base salary (on an annualized basis, following the March 2018 salary increases), 2018 target cash bonus, and grant-date fair value of long-term incentive awards issued in March 2018 in the form of Milestone Options (referred to as Milestone Performance Options below) and Performance Options (referred to as Cash Profit Performance Options below).



Summary of 2018 Compensation

The components of our Named Executive Officers’ target total direct compensation are base salary and variable performance-based compensation, including cash incentives and long-term incentive compensation, in the form of performance-based stock options. The following table shows our Named Executive Officers’ base salaries and target performance-based compensation for 2018 and the amount of any increase of such compensation over 2017. The basis for our Compensation Committee’s decisions with respect to each of these components for 2018 is discussed in greater detail below.

Summary 2018 Target Total Direct Compensation

Executive Officer	2018 Base Salary ⁽¹⁾	% Increase Over 2017 Base Salary	2018 Cash Incentive Bonus Target as % of Base Salary	Change in Cash Incentive Bonus Target % ⁽²⁾	2018 Long-Term Incentive Award Target ⁽³⁾	2018 Total Target Direct Compensation
Martine Rothblatt	\$1,225,000	4%	110%	0%	\$14,000,000	\$16,572,500
James Edgemond	\$ 650,000	4%	75%	0%	\$ 3,700,000	\$ 4,837,500
Michael Benkowitz	\$ 850,000	13%	85%	5%	\$ 4,200,000	\$ 5,772,500
Paul Mahon	\$ 820,000	0%	65%	0%	\$ 4,000,000	\$ 5,353,000

- (1) Reflects increases in annual base salaries effective March 2018.
- (2) Represents the difference in cash incentive award target as a percentage of salary, between 2018 and 2017.
- (3) Represents the target value of stock options for our Named Executive Officers that could potentially be earned for the 2018 performance period. Awards were converted into a number of stock options based on a Black-Scholes-Merton value, which uses the average closing price of our common stock for the month of February 2018. Fifty percent of the awards were granted in March 2018 with performance criteria tied to the achievement of our 2018 Company-Wide Milestones (one-year metrics), and earned shares vest in equal installments over a three-year period from the date of grant for additional incentive and retention purposes. The remaining fifty percent were granted in March 2018, vesting on the third anniversary of the date of grant based on performance of a three-year financial metric from 2018 to 2020.

Base Salary

Base salary is the primary fixed element of the compensation packages for our Named Executive Officers. Our Compensation Committee reviews and establishes base salary levels for our Named Executive Officers each year taking into consideration one or more of the following factors, depending on the circumstances: (i) a qualitative evaluation of individual performance, including contribution to the advancement of corporate objectives, impact on financial results, and strategic accomplishments; (ii) our overall performance, financial condition and prospects; (iii) the annual compensation received by executives holding comparable positions at our peers as described in the section entitled *Overview of our 2018 Executive Compensation Program* above; (iv) our annual company-wide budget for salary increases; and (v) the input of our Chief Executive Officer (in the case of the other Named Executive Officers). Base salaries are also typically reviewed when there is a material change in the executive's responsibilities during the year.

In early 2018, our Compensation Committee approved salary increases for certain of our Named Executive Officers, providing a four percent increase for Dr. Rothblatt, a four percent increase for Mr. Edgemond, and a 13 percent increase for Mr. Benkowitz, effective March 2018. Mr. Benkowitz's salary increase reflected his significant contribution to the business in 2017 and anticipated contributions in 2018, and a desire to bring his market positioning into closer alignment with similarly-situated executives at companies within our peer group and with the other Named Executive Officers at our company. The remaining salary increases were determined based on a review of competitive pay positioning, taking into consideration internal pay equity among Named Executive Officers and the importance of the Named Executive Officers.

Cash Incentive Award Program

Each year, our Compensation Committee establishes cash incentive award targets for each of our Named Executive Officers, taking into consideration the same factors it uses to determine base salaries

(other than our company-wide budget for salary increases). For 2018, our Compensation Committee established cash incentive award targets for our Named Executive Officers as a percentage of base salary in early 2018, at the levels shown in the *Summary 2018 Target Total Direct Compensation* table above.

These stated incentive targets are comparable to those of executives holding similar roles and levels of responsibility at our peer group companies. Cash incentives are earned for achieving our Company-Wide Milestones (described below) and are subject to a threshold, or minimum, level of performance that must be achieved before any awards are made. In addition, each of our Named Executive Officers has the opportunity to earn up to 150 percent of their target cash incentive award for 2018, based on above-target performance on our cash profit and revenue-based milestones. We believe that by setting a threshold level of performance as well as a maximum under the plan we have aligned these policies with market norms and have also responded to feedback from our shareholders.

Cash incentive bonus targets (as a percentage of salary) remained constant in 2018 compared with 2017, except in the case of Mr. Benkowitz, whose target increased from 80 percent of salary to 85 percent of salary, for the same reasons his salary increased (as discussed above).

2018 Milestones

The Milestones (or performance goals) are generally intended to create company-wide incentives relating to significant corporate objectives, such as (i) financial performance and growth; (ii) research and development programs, manufacturing capabilities and other operational metrics and goals; and (iii) ethical conduct. Our Compensation Committee approved the specific goals and weightings based on management input at the beginning of the year based on a desire to reflect core performance measures and priorities for the business for the fiscal year, including our commitment to compliance, and to set goals that translate most directly into short-, medium- and long-term value growth.

The Milestone performance targets are difficult to meet and require significant leadership and execution on the part of our Named Executive Officers. Based on these factors, our Compensation Committee established the following Company-Wide Milestones and weightings for 2018:

<u>2018 Company-Wide Milestones</u>	<u>Percentage of Award Opportunity</u>
Milestone 1—Cash Profits*: Achieve the cash profit level for 2018 included in our long-range business plan (\$550 million)	20%
Milestone 2—Financial Performance: Superior financial performance as evidenced by achieving the net revenues for 2018 included in our long-range business plan (\$1.4 billion)	20%
Milestone 3—Manufacturing: Adequate manufacturing capabilities, evidenced by a two-year inventory of Remodulin, Tyvaso and Orenitram finished drug product and passing all GMP-related FDA inspections at our facilities without any issues that prevent the use or approval of any of our drug products	20%
Milestone 4—Research & Development: Conduct insightful research and development programs, taking into account regulatory approvals, label extensions and the quantity and quality of trials that support our business goals	20%
Milestone 5—Ethics: Accomplish each of the above Milestones in an ethical manner, and respond, as appropriate, to any compliance-related investigations	20%

* Cash profit is defined as net income for 2018 (as reported in the Company’s Annual Report on Form 10-K for the year ended December 31, 2018), adjusted to add the following expenses, net of relevant benefits (or subtracted, to the extent the expense item is a net benefit):

- Interest expense;
- Non-cash charges (including, without limitation, amortization and depreciation);
- Tax expense (including penalties and interest);
- Extraordinary, non-recurring and unusual items (including without limitation, license fees, milestone payments, gains/losses on acquisition/disposal of assets, asset impairments; restructuring costs; foreign currency adjustments; discontinued operations);
- Legal expenses related to (a) intellectual property prosecution and defense; (b) litigation and government investigation and enforcement proceedings; and (c) amounts paid to settle/resolve legal disputes, litigation and government investigations and enforcement proceedings; and
- Share-based compensation expense.

Our Compensation Committee has carefully crafted these Milestones, which represent rigorous, objective standards by which to measure company and executive officer performance. Our Compensation Committee believes that all five Milestones are strategically important to our continued success and therefore should be weighted equally in determining incentive awards. Cash profits and financial performance objectives are important to maintaining industry-leading financial performance, and our 2018 goals are tied to our long-term strategic objectives, which include aggressive revenue targets over near-term, medium-term and long-term time horizons. Our financial performance goal for 2018 was also set above analyst consensus expectations. Our manufacturing Milestone is intended to ensure a continuous supply of our treprostinil-based therapies, which generate the vast majority of our revenues. Our research and development Milestone is intended to ensure that we have a robust pipeline of products that has the capability of delivering future revenues sufficient to drive continued, industry-leading growth. Finally, our ethics milestone recognizes the importance of maintaining an

effective compliance program as individual fines from government investigations of pharmaceutical companies have become increasingly material. Importantly, four of our Milestones create clear, objective standards for measuring company performance, while the fifth (Ethics) is based on a qualitative assessment.

The details of our framework for determining 2018 Milestone performance are provided below:

Milestone	Award Determination Criteria
Cash Profits	<ul style="list-style-type: none"> ● < \$500 million: 0 percent credit (below threshold) ● \$500 million: 50 percent credit (at threshold) ● \$500 million to \$550 million: partial credit (linear interpolation, between threshold and target) ● 100 percent+ of Goal (\$550 million): 100 percent credit (target)
Financial Performance	<ul style="list-style-type: none"> ● < \$1.3 billion: 0 percent credit (below threshold) ● \$1.3 billion: 50 percent credit (at threshold) ● \$1.3 billion to \$1.4 billion: partial credit (linear interpolation, between threshold and target) ● 100 percent+ of Goal (\$1.4 billion): 100 percent credit (at target)
Manufacturing	<ul style="list-style-type: none"> ● Award pro rata credit based on number of quarters for which: (1) pre-specified inventory levels are achieved (i.e., 2-year supply of Orenitram, Remodulin and Tyvaso); and (2) we pass any GMP-related FDA inspections
Research & Development*	<ul style="list-style-type: none"> ● < 100 percent of Goal: Award pro rata credit ● 100 percent+ of Goal: 100 percent credit (at target)
Ethics	<ul style="list-style-type: none"> ● 100 percent+ of Goal: 100 percent credit (at target) ● Based on a qualitative assessment of the effectiveness of the overall compliance program as determined by our Nominating and Governance and Compensation Committees

* Based on a system of R&D points, where expected points (i.e., the goal) are determined at the beginning of the year based on our pipeline, and progress is measured at the end of the year (subject to potential adjustment to the formula for research and development efforts commenced and/or terminated during the year).

Under the terms of our Company-Wide Milestone Program, our Compensation Committee has the authority to exercise negative (downward) discretion in the event of partial attainment under any of the Milestones.

The financial targets are set considering the market opportunity for our existing products, potential entrants of generic competition into the market during the performance period, analyst expectations and our broader business plans. For 2018, above-target cash incentive awards were possible (up to 150 percent of target) based only on the achievement of financial performance against the pre-established revenue and cash profit goals, as follows:

	Range (Target to Stretch)	
Revenue Performance	\$ 1.4 billion	\$1.55 billion
Cash Profit Performance	\$550 million	\$625 million
Multiplier for each Metric*	0%	25%

* Multiplier calculated independently for each metric; interpolate between performance levels

For 2018, our Compensation Committee determined that 100 percent of the Milestones were achieved, in accordance with the following analysis:

<u>Milestone</u>	<u>Performance</u>	<u>Attainment Level % (A)</u>	<u>Weighting (B)</u>	<u>% of Award Earned (A × B)</u>
1	2018 cash profits were \$933 million, representing 170 percent of the target of \$550 million.	100%	20%	20%
2	2018 net revenues for Remodulin, Tyvaso, Adcirca, Orenitram and Unituxin were \$1.628 billion, representing 116 percent of the target of \$1.4 billion.	100%	20%	20%
3	Maintained greater than two-year inventory of all strengths of Remodulin, Tyvaso and Orenitram and passed all FDA inspections at our facilities.	100%	20%	20%
4	Achieved the full 20 R&D points (details provided below).	100%	20%	20%
5	Based on an assessment by our Nominating and Governance Committee, our company was found to have performed in an ethical manner, and with an effective compliance program, including full implementation of, and compliance with, the Corporate Integrity Agreement entered into in December 2017.	100%	20%	20%
Total				<u>100%</u>

At the time we established our 2018 Company-Wide Milestones, we expected generic competition for Adcirca to commence in May 2018 upon loss of regulatory exclusivity for this product. As a result, we anticipated a decline in our revenues and cash profits for 2018, based on standard industry projections, including a review of the revenue curves of analogous branded drugs following the launch of generic competition. For this reason, among others, our 2018 Cash Profit and Financial Performance Milestone targets were lower in 2018 as compared to 2017, consistent with industry standard practice. Ultimately, we delivered strong performance for Adcirca due to the strength of the product as well as the delayed introduction of a generic competition from May 2018 to August 2018. Even without this delay in generic Adcirca competition, our 2018 revenues would have exceeded the aggregate revenue target for the Financial Performance milestone, based on the strength of our other commercial products. Notably, we exceeded our internal revenue goals for each of our commercial products, each of which were set above analyst estimates.

In evaluating performance under Milestone 4 (Research and Development), the Compensation Committee reviewed the clinical and registration-stage products being developed within our pipeline, the unmet medical need they are intended to address, and the significance of potential revenues if approved. The following is a list of these programs, several of which represent multi-billion dollar revenue opportunities, and in some cases addressing potential indications for which there are no FDA-approved therapies:

- 10 points awarded for FDA approval of the Implantable System for Remodulin.
- Seven points awarded for progressing eight phase III or IV clinical programs (compared to a goal of five programs), listed below:
 - *FREEDOM-EV*, a phase IV study of Orenitram® for WHO Group 1 PAH patients being treated with an approved background therapy, with a morbidity/mortality endpoint.

- *BEAT*, a phase III study of esuberaprost for treatment of PAH;
- *INCREASE*, a phase III study of Tyvaso® for WHO Group 3 pulmonary hypertension associated with interstitial lung disease
- *DISTINCT*, a phase III study of Unituxin® for small cell lung cancer
- *SAPPHIRE*, a phase II/III study of a gene therapy product for PAH
- *EVLP*, a registration study of ex-vivo lung perfusion technology to increase the utilization of donated lungs for transplantation
- *SOUTHPAW*, a phase III study of Orenitram® in patients with WHO Group 2 pulmonary hypertension associated with left ventricular diastolic dysfunction
- *Trevent®*, a registration-stage drug-device combination product for PAH
- Three points awarded for advancing five new products into clinical development (compared to a goal of two):
 - *PRN*, or “pro re nata” (use as needed) version of treprostinil
 - *PERFECT* study of Tyvaso for WHO Group 3 pulmonary association associated with chronic obstructive pulmonary disease
 - *RemoPro™*, a less painful form of Remodulin® for subcutaneous delivery
 - *Treprostinil Technosphere®*, a dry powder inhalation form of treprostinil
 - *SM04646*, a Wnt pathway inhibitor for treatment of idiopathic pulmonary fibrosis

We note that the scoring system above is modified from the system used in 2017, with the number of points more heavily weighted toward achievements more likely to result in near-term revenue growth (i.e., regulatory approval and phase III or IV programs), and a limit placed on the number of points that can be awarded for earlier-stage developments (i.e., new clinical trials).

Our Named Executive Officers have the ability to earn above target pay only when we exceed our financial targets under Milestones 1 and 2 above. For 2018, our cash profits of \$933 million exceeded both target (\$550 million) and maximum (\$650 million), therefore the additional 25 percent financial multiplier was achieved for this metric. The revenues of \$1.628 billion were above both target (\$1.4 billion) and maximum (\$1.55 billion), therefore an additional 25 percent financial multiplier was achieved for this performance. Therefore, aggregate financial multiplier for 2018 was 150 percent (100 percent + 25 percent + 25 percent).

The cash incentive awards earned by our Named Executive Officers and approved by our Compensation Committee for the 2018 performance year were as follows:

<u>Executive Officer</u>	<u>2018 Base Salary (A)</u>	<u>2018 Cash Incentive Award Target as % of Base Salary (B)</u>	<u>2018 Milestone Attainment (C)</u>	<u>2018 Financial Multiplier (D)</u>	<u>Total Cash Incentive Bonus Earned (A × B × C × D)</u>
Martine Rothblatt	\$1,225,000	110%	100%	150%	\$2,021,250
James Edgemon	\$ 650,000	75%	100%	150%	\$ 731,250
Michael Benkowitz	\$ 850,000	85%	100%	150%	\$1,083,750
Paul Mahon	\$ 820,000	65%	100%	150%	\$ 799,500

Long-Term Incentive Compensation

2018 Long-Term Incentive Compensation

Our long-term incentive compensation program is structured to support our pay-for-performance and shareholder alignment objectives. As such, in 2018 our program consisted entirely of performance-based stock options under the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan (the 2015 SIP). For the 2018 performance period, we granted performance-based stock options to each Named Executive Officer based on the target equity values shown above under *2018 Target Total Direct Compensation*, converted into a number of stock options based on a Black-Scholes-Merton value, which uses the average closing price of our common stock for the month of February 2018. Our Compensation Committee does not have a set benchmark or formula for setting the long-term incentive award target for these individuals. It reviews and establishes long-term incentive target opportunities based on several factors, including: (i) the fair value of the long-term target opportunity in relation to our peer group; (ii) past grant levels including the retention value of these holdings; (iii) individual and company performance; and (iv) the potential gain to be realized from these awards based on the appreciation in the price of our common stock. 2018 awards were granted in two forms of performance-based stock options, as follows:

- Milestone Performance Options.** Fifty percent of each Named Executive Officer's equity opportunity for 2018 was awarded in March 2018, with performance criteria tied to the achievement of our 2018 Company-Wide Milestones. These options have a maximum payout of 150 percent of target, based on above-target performance using the financial multiplier used to determine cash incentive payouts (discussed above). The number of shares earned based on performance will then vest in equal installments over a three-year period from the date of grant. Following the end of the 2018 performance period, our Compensation Committee determined that the following number of Milestone Performance Options was earned by each Named Executive Officer, on the basis of our 100 percent milestone performance and 150 percent financial multiplier.

Executive Officer	2018 Milestone Performance Option Award (Granted on March 15, 2018) (50% of Overall Opportunity)		
	Milestone Performance Option Award Opportunity (Target) (#) (A)	Earned Award as % of 2018 Target (B)	Long-Term Incentive Award Earned (#) (A × B)
Martine Rothblatt	142,551	150%	213,827
James Edgemon	37,675	150%	56,512
Michael Benkowitz	42,765	150%	64,148
Paul Mahon	40,729	150%	61,094

- Cash Profit Performance Options.** Fifty percent of each Named Executive Officer's equity opportunity for 2018 was awarded in March 2018 with a vesting condition tied entirely to achievement of a cash profit margin target over a multi-year period from 2018 through 2020 (Cash Profit Performance Options). Each award will vest fully on the third anniversary of the date of grant if our average cash profit margin meets or exceeds 50 percent over the 2018-2020 performance period. Vesting is subject to a threshold performance criterion of 45 percent average cash profit margin, at which one-half of the target number of shares will vest. Below this threshold, zero shares will vest and between 45 percent and 50 percent, the number of shares earned will be determined by linear interpolation. Up to 200 percent of the target number of shares may be earned if average cash profit margin equals or exceeds 55 percent, with the number of shares earned between target and maximum determined by linear interpolation. Cash profit margin for a given year is defined as noted above under the cash profit Milestone for 2018.

The following table shows the number of Cash Profit Performance Options granted to each Named Executive Officer in March 2018 for the 2018 equity opportunity at threshold, target and maximum performance levels:

<u>Executive Officer</u>	<u>Threshold</u>	<u>Target</u>	<u>Maximum</u>
Martine Rothblatt	71,276	142,551	285,103
James Edgemon	18,838	37,675	75,349
Michael Benkowitz	21,383	42,765	85,531
Paul Mahon	20,365	40,729	81,458

Both types of stock options expire 10 years from the date of grant, subject to earlier expiration upon termination of employment with us.

Conclusion

As a result of these actions, target total direct compensation (defined as 2018 base salary, plus target cash incentive award for 2018 performance, plus the grant date fair value of Milestone Performance Options and Cash Profit Performance Options granted in 2018 assuming performance at target) for our Named Executive Officers approximated the 90th percentile of our peer group in the case of our Chief Executive Officer and General Counsel, between the 75th and 90th percentile for our Chief Financial Officer, and the 60th percentile for our President and Chief Operating Officer. Our Compensation Committee believes this was appropriate given the pay-for-performance design of our compensation arrangements, under which all of the Named Executive Officers’ equity compensation is performance-based, in addition to the cash bonus being at-risk. We have a track record of extraordinary, long-term performance against our internal goals and relative to our peers, therefore aligning our pay with stretch performance expectations. Additionally, our annual compensation levels and composite performance for 2018 are extremely well aligned in relation to our peer group. We also note that a key driver of these reported values (and corresponding percentile rankings) was the grant date fair value of stock options awarded to each Named Executive Officer. All of these stock options were granted with an exercise price of \$111.00 per share, and our stock price at year-end 2018 was \$108.90. As a result, all of these stock options were under water at year-end 2018. Our stock price must experience double digit growth for the Named Executive Officers to realize the full reported value from these stock options. As such, realizable pay as of year-end is far below the reported values in the *Summary Compensation Table* and is actually far lower than many of our peers, given the market prevalence of issuing restricted stock and similar full value awards, which deliver value to executives even if the issuer’s stock price declines. Our Compensation Committee has continued to issue equity to our Named Executive Officers exclusively in the form of stock options, to maximally align their interests with those of shareholders and incentivize superior performance. At the end of 2018, the stock option grants to our named executive officers that are presented in the summary compensation table are under water therefore delivering annualized compensation that is well below our peers.

Other Executive Compensation Policies and Practices

Long-Term Incentive Awards Grant Timing Policy

Our long-term incentive award grant timing is designed so that awards are granted after the market has had an opportunity to react to our announcement of annual earnings. We also believe this timing helps us avoid broad internal communication of highly confidential financial results prior to public announcement of our annual financial results. All long-term incentive awards granted to our Named Executive Officers and other employees have an exercise price equal to the closing price of our common stock on the Nasdaq on the date of grant or, if the award is granted on a date when the Nasdaq is not open, an exercise price equal to the closing price of our common stock on the Nasdaq on the preceding trading day.

As a general matter, awards to our Named Executive Officers are typically granted on March 15th each calendar year (or the preceding trading day if markets are not open on March 15th). Long-term incentive awards for our Named Executive Officers, as discussed in our 2018 Proxy Statement, were granted on March 15, 2018, and these awards are shown in the *Summary Compensation Table* and the tables thereafter in this Proxy Statement.

Benefits and Perquisites

The benefits offered to our Named Executive Officers are substantially the same as those offered to all employees, with the exception of the supplemental executive retirement plan (SERP) discussed in the section entitled *Supplemental Executive Retirement Plan* below. We provide a tax-qualified retirement plan (a 401(k) plan) and medical and other benefits to executives that are generally available to other full-time employees. Under our 401(k) plan, all employees are permitted to contribute up to the maximum amount allowable under applicable law (i.e., \$18,500 in 2018 or \$24,500 for eligible participants who are age 50 or older). We make matching contributions equal to 40 percent of eligible employee contributions with such matching contributions vesting 33 $\frac{1}{3}$ percent per year based on years of service, not the amount of time an employee has participated in the 401(k) plan. Therefore, once an employee completes three years of service, his or her account is fully vested, and any future matching funds will vest immediately. The 401(k) plan and other generally available benefits programs allow us to remain competitive for executive talent. We also provide limited perquisites to our Named Executive Officers, including participation in either our vehicle lease program, which covers the monthly lease payment and cost of insurance and maintenance on vehicles, or a monthly car allowance of up to \$1,000. Our Compensation Committee believes that the availability of these benefit programs generally enhances executive recruitment, retention, productivity and loyalty to us.

For additional details on certain benefits and perquisites received by our Named Executive Officers, see the *Summary Compensation Table* below.

Supplemental Executive Retirement Plan

We maintain our SERP for select executives to enhance the long-term retention of individuals who have been and will continue to be vital to our success. Currently, only our Named Executive Officers and two other members of senior management participate in the SERP. The SERP provides each participant with a lifetime annual payment after retirement (or at his or her election, a lump-sum payment) of up to 100 percent of final average three-year gross salary less estimated social security benefit, provided that he or she is employed by us or one of our affiliates until age 60. Participants in the SERP are prohibited from competing with us or soliciting our employees for a period of twelve months following his or her termination of employment (or, if earlier, upon attainment of age 65). Violation of this covenant will result in forfeiture of all benefits under the SERP.

Additional details regarding the SERP, including provisions in connection with a participant's death or disability or change in control of our company, are provided under the *Pension Benefits in 2018* table below.

Post-Employment Obligations for Named Executive Officers

Each of our Named Executive Officers is eligible for certain severance payments in the event his or her employment terminates under specified circumstances, including in connection with a change in control, as provided in their employment agreements as well as the terms of the SERP, the 1997 United Therapeutics Corporation Amended and Restated Equity Incentive Plan (EIP), the 2015 SIP and the STAP. These payments vary based on the type of termination but may include cash severance, stock option and STAP vesting acceleration, SERP vesting acceleration, and/or continuation of health and other benefits.

Our Compensation Committee approved these arrangements in order to promote the loyalty and productivity of our Named Executive Officers and to align executive and shareholder interests by enabling executives to consider corporate transactions that are in the best interests of our shareholders and other constituents of our company without undue concern about whether the transaction may jeopardize their employment. Our Compensation Committee wants our Named Executive Officers to be free to think creatively and promote the best interests of our company without worrying about the impact of those decisions on their employment.

Details regarding severance and change in control arrangements for our Named Executive Officers are contained in the text following the *Potential Payments Upon Termination or Change in Control* table below.

Stock Ownership Guidelines

As noted above under *Board of Directors, Committees, Corporate Governance—Stock Ownership Guidelines*, in 2011 our Board adopted Stock Ownership Guidelines in order to further align the financial interests of our directors and executive officers with those of our shareholders, to foster a long-term management orientation, and to promote sound corporate governance. Our Board amended the Stock Ownership Guidelines in 2016 in light of changes in the composition of our executive management team. As amended, our Stock Ownership Guidelines set targets for each executive officer according to the lesser of a multiple of base salary or fixed number of shares of common stock as follows:

<u>Title of Individual</u>	<u>Ownership Target</u>
Chairman and Chief Executive Officer	Lesser of 6x base salary or 100,000 shares
President and Chief Operating Officer	Lesser of 3x base salary or 30,000 shares
Chief Financial Officer and Treasurer	Lesser of 3x base salary or 20,000 shares
Executive Vice President and General Counsel	Lesser of 3x base salary or 30,000 shares

The policy provides procedures for granting exemptions in the case of hardship.

Policy Regarding Tax Deductibility of Executive Compensation

For fiscal year 2017 and prior years, Section 162(m) of the Internal Revenue Code (the Code) generally limited the deductibility of compensation to \$1 million per year for certain of our named executive officers, unless compensation in excess of the limit qualified as “performance-based compensation.” Following the changes to the tax laws effective as of January 1, 2018 that eliminate the exception for “performance-based compensation,” we expect we will be unable to deduct compensation payable to Named Executive Officers in excess of \$1,000,000.

While our Compensation Committee considers the impact of this tax treatment, the primary factor influencing program design is the support of our business objectives. Generally, whether incentive compensation will be deductible under Section 162(m) of the Code will be a consideration, but not the decisive consideration, with respect to our Compensation Committee’s compensation determinations. Accordingly, our Compensation Committee retains flexibility to structure our compensation programs in a manner that is not tax-deductible in order to achieve a strategic result that our Compensation Committee determines to be more appropriate.

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 and contained within this Proxy Statement with management and, based on such review and discussions, our Compensation Committee recommended to our Board of Directors that the *Compensation Discussion and Analysis* be included in this Proxy Statement and incorporated into United Therapeutics' Annual Report on Form 10-K for the year ended December 31, 2018.

Submitted by the Compensation Committee:
Christopher Causey (Chair)
Judy Olian
Christopher Patusky
Louis Sullivan

EXECUTIVE COMPENSATION

The following table shows compensation information for 2016, 2017 and 2018 for our Named Executive Officers, calculated in accordance with SEC regulations. We refer your attention to the *Supplementary 2017 Summary Compensation Table* that immediately follows for an understanding of 2017 compensation in a way that eliminates the effect of a one-time overlap in equity awards for the 2016 and 2017 performance periods, due to a transition in our equity compensation program to entirely performance-based awards using prospective performance conditions.

Summary Compensation Table

Name and Principal Position	Year	Salary ⁽¹⁾ (\$)	Stock Options ⁽²⁾ (\$)	Non-Equity Incentive Plan Compensation ⁽³⁾ (\$)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ⁽⁴⁾ (\$)	All Other Compensation ⁽⁵⁾ (\$)	Total (\$)
Martine Rothblatt Chairman and Chief Executive Officer	2018	\$1,208,447 ⁽⁶⁾	\$12,796,803	\$2,021,250	\$ —	\$ 9,800	\$16,036,300
	2017	\$1,163,707 ⁽⁶⁾	\$33,122,078	\$1,598,163	\$1,239,653	\$ 9,600	\$37,133,201
	2016	\$1,226,949 ⁽⁶⁾	\$12,583,891	\$ 992,464	\$ 611,425	\$ 9,600	\$15,424,329
James Edgemond Chief Financial Officer and Treasurer	2018	\$ 645,833	\$ 3,382,085	\$ 731,250	\$ 467,161	\$ 16,400	\$ 5,242,729
	2017	\$ 620,833	\$ 6,583,317	\$ 577,148	\$ 854,747	\$ 17,000	\$ 8,653,045
	2016	\$ 591,014	\$ 2,097,315	\$ 360,000	\$1,039,675	\$ 21,450	\$ 4,109,454
Michael Benkowitz ⁽⁷⁾ President and Chief Operating Officer	2018	\$ 833,333	\$ 3,839,015	\$1,083,750	\$ 835,680	\$ 17,480	\$ 6,609,258
	2017	\$ 733,333	\$ 9,017,790	\$ 738,750	\$1,043,171	\$ 24,433	\$11,557,477
	2016	\$ 568,417	\$ 3,570,563	\$ 416,000	\$ 508,653	\$287,522	\$ 5,351,155
Paul Mahon Executive Vice President and General Counsel	2018	\$ 820,000	\$ 3,656,242	\$ 799,500	\$ —	\$ 21,800	\$ 5,297,542
	2017	\$ 815,950	\$ 9,977,780	\$ 656,256	\$1,399,858	\$ 21,600	\$12,871,444
	2016	\$ 942,724	\$ 5,243,288	\$ 413,764	\$1,006,819	\$ 21,600	\$ 7,628,195

- (1) Increases in base salaries for each of our Named Executive Officers became effective on March 1, 2016, 2017 and 2018. In addition, a base salary increase for Mr. Benkowitz became effective June 26, 2016, upon his promotion to President and Chief Operating Officer, and Mr. Edgemond also received a base salary increase at that time. Therefore, a portion of the base salary shown for each year reflects the salary level for the previous year. In the case of Dr. Rothblatt and Messrs. Edgemond, Benkowitz and Mahon, amounts shown for 2016 also include \$117,075, \$60,074, \$75,256 and \$152,125 in accrued but unused vacation time that was cashed out in 2016 as a result of the elimination of our paid time off policy.
- (2) Amounts shown represent the aggregate grant date fair value of stock options granted in each reported year, computed in accordance with applicable accounting standards. For a discussion of valuation assumptions for stock options for 2018 see Note 10—*Share-Based Compensation* to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2018. The stock options were awarded under our 2015 SIP. 2017 was a transition year where we issued equity awards in March 2017 based on 2016 performance (based on the timing of our historical program), as well as awards reflecting each Named Executive Officer's 2017 equity award opportunity. The value of 2017 and 2018 stock option awards with performance conditions are reported at target, calculated using the Black-Scholes-Merton value in accordance with GAAP. For awards granted in respect of the 2016 performance year, target and maximum are equivalent. For awards granted in respect of the 2017 and 2018 performance years, the number of shares earned may exceed target for "stretch" performance, up to a maximum number of shares. If the maximum number of shares were used in calculating the Black-Scholes-Merton value of these awards, the grant date fair value would be as follows:

Name	Year	Number of Shares (at target)	Grant-Date Fair Value (at target)	Number of Shares (at maximum)	Grant-Date Fair Value (at maximum)
Martine Rothblatt	2018	285,102	\$12,796,803	498,930	\$22,464,680
	2017	244,122	\$13,922,278	427,214	\$24,447,015
James Edgemond	2018	75,350	\$ 3,382,085	131,861	\$ 5,937,136
	2017	52,312	\$ 2,983,354	91,546	\$ 5,238,654
Michael Benkowitz	2018	85,530	\$ 3,839,015	149,679	\$ 6,739,404
	2017	69,750	\$ 3,977,842	122,062	\$ 6,984,912
Paul Mahon	2018	81,458	\$ 3,656,242	142,552	\$ 6,418,505
	2017	69,750	\$ 3,977,842	122,062	\$ 6,984,912

- (3) Amounts shown for each year represent the total cash awards earned by each Named Executive Officer under our Company-Wide Milestone Program for the respective year, although the awards were not paid until March of the following year. The payouts were determined based on our attainment of specific, pre-established performance Milestones. For example, the amounts reported for 2018 reflect cash earned in respect of 2018 performance but paid in March 2019. For information on the amounts earned for 2018, see the section entitled *Cash Incentive Award Program* in the *Compensation Discussion and Analysis* above.
- (4) Amounts shown represent the change in the actuarial present value of retirement benefits under the SERP calculated in accordance with GAAP under SEC requirements. The assumptions used in calculating the change in the actuarial present value of SERP benefits are described in the footnotes to the *Pension Benefits* table below. Mr. Edgemond was added to the SERP effective July 1, 2016. The change in pension value from year to year as reported in the table will vary based on these assumptions and may not represent the value that a Named Executive Officer will accrue or receive under the SERP. For Dr. Rothblatt and Mr. Mahon, the value in the table is reported as zero in accordance with SEC rules. The actual change for Dr. Rothblatt was (\$1,575,890) and for Mr. Mahon was (\$627,382).
- (5) The amounts shown represent the aggregate incremental cost that can be attributed to lease, insurance and maintenance payments made on vehicles used by a Named Executive Officer or for monthly automobile allowances, and for travel expenses for family members to our functions (collectively, the perquisites), and “matching contributions” under our 401(k) Plan equal to 40 percent of each participant’s qualifying salary contributions.
- (6) Our Canadian subsidiary paid a portion of Dr. Rothblatt’s total base salary in the amount of 120,000 Canadian dollars. The value of this portion in U.S. dollars has been estimated for the purposes of disclosure here by using the spot exchange rate on the dates on which Dr. Rothblatt was paid. In 2016, 2017 and 2018, our Canadian subsidiary paid the equivalent of US\$89,308, US\$92,407 and US\$92,614 of Dr. Rothblatt’s total base salary, respectively.
- (7) Mr. Benkowitz was promoted to President and Chief Operating Officer effective June 26, 2016. Amounts reported for fiscal year 2016 reflect compensation paid to Mr. Benkowitz during the entirety of 2016.

Supplementary 2017 Summary Compensation Table

In 2017, we made a major shift in our equity grant practices. Historically, we established the size of an equity award at the start of the year for a performance year (e.g. Q1 2016) and then issued an award after the close of the fiscal year based on performance against pre-established milestone goals (e.g. Q1 2017). The award was then subject to time-based vesting for retention and incentivization to drive sustainable future performance. While these awards were entirely performance-based, some shareholders viewed these as time-based since they were granted after the performance was completed and were subject to additional time-based vesting. As a result of shareholder feedback and to enhance the performance aspect of these awards, we modified our equity award policy to be prospective in nature. This means that for the 2017 performance year, we made grants in March 2017 and these awards will only vest if the performance conditions are achieved over a prospective measurement period. However, this transition from retrospective grants to prospective grants resulted in grants being issued in March 2017 to reward milestone performance under the 2016 performance year as well as to start the 2017 performance and pay cycle. Both sets of grants are presented for 2017 in the *Summary Compensation Table*, and as a result, the table overstates the actual compensation set for 2017. As such, in order to provide a clear summary of 2017 compensation that eliminates the effect of this one-time overlap, the following table presents 2017 compensation information for each Named Executive Officer exactly as shown above in the *Summary Compensation Table*, except that the *Option/STAP Awards* column only shows the grant date value of the 2017 Milestone Performance Options and 2017 Cash

Profit Performance Options. The equity awards granted in 2017 related to 2016 equity opportunities have been eliminated.

Name and Principal Position	Year	Salary ⁽¹⁾ (\$)	Bonus (\$)	Option/ STAP Awards ⁽²⁾ (\$)	Non-Equity Incentive Plan Compensation ⁽³⁾ (\$)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ⁽⁴⁾ (\$)	All Other Compensation ⁽⁵⁾ (\$)	Total (\$)
Martine Rothblatt Chairman and Chief Executive Officer	2017	\$1,163,707 ⁽⁶⁾	—	\$13,922,278	\$1,598,163	\$1,239,653	\$ 9,600	\$17,933,401
James Edgemond Chief Financial Officer and Treasurer	2017	\$ 620,833	—	\$ 2,983,354	\$ 577,148	\$ 854,747	\$17,000	\$ 5,053,082
Michael Benkowitz President and Chief Operating Officer	2017	\$ 733,333	—	\$ 3,977,842	\$ 738,750	\$1,043,171	\$24,433	\$ 6,517,529
Paul Mahon Executive Vice President and General Counsel	2017	\$ 815,950	—	\$ 3,977,842	\$ 656,256	\$1,399,858	\$21,600	\$ 6,871,506

- (1) Increases in base salaries for each of our Named Executive Officers became effective on March 1, 2017. Therefore, a portion of the base salary shown reflects the salary level for the previous year.
- (2) Amounts shown represent the aggregate grant date fair value of stock options granted in 2017, computed in accordance with applicable accounting standards. No STAP Awards were granted in 2017. For a discussion of valuation assumptions for stock options for 2017 see Note 9—*Share-Based Compensation* to the Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2017. The stock options were awarded under our 2015 SIP. See the *Grants of Plan-Based Awards in 2017* table for more information on stock options granted to our Named Executive Officers in 2017. The value of 2017 stock option awards with performance conditions are reported at target, calculated using the Black-Scholes-Merton value in accordance with GAAP. For awards granted in respect of the 2017 performance year, the number of shares earned may exceed target for “stretch” performance, up to a maximum number of shares. If the maximum number of shares were used in calculating the Black-Scholes-Merton value of these awards, the grant date fair value would be as follows:

Name	Number of Shares (at target)	Grant-Date Fair Value (at target)	Number of Shares (at maximum)	Grant-Date Fair Value (at maximum)
Martine Rothblatt	244,122	\$13,922,278	427,214	\$24,447,015
James Edgemond	52,312	\$ 2,983,354	91,546	\$ 5,238,654
Michael Benkowitz	69,750	\$ 3,977,842	122,062	\$ 6,984,912
Paul Mahon	69,750	\$ 3,977,842	122,062	\$ 6,984,912

- (3) Amounts shown represent the total cash awards earned by each Named Executive Officer under our Company-Wide Milestone Program for the year, although the awards were not paid until March of the following year. The payouts were determined based on our attainment of specific, pre-established performance Milestones. For example, the amounts reported for 2017 reflect cash earned in respect of 2017 performance but paid in March 2018. For information on the amounts earned for 2017, see the section entitled *Cash Incentive Award Program* in the *Compensation Discussion and Analysis* above.
- (4) Amounts shown represent the change in the actuarial present value of retirement benefits under the SERP calculated in accordance with GAAP under SEC requirements. The assumptions used in calculating the change in the actuarial present value of SERP benefits are described in the footnotes to the *Pension Benefits* table below. The change in pension value from year to year as reported in the table will vary based on these assumptions and may not represent the value that a Named Executive Officer will accrue or receive under the SERP.
- (5) The amounts shown represent the aggregate incremental cost that can be attributed to lease, insurance and maintenance payments made on vehicles used by a Named Executive Officer or for monthly automobile allowances, and for travel expenses for family members to our functions (collectively, the perquisites), and “matching contributions” under our 401(k) Plan equal to 40 percent of each participant’s qualifying salary contributions. In the case of Mr. Benkowitz, the amount shown also includes \$6,233 in relocation benefits during 2017, as Mr. Benkowitz relocated from California to North Carolina in connection with his promotion to President and Chief Operating Officer.
- (6) Our Canadian subsidiary paid a portion of Dr. Rothblatt’s total base salary in the amount of 120,000 Canadian dollars. The value of this portion in U.S. dollars has been estimated for the purposes of disclosure here by using the spot exchange rate on the dates on which Dr. Rothblatt was paid. In 2017, our Canadian subsidiary paid the equivalent of US\$92,407 of Dr. Rothblatt’s total base salary.

Grants of Plan-Based Awards in 2018

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards			Estimated Future Payouts Under Equity Incentive Plan Awards			Exercise or Base Price of Stock Option Awards (\$/Sh)	Grant Date Fair Value of Stock Option Awards ⁽⁴⁾ (\$)
		Threshold ⁽³⁾ (\$)	Target ⁽³⁾ (\$)	Maximum ⁽³⁾ (\$)	Threshold (#)	Target (#)	Maximum (#)		
Martine Rothblatt	03/15/18 ⁽¹⁾				N/A	142,551	213,827	\$111.00	\$6,257,989
	03/15/18 ⁽²⁾				71,276	142,551	285,103	\$111.00	\$6,538,814
	N/A ⁽³⁾	\$673,750	\$1,347,500	\$2,021,250					
James Edgemond	03/15/18 ⁽¹⁾				N/A	37,675	56,512	\$111.00	\$1,653,933
	03/15/18 ⁽²⁾				18,838	37,675	75,349	\$111.00	\$1,728,152
	N/A ⁽³⁾	\$243,625	\$ 487,500	\$ 731,250					
Michael Benkowitz . . .	03/15/18 ⁽¹⁾				N/A	42,765	64,148	\$111.00	\$1,877,384
	03/15/18 ⁽²⁾				21,383	42,765	85,531	\$111.00	\$1,961,631
	N/A ⁽³⁾	\$361,250	\$ 722,500	\$1,083,750					
Paul Mahon	03/15/18 ⁽¹⁾				N/A	40,729	61,094	\$111.00	\$1,788,003
	03/15/18 ⁽²⁾				20,365	40,729	81,458	\$111.00	\$1,868,239
	N/A ⁽³⁾	\$266,500	\$ 533,000	\$ 799,500					

- (1) This award of stock options represents 50 percent of the Named Executive Officer's 2018 equity incentive award opportunity and was subject to a one-year performance period tied to achievement of the 2018 Company-Wide Milestones. To the extent earned, these stock options vest in equal installments over a three-year period from the date of grant. These awards do not have an overall threshold amount, although individual milestones within the 2018 Company-Wide Milestone program are each subject to a performance threshold in order to receive partial credit for the respective milestone. See the *Compensation Discussion and Analysis* above for details on the achievement of the Company-Wide Milestones.
- (2) This award of stock options represents 50 percent of the Named Executive Officer's 2018 equity incentive award opportunity and is subject to a three-year performance threshold tied to average cash profit margin. To the extent earned, these stock options vest at the end of the three-year performance period.
- (3) Actual cash incentive awards earned under the program in 2018 are reported in the Summary Compensation Table under the column entitled "Non-Equity Incentive Plan Compensation."
- (4) The grant date fair value of stock options is generally the amount that we will recognize as an expense over the award's vesting period assuming target performance levels, computed in accordance with applicable accounting standards.

Narratives to Summary Compensation Table and Grants of Plan-Based Awards in 2018 Table

Named Executive Officer Employment Agreements

The material terms of each Named Executive Officer's employment agreement are described below.

Dr. Rothblatt

In April 1999, we entered into an employment agreement with Dr. Rothblatt. This agreement was amended from time to time and we entered into an Amended and Restated Executive Employment Agreement with Dr. Rothblatt effective January 1, 2009 in order to clarify the effectiveness of certain prior amendments, and to make certain other immaterial amendments. This agreement was further amended effective January 1, 2015, to remove her entitlement to an annual grant of stock options based on a market capitalization growth formula and to provide flexibility for our company to grant her incentive-based compensation in a variety of forms at our Compensation Committee's discretion. The amendment also eliminated Dr. Rothblatt's right to an Internal Revenue Code Section 280G excise tax gross-up payment, among other changes.

Dr. Rothblatt's employment agreement provides for an initial five-year term, which is automatically extended for an additional year at the end of each year unless either party gives at least six months' notice of termination. If either party provided such a notice of termination, it would result in a four-year remaining term. We note that this rolling five-year term has no bearing on potential

severance payments upon termination, which are described under *Potential Payments Upon Termination or Change in Control*.

Dr. Rothblatt’s compensation in 2018 was paid pursuant to this employment agreement, which entitles her to a minimum base salary of \$180,000, annual cash and long-term incentive compensation and participation in employee benefits generally available to other executives of our company. The level of Dr. Rothblatt’s base salary is subject to annual review and increase by our Compensation Committee. Her annual salary was reviewed in early 2018, and beginning March 1, 2018, was set at \$1,225,000. Her employment agreement also requires us to pay the cost of leasing, maintaining and insuring an automobile for Dr. Rothblatt.

Dr. Rothblatt’s employment agreement prohibits her from engaging in activities competitive with us for five years following her last receipt of compensation from us. She is also subject to a permanent confidentiality obligation. For information regarding severance and change in control arrangements for Dr. Rothblatt, see the text following the *Potential Payments Upon Termination or Change in Control* table below.

Mr. Edgemon, Mr. Benkowitz and Mr. Mahon

We have entered into employment agreements with each of Messrs. Edgemon, Benkowitz and Mahon. The agreement for Mr. Mahon provides for an initial five-year term, which is automatically extended for an additional year at the end of each year. Either party may terminate the agreement a certain time period prior to an annual renewal, which would result in a four-year remaining term. The agreements for Messrs. Benkowitz and Edgemon provide an initial term of three years, following which the agreement continues from year-to-year for one-year terms unless either party provides written notice to terminate a certain time period prior to the end of the then-current term. Each employment agreement provides for an annual minimum base salary, which is subject to annual review and increase by our Compensation Committee. Annual salaries for each of these executives were reviewed in early 2018, with raises becoming effective March 1, 2018. The following table outlines these details for each executive:

<u>Executive Officer</u>	<u>Month/Year of Agreement</u>	<u>Minimum Base Salary under Agreement</u>	<u>Base Salary as of March 1, 2018</u>
James Edgemon	March 2015	\$400,000	\$650,000
Michael Benkowitz	June 2016	\$650,000	\$850,000
Paul Mahon	June 2001	\$300,000	\$820,000

Under these agreements, each executive is eligible to participate in our broad-based employee benefit plans. In accordance with our executive automobile policy, Messrs. Edgemon, Benkowitz and Mahon each receives either a monthly car allowance of \$1,000 per month or the use of a company-owned or leased vehicle.

Each of these employment agreements prohibits the executive from accepting employment, consultancy or any other business relationships with an entity that directly competes with us or from engaging in the solicitation of our employees on behalf of a competitor for a period of time following his last receipt of compensation from us (two years in the case of Mr. Mahon and one year in the case of Mr. Edgemon and Mr. Benkowitz). Each agreement includes an obligation of confidentiality for three years after termination of the executive’s employment.

Messrs. Edgemon and Benkowitz are each party to a change in control severance agreement providing benefits in the event of his termination following a change in control of our company. In particular, these benefits include a cash severance payment equal to two times base salary, plus two times the highest of (i) the cash incentive award paid to the individual for the year immediately preceding the year in which the change in control occurs, (ii) the cash incentive award payable to the

individual for the year immediately preceding the year in which the termination of employment occurs, or (iii) the individual's annual target cash incentive award. This cash severance would become payable in lieu of any severance payment under the respective employment agreements unless severance under the employment agreement would result in a greater benefit. The change in control severance agreement also provides for continuation of medical benefits for 24 months following termination, and outplacement benefits with a value of \$10,000.

For further information regarding severance and change in control arrangements for these Named Executive Officers, see the text following the *Potential Payments Upon Termination or Change in Control* table below.

Summary of Terms of Plan-Based Awards

Stock Options under the 2015 SIP

In 2016, 2017 and 2018, our Named Executive Officers were granted stock options under our 2015 SIP.

These long-term incentive awards were granted annually in 2016, 2017 and 2018 concurrently with the cash incentive award awards.

Stock options granted under the 2015 SIP in 2016 vest in one-fourth increments on the first four anniversaries of the date of grant, in each case subject to the Named Executive Officer's continued employment. Stock options granted under the 2015 SIP in 2017 and 2018 vest in one-third increments on the first three anniversaries of the date of grant (in the case of stock options granted as a result of 2016 performance under our Company-Wide Milestone Program, and Milestone Performance Options granted with respect to 2017 and 2018 performance, to the extent earned), or cliff vest on the third anniversary of the date of grant to the extent earned based on performance (in the case of Cash Profit Performance Options), in each case subject to the Named Executive Officer's continued employment. Each award has a ten-year term. For information regarding acceleration of vesting upon certain employment termination events, see the text following the *Potential Payments Upon Termination or Change in Control* table below.

Outstanding Equity Awards at 2018 Fiscal Year-End

The following table sets forth information regarding unexercised stock options or STAP awards held by each of our Named Executive Officers as of December 31, 2018.

Name and Grant Date	Award Type	Number of Securities Underlying Unexercised Options or STAP Awards		Equity Incentive Plan Awards:	Option or STAP Award Exercise Price (\$)	Option or STAP Award Expiration Date
		(#) Exercisable	(#) Unexercisable	Number of Securities Underlying Unexercised Unearned Options (#)		
Martine Rothblatt						
12/31/2009	Stock Option ⁽¹⁾	148,138	—	—	52.65	12/31/2019
12/31/2010	Stock Option ⁽¹⁾	364,834	—	—	63.22	12/31/2020
12/31/2012	Stock Option ⁽¹⁾	55,488	—	—	53.42	12/31/2022
12/31/2013	Stock Option ⁽¹⁾⁽²⁾	1,000,000	—	—	113.08	12/31/2023
12/31/2014	Stock Option ⁽¹⁾⁽²⁾	723,869	—	—	129.49	12/31/2024
03/15/2016	Stock Option ⁽³⁾	147,000	147,000	—	120.26	03/15/2026
03/15/2017	Stock Option ⁽⁴⁾	80,000	160,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	100,000	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁶⁾	50,096	100,192	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	244,122	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁵⁾	—	—	285,103	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁶⁾	—	213,827	—	111.00	03/15/2028
James Edgemond						
01/14/2013	STAP Award ⁽⁷⁾	5,000	—	—	52.12	01/14/2023
03/14/2014	STAP Award ⁽³⁾	2,411	—	—	94.96	03/14/2024
03/13/2015	STAP Award ⁽³⁾	18,750	6,250	—	163.30	03/13/2025
03/13/2015	STAP Award ⁽³⁾	11,370	3,790	—	163.30	03/13/2025
03/15/2016	Stock Option ⁽³⁾	24,500	24,500	—	120.26	03/15/2026
03/15/2017	Stock Option ⁽⁴⁾	15,000	30,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	18,750	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁶⁾	10,735	21,470	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	52,312	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁵⁾	—	—	75,349	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁶⁾	—	56,512	—	111.00	03/15/2028
Michael Benkowitz						
04/04/2011	STAP Award ⁽³⁾	21,750	—	—	68.14	04/04/2021
03/15/2012	STAP Award ⁽³⁾	6,450	—	—	47.50	03/15/2022
01/02/2013	STAP Award	100,000	—	—	53.83	01/02/2023
03/15/2013	STAP Award ⁽³⁾	18,400	—	—	61.06	03/15/2023
03/14/2014	STAP Award ⁽³⁾	40,000	—	—	94.96	03/14/2024
03/13/2015	STAP Award ⁽³⁾	27,900	9,300	—	163.30	03/13/2025
03/15/2016	Stock Option ⁽³⁾	19,600	19,600	—	120.26	03/15/2026
06/24/2016	Stock Option ⁽³⁾	26,250	26,250	—	102.11	06/24/2026
03/15/2017	Stock Option ⁽⁴⁾	21,000	42,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	26,250	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁶⁾	14,313	28,627	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	69,750	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁵⁾	—	—	85,531	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁶⁾	—	64,148	—	111.00	03/15/2028
Paul Mahon						
03/15/2011	STAP Award ⁽³⁾	30,500	—	—	65.80	03/15/2021
03/14/2014	STAP Award ⁽³⁾	119,000	—	—	94.96	03/14/2024
03/13/2015	STAP Award ⁽³⁾	87,187	29,063	—	163.30	03/13/2025
03/15/2016	Stock Option ⁽³⁾	61,250	61,250	—	120.26	03/15/2026
03/15/2017	Stock Option ⁽⁴⁾	25,000	50,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	31,250	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁶⁾	14,313	28,627	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	—	69,750	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁵⁾	—	—	81,458	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁶⁾	—	61,094	—	111.00	03/15/2028

(1) These stock options were fully vested upon grant pursuant to Dr. Rothblatt's employment agreement.

- (2) These stock options have been transferred to trusts beneficially owned by Dr. Rothblatt and her spouse, for estate planning purposes.
- (3) These stock options or STAP awards vest in one-fourth increments on each of the first four anniversaries of the date of grant.
- (4) These stock options vest in one-third increments on each of the first three anniversaries of the date of grant.
- (5) These stock options are subject to a three-year performance threshold tied to average cash profit margin. To the extent earned, these stock options vest at the end of the three-year performance period. Given performance to-date has fallen above target, the number of shares shown is at “maximum”. The number of shares that are ultimately earned may be lower, depending on performance over the relevant three-year period.
- (6) These stock options are subject to a one-year performance threshold tied to Company-Wide Milestone Performance. Once earned, shares vest in equal installments over a three-year period. The number of shares shown reflect the number of shares earned based on actual performance.
- (7) One-time STAP award granted upon Mr. Edgemon’s commencement of employment, which vested in full on February 28, 2015.

Option Exercises and Stock Vested in 2018

The following table shows (i) the number of shares of our common stock acquired upon exercise of stock options; and (ii) the number of STAP awards exercised by each of our Named Executive Officers during the year ended December 31, 2018.

Name	Option Awards		STAP Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$) ⁽¹⁾	Number of STAP Awards Exercised (#)	Value Realized on Exercise (\$) ⁽¹⁾
Martine Rothblatt	282,106	\$16,883,731	—	\$ —
James Edgemon	—	\$ —	—	\$ —
Michael Benkowitz	—	\$ —	—	\$ —
Paul Mahon	—	\$ —	142,000	\$8,088,800

- (1) Represents the difference between the exercise price of the stock options or STAP award and the fair market value of our common stock on the date of exercise, multiplied by the number of options or STAP awards exercised. STAP awards convey the right to receive an amount in cash equal to the positive difference between the exercise price and the closing price of our common stock on the date of exercise.

Pension Benefits in 2018

The table below describes the present value of the accumulated benefit for our Named Executive Officers under the SERP.

Name	Plan Name	Number of Years of Credited Service ⁽¹⁾	Actual Years of Service ⁽²⁾	Present Value of Accumulated Benefit (\$) ⁽³⁾
Martine Rothblatt	SERP	15.0	22.5	\$14,860,336
James Edgemon	SERP	5.9	6.0	\$ 2,361,583
Michael Benkowitz	SERP	7.7	7.7	\$ 3,181,444
Paul Mahon	SERP	15.0	17.6	\$ 9,586,367

- (1) Reflects the number of years (up to the maximum of 15 years under the terms of the SERP) since each Named Executive Officer commenced employment with us, through December 31, 2018.
- (2) Reflects the number of years since each Named Executive Officer commenced employment with us, through December 31, 2018.

- (3) The present values of accumulated benefits are based on assumptions used in the financial disclosures for the year ended December 31, 2018 including a discount rate of 3.92 percent and a lump sum interest rate of 4.50 percent. The present value represents the lump sum value of the accrued benefit which is based on service and earnings as of December 31, 2018, and assumes payment at age 60, the normal retirement date under the Plan. No preretirement death, disability, or termination is assumed. For a discussion of valuation assumptions, see Note 13—*Employee Benefit Plans* to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2018.

Supplemental Executive Retirement Plan

In 2006, our Compensation Committee approved our SERP, which is a non-qualified supplemental defined benefit retirement plan for select key executives intended to enhance the long-term retention of individuals that have been and will continue to be vital to our success. Participants in the SERP generally must remain in the employ of our company or one of its affiliates until age 60 to receive a benefit except in the event of death, disability or a change in control of our company. If a participant terminates employment with us for any reason prior to age 60 (other than due to death or disability or following a change in control), no benefit will be paid. The benefit to be paid under the plan is based on when an executive commenced participation in the plan. In general, a participant will be eligible for an unreduced benefit under the plan after 15 years of service. Upon a change in control before a participant reaches age 60, he or she will immediately vest in and receive a prorated benefit based on years of service to date.

The SERP is administered by our Compensation Committee. Currently, our Named Executive Officers and four other members of senior management participate in the SERP. Each of our Named Executive Officers all eligible, upon retirement after the age of 60, to receive monthly payments equal to the monthly average of the total gross base salary received by the participant over his or her last 36 months of active employment (the Final Average Compensation), reduced by the participant's estimated social security benefit (determined as provided under the SERP), for the remainder of the participant's life (the aggregate amount of such payments, the Normal Retirement Benefit), commencing on the first day of the sixth month after retirement. For executives who began participating in the plan after July 1, 2006, the retirement benefit is generally calculated as 100 percent of the final three-year average gross base salary reduced by the estimated social security benefit they would receive in retirement, multiplied by a fraction (not to exceed 1) the numerator of which is their years of service and the denominator of which is 15 (the Normal Retirement Benefit). This means that for participants who have less than 15 years of service with us, the retirement benefit is prorated by the number of years of actual service divided by 15 years. By age 60, all current participants will have had 15 years of service if they remain employed by us. In the event of termination of employment due to disability prior to the age of 60 or death prior to retirement, a participant or the participant's beneficiary, as applicable, will be entitled to a percentage of the Normal Retirement Benefit, as determined under the SERP (the aggregate amount of such payments referred to as the Disability Retirement Benefit), commencing on the first day of the sixth month after termination of employment in the event of a Disability and as soon as administratively practicable in the event of death. All of our Named Executive Officers have elected to receive their benefit in the form of a lump sum, although they were also offered a choice of a single life annuity or an actuarially equivalent joint or survivor annuity.

In the event of a change in control, as defined in the SERP, a participant who is actively employed on the date of the change in control will be entitled to a lump sum payment equal to the actuarial equivalent present value of a monthly single life annuity equal to (1) the participant's Final Average Compensation, reduced by the participant's estimated future social security benefit (determined as provided under the SERP), multiplied by (2) a fraction (no greater than one), the numerator of which

equals the participant's years of service and the denominator of which equals 15, to be paid as soon as administratively practicable following the change in control. In the event that a participant is entitled to a Normal Retirement Benefit or Disability Retirement Benefit at the time of a change in control, all such payments (or any remaining payments, with respect to any participant who is receiving payments under the SERP at the time of the change in control) will be made in a lump sum as soon as administratively practicable following such change in control.

Participants in the SERP will be prohibited from competing with us or soliciting its employees for a period of twelve months following his or her termination of employment (or, if earlier upon attainment of age 65). Violation of this covenant will result in forfeiture of all benefits under the SERP.

Rabbi Trust

In December 2007, our Compensation Committee adopted the United Therapeutics Corporation Supplemental Executive Retirement Plan Rabbi Trust Document (Rabbi Trust Document), providing for the establishment of a trust (Rabbi Trust), the assets of which will be contributed by us and used to pay benefits under the SERP. The Rabbi Trust Document was entered into between our company and Wilmington Trust Company, which will serve as trustee of the Rabbi Trust. The Rabbi Trust is irrevocable, and SERP participants will have no preferred claim on, nor any beneficial ownership interest in, any assets of the Rabbi Trust.

Currently, the Rabbi Trust does not contain any assets. Generally, we may contribute additional assets to the Rabbi Trust at our sole discretion. However, pursuant to the terms of the Rabbi Trust Document, within five days following the occurrence of a potential change in control (as defined in the Rabbi Trust Document), or if earlier, at least five days prior to the occurrence of a change in control (as defined in the Rabbi Trust Document), we will be obligated to make an irrevocable contribution to the Rabbi Trust in an amount sufficient to pay each SERP participant or beneficiary the benefits to which they would be entitled pursuant to the terms of the SERP on the date on which the change in control occurred. The Rabbi Trust will not terminate until the date on which SERP participants or their beneficiaries are no longer entitled to benefits pursuant to the terms of the SERP.

Potential Payments Upon Termination or Change in Control

Each of our Named Executive Officers is eligible to receive certain payments and benefits if his or her employment is involuntarily terminated without "Cause", terminated by the executive for "Good Reason", terminated by the executive voluntarily with continued status as a "Senior Advisor" to us, terminated due to disability or death, or terminated in connection with a "Change in Control" of our company in accordance with the applicable terms of their respective employment agreements, change in control severance agreements, the SERP, our equity compensation plans (the EIP and 2015 SIP) and related stock option agreements, and the STAP and related award agreements, as reported in the *Potential Payments Upon Termination or Change in Control* table below and described in the narrative table that follows. The summary of these benefits is qualified in its entirety by the specific language of the various agreements and plans that have been filed with the SEC. The amounts shown in the *Potential Payments Upon Termination or Change in Control* table below are estimates of the value of these payments and benefits, assuming that such termination or triggering event was effective as of December 31, 2018 (except as otherwise noted below with respect to those Named Executive Officers who terminated during the year). The actual compensation to be paid to a Named Executive Officer can only be determined at the time such Named Executive Officer's employment is terminated and may vary based on factors such as the timing during the year of any such event, our stock price, the Named Executive Officer's age, and any changes to our benefit arrangements and policies. In addition to the benefits described below, our Named Executive Officers will be eligible to receive any benefits accrued under our broad-based benefit plans, such as distributions under life insurance and disability benefit plans.

Potential Payments Upon Termination or Change in Control

Executive Benefits and Payments Upon Separation	Involuntary Termination Without Cause/ Resignation for Good Reason/ Resignation While Continuing as Senior Advisor ⁽¹⁾	Disability	Death	Termination upon a Change in Control	Change In Control without Termination of Employment
Martine Rothblatt					
Salary and cash incentive	\$10,067,652	\$ 1,225,000	\$ 1,225,000	\$10,067,652	\$ —
Stock option vesting acceleration ⁽²⁾	—	—	—	—	—
Supplemental Executive Retirement Plan	14,860,336 ⁽³⁾	14,860,336	10,367,352	14,860,336	14,860,336
Health and other benefits ⁽⁴⁾	178,123	—	—	178,123	—
Total	<u>\$25,106,111</u>	<u>\$16,085,336</u>	<u>\$11,592,352</u>	<u>\$25,106,111</u>	<u>\$14,860,336</u>
James Edgemond					
Salary and cash incentive	\$ 128,219	\$ —	\$ —	\$ 2,454,296	\$ —
STAP award and stock option vesting acceleration ⁽²⁾	—	—	—	—	—
Supplemental Executive Retirement Plan	—	3,816,514	2,753,831	2,284,284	2,284,284
Health and other benefits ⁽⁵⁾	—	—	—	70,312	—
Total	<u>\$ 128,219</u>	<u>\$ 3,816,514</u>	<u>\$ 2,753,831</u>	<u>\$ 4,808,892</u>	<u>\$ 2,284,284</u>
Michael Benkowitz					
Salary and cash incentive	\$ 412,192	\$ —	\$ —	\$ 3,177,500	\$ —
STAP award and stock option vesting acceleration ⁽²⁾	—	178,238	178,238	178,238	178,238
Supplemental Executive Retirement Plan	—	4,525,781	3,162,560	2,854,230	2,854,230
Health and other benefits ⁽⁵⁾	—	—	—	70,312	—
Total	<u>\$ 412,192</u>	<u>\$ 4,704,019</u>	<u>\$ 3,340,798</u>	<u>\$ 6,280,280</u>	<u>\$ 3,032,468</u>
Paul Mahon					
Salary and cash incentive	\$ 2,952,512	\$ —	\$ —	\$ 2,952,512	\$ —
STAP award and stock option vesting acceleration ⁽²⁾	—	—	—	—	—
Supplemental Executive Retirement Plan	—	9,767,639	6,875,965	9,329,182	9,329,182
Total	<u>\$ 2,952,512</u>	<u>\$ 9,767,639</u>	<u>\$ 6,875,965</u>	<u>\$12,281,694</u>	<u>\$ 9,329,182</u>

- (1) Benefits upon termination while continuing as a senior advisor are applicable only to employment agreements with Dr. Rothblatt and Mr. Mahon.
- (2) The value shown is based on the positive difference between the aggregate exercise price of all accelerated stock options and/or STAP awards and the aggregate market value of the underlying shares calculated based on the closing market price of our common stock on December 31, 2018, \$108.90. Per the terms of awards containing performance-vesting criteria, acceleration will result in the vesting of the “target” number of shares.
- (3) Dr. Rothblatt’s employment agreement provides for SERP benefits under her employment agreement upon reaching age 65, including three additional years of service. Given Dr. Rothblatt has attained retirement age and has already reached the maximum number of years of service under the SERP, this additional benefit is no longer applicable. As a result, the value included in this table represents the normal benefits Dr. Rothblatt would receive upon retirement, in accordance with the terms of the SERP.
- (4) Represents the estimated value of continued health care benefits for a three-year period after termination, outplacement services for 12 months and the fair value of one currently leased vehicle.
- (5) Represents the estimated value of continued health care benefits for a two-year period after termination and outplacement services equal to \$10,000.

Severance and Change in Control Payments to Named Executive Officers

<u>Provision</u>	<u>Terms Applicable to Chairman and CEO</u>	<u>Terms Applicable to Mr. Mahon</u>
<i>Payments Upon Involuntary Termination without Cause, or Resignation for Good Reason, or Resignation while Continuing as Senior Advisor</i>	<ul style="list-style-type: none"> • Lump sum prorated cash incentive and incentive payment* • Lump sum payment equal to 3.0 times base salary + 3.0 times annual cash incentive award* • Continuation of health care benefits for 36 months, outplacement services for 12 months and the transfer of one currently leased vehicle • Immediate vesting of unvested stock options 	<ul style="list-style-type: none"> • Lump sum payment equal to 2.0 times: (i) current base salary; plus (ii) annual cash incentive award* • Immediate vesting of unvested stock options and STAP awards
<i>Payments Upon Disability</i>	<ul style="list-style-type: none"> • Continued payment of current base salary through the end of the calendar year following such disability • Acceleration of SERP benefits • Immediate vesting of unvested stock options 	<ul style="list-style-type: none"> • Immediate vesting of unvested stock options and STAP awards • Acceleration of SERP benefits
<i>Payments Upon Death</i>	<ul style="list-style-type: none"> • Continued payment of current base salary through the end of the calendar year following such death to Executive's legal representatives • Acceleration of SERP benefits • Immediate vesting of unvested stock options 	<ul style="list-style-type: none"> • Immediate vesting of unvested stock options and STAP awards • Acceleration of SERP benefits
<i>Payments Upon Change in Control without Termination</i>	<ul style="list-style-type: none"> • Acceleration of SERP benefits • Immediate vesting of unvested stock options (if not assumed) 	<ul style="list-style-type: none"> • Acceleration of SERP benefits • Immediate vesting of unvested stock options and STAP awards (if not assumed)
<i>Payments Upon Termination Following Change in Control</i>	<ul style="list-style-type: none"> • Same as Payments Upon Involuntary Termination, etc., except that payment of SERP benefits occurs immediately, and is calculated as described above under <i>Supplemental Executive Retirement Plan</i> 	<ul style="list-style-type: none"> • Same as Payments Upon Involuntary Termination, etc. • Acceleration of SERP benefits

* Payment is equal to greater of payment for the prior year, or the average of such payments for the prior two years.

<u>Provision</u>	<u>Terms Applicable to Mr. Edgemond and Mr. Benkowitz</u>
<i>Payments Upon Involuntary Termination without Cause</i>	<ul style="list-style-type: none"> • Lump sum payment equal to base salary through the remainder of the agreement term
<i>Payments Upon Disability</i>	<ul style="list-style-type: none"> • Continued payment of current base salary through date of termination • Immediate vesting of unvested stock options and STAP awards • Acceleration of SERP benefits
<i>Payments Upon Death</i>	<ul style="list-style-type: none"> • Immediate vesting of unvested stock options and STAP awards • Acceleration of SERP benefits
<i>Payments Upon Change in Control without Termination</i>	<ul style="list-style-type: none"> • Acceleration of SERP benefits • Immediate vesting of unvested stock options and STAP awards (if not assumed)

Provision

Terms Applicable to Mr. Edgmond and Mr. Benkowitz

Payments Upon Termination Following Change in Control

- Payment of a lump sum cash amount equal to 2.0 times the sum of (x) base salary plus (y) the highest of (i) the cash incentive paid to the individual for the year immediately preceding the year in which the change in control occurs, (ii) the cash incentive award payable to the individual for the year immediately preceding the year in which the termination of employment occurs, or (iii) the individual's annual target cash incentive award.
- Immediate vesting of unvested stock options and STAP awards
- Acceleration of SERP benefits
- Continuation of medical benefits for 24 months
- Outplacement benefits with a value of \$10,000

As used in the tables above, the following terms are generally defined as follows:

Cause:

- In the case of Dr. Rothblatt, her willful and continued failure to substantially perform her duties, or willfully engaging in gross misconduct that is materially injurious to us.
- In the case of the other Named Executive Officers, (i) failure to perform any of the material terms or provisions of his employment agreement; (ii) negligent or unsatisfactory performance of duties, after notice and the opportunity to correct such performance; (iii) employment- or profession- related misconduct; (iv) conviction of a crime involving a felony, fraud or embezzlement; or (v) misappropriation of our funds or misuse of assets.

Good Reason:

- In the case of Dr. Rothblatt, without her consent, the occurrence of any of the following: (i) the assignment of any duties that are inconsistent with her position as Chairman and Chief Executive Officer; (ii) a material adverse change in her reporting responsibilities, titles or offices; (iii) failure to re-elect her to any position she held with us; (iv) a reduction in her base salary or failure to increase her salary consistent with certain other executive salary increases; (v) relocation of 25 miles or more or additional substantially more burdensome travel requirements; (vi) failure to continue her as a participant in any bonus or other incentive plans in which she was participating; (vii) failure to keep in effect certain benefit plans and arrangements; (viii) failure to obtain a successor entity's assumption of the employment agreement; (ix) failure to abide by certain provisions in the employment agreement; or (x) any other material breach of the employment agreement.
- In the case of Mr. Mahon, his authority and responsibilities being materially diminished without cause.

Change in Control: Transfer of control of our company (generally, as a result of an acquisition, merger, hostile takeover or any other reason).

Pay Ratio

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 402(u) of Regulation S-K, we are required to disclose the ratio of the 2018 compensation of our principal executive officer to that of our median compensated employee.

During 2018, the principal executive officer of United Therapeutics was our Chief Executive Officer, Dr. Martine Rothblatt. For purposes of this pay ratio disclosure, the 2018 annual total compensation for Dr. Rothblatt was \$16,051,966, and for our median employee, identified as discussed

below, was \$189,774, resulting in a pay ratio of approximately 85:1. The annual total compensation of our CEO for purposes of this disclosure differs from the total annual compensation reflected in the *Summary Compensation Table* because we included the value of employer paid non-discriminatory health and welfare benefits and basic life insurance premiums, which are not required to be disclosed in the Summary Compensation Table, but which we include here to give a more complete picture of our median employee's total rewards compensation.

As permitted under Item 402(u) of Regulation S-K, we chose to utilize the same median employee for 2018 as we did for 2017, based on our conclusion that (i) there has been no change in our employee compensation arrangements that we reasonably believe would result in a significant change in our pay ratio disclosure; and (ii) there has been no change in our employee population that we believe would result in a significant change to our pay ratio disclosure. As of October 1, 2018, we had a total of 823 employees, which represents only a 7.1 percent increase in our employee population. This number excludes 30 employees located outside the United States, in accordance with the *de minimis* exception employed for 2017, as described below.

In accordance with Item 402(u) of Regulation S-K, we identified our employee population as of October 1, 2017 and determined the median employee by (i) aggregating for each applicable employee (A) annual base salary determined as of October 1, 2017 for salaried employees (or hourly rate as of the same date, multiplied by estimated hours worked in 2017, for hourly employees), (B) and the target cash incentive, commissions, and overtime earned in 2017, and (ii) ranking this compensation measure for our employees from lowest to highest. This calculation was performed for all employees except as disclosed in the following paragraph, excluding Dr. Rothblatt, whether employed on a full-time, part-time, or seasonal basis.

For purposes of identifying the median employee, all employees located outside of the United States as of October 1, 2017, totaling 17 individuals, were excluded from the determination of the median employee pursuant to the so-called *de minimis* exemption, which permits us to exclude foreign employees, up to 5 percent of our total employee population of 785, on a whole-country basis. As of October 1, 2017, these employees were located in the following countries: Canada (2), China (1), Germany (2) and United Kingdom (12). Applying this *de minimis* exemption, as of October 1, 2017, we considered a total of 768 US-based employees (excluding our CEO) and no employees located outside of the US. Irrespective of the *de minimis* exemption, on this same date we had 768 US-based employees and no employees located outside of the United States for purposes of our pay ratio calculation.

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

PROPOSAL NO. 3
APPROVAL OF THE AMENDMENT AND RESTATEMENT OF THE UNITED THERAPEUTICS CORPORATION AMENDED AND RESTATED 2015 STOCK INCENTIVE PLAN

Overview

We are asking our shareholders to approve an amendment and restatement (the 2019 Restatement) of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan (the Plan). On April 29, 2015, our Board of Directors unanimously adopted and approved the United Therapeutics Corporation 2015 Stock Incentive Plan (the Plan). Our shareholders subsequently approved the Plan at our 2015 annual meeting of shareholders. Our shareholders subsequently approved an amendment and restatement of the Plan (the 2018 Restatement) at our 2018 annual meeting of shareholders.

Our Board of Directors adopted and approved the Plan to stimulate the efforts of non-employee directors, officers, employees and other service providers, in each case who are selected to be participants in the Plan, by heightening the desire of such persons to continue working toward and contributing to the success and progress of our company. The Plan allows grants of stock options, stock appreciation rights, restricted stock, restricted stock units and stock awards, any of which may be performance-based, and for cash incentives.

We believe that a comprehensive equity compensation program serves as a necessary and powerful tool to attract, retain and incentivize individuals essential to our financial success and accordingly benefits all of our shareholders by allowing us to retain individuals who are expected to make significant contributions to the creation of shareholder value.

The 2019 Restatement makes only one change to the 2018 Restatement of the Plan:

- Increases the maximum number of shares of our common stock that may be issued under the Plan by 450,000 shares.

Why You Should Vote For the 2019 Restatement of the Plan

Our Board of Directors recommends that our shareholders approve the 2019 Restatement of the Plan. First, we offer equity-based compensation to virtually all of our full-time employees, executive officers and non-employee directors. Like other similarly-situated biotech and pharmaceutical companies, many of which we compete with for talent, equity is an important part of our compensation program. Our ability to continue granting equity-based awards is crucial to ensure that we can attract, retain, motivate and reward key talent so that we can continue to deliver the exceptional type of performance highlighted in the Compensation Discussion and Analysis. At the current burn rate for equity awards, we expect that the existing limit of 9,050,000 shares available for issuance under the 2018 Restatement of the Plan will be used up prior to the annual issuance of awards to Named Executive Officers and other employees in March 2022. If the 2019 Restatement is not approved, we will need to grant cash-based or other awards in order to remain competitive; these awards may not align the interests of our key employees and non-employee directors as closely with those of our shareholders as equity awards. In addition, the use of cash resources to deliver competitive pay would divert cash from use in running other aspects of our business and investing in future product development.

Promotion of Good Corporate Governance Practices

Our company and our Board of Directors have designed the Plan to include a number of provisions that we believe promote best practices by reinforcing the alignment between equity

compensation arrangements for non-employee directors, officers, employees and other service providers and shareholders' interests. These provisions include, but are not limited to:

- stock options and stock appreciation rights may not be granted with exercise prices lower than the fair market value of the underlying shares on the grant date;
- no award may vest prior to the first anniversary of grant, subject to limited exceptions for death, disability, or a change in control;
- the share pool under the Plan is not subject to liberal “recycling” provisions (among other things, shares used to pay the exercise price for stock options do not again become available for grant under the Plan);
- at any time when the exercise price of a stock option or stock appreciation right is above the market value of our common stock, we cannot, without shareholder approval, directly or indirectly “reprice” those awards;
- stock options granted under the Plan cannot be subject to a “reload” feature;
- we have the authority under the Plan to cancel outstanding awards (vested or unvested) in the event the applicable plan participant engages in an “act of misconduct” (as such term is defined in the Plan); and
- the Plan specifies limits on cash and equity compensation that may be provided annually to our non-employee directors.

Key Data

The following table includes information regarding all of our outstanding equity awards (under all of our equity-based compensation plans under which shares of common stock may be issued, other than our Employee Stock Purchase Plan) and shares available for future awards under the Plan as of March 31, 2019:

Total shares underlying all outstanding stock options	8,067,762
Weighted average exercise price of outstanding stock options	\$123.52
Weighted average remaining contractual life of outstanding stock options	7.0 years
Total shares of common stock outstanding	43,805,721
Total shares underlying all outstanding and unvested performance shares	0
Total shares underlying all outstanding and unvested restricted stock (excluding performance shares)	332,344
Shares available for future awards that could be issued under Prior Plan ⁽¹⁾	0
Shares available for future awards that could be issued under all plans including the 2019 Inducement Stock Incentive Plan and the 2015 Stock Incentive Plan ⁽²⁾	2,088,844

(1) Certain outstanding stock options were issued under our Amended and Restated Equity Incentive Plan (the Prior Plan), which was approved by security holders in 1997. Information regarding this plan is contained in Note 10—*Share Based Compensation* to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2018. No further awards may be granted pursuant to the Prior Plan following shareholder approval of the Plan in June 2015 (but outstanding awards under the Prior Plan will continue to be governed by the Prior Plan). Any shares subject to awards that are forfeited under the Prior Plan will not become available for the issuance of future awards under either the Plan or the Prior Plan.

(2) This is the Plan being amended and restated and does not include the additional shares to be made available for issuance if the amendment and restatement is approved.

The potential dilution from the additional 450,000 shares to be made available for issuance under the Plan is approximately 1.0 percent (calculated as the additional shares requested divided by shares outstanding as of March 31, 2019). Our Board of Directors has considered this potential dilution level in the context of competitive data from our peer group and believes that the resulting dilution levels would be within normal competitive ranges. Actual dilution from the Plan will depend on several factors, including the type of awards made under the Plan. This is because the Plan uses a fungible share design, under which each share issued pursuant to a stock option or stock appreciation right will reduce the number of shares available under the Plan by one share, and each share issued pursuant to other awards will reduce the number of shares available by 2.14 shares. If all of the shares available under the Plan were to be granted in the form of restricted stock units, the total potential dilution from the Plan would be approximately 0.5 percent as of March 31, 2019 (calculated as the additional shares requested divided first by 2.14 and then by the total shares outstanding as of March 31, 2019).

We manage our long-term dilution goal by limiting the number of shares subject to equity awards that we grant annually, commonly referred to as burn rate. Burn rate shows how rapidly a company is depleting its shares reserved for equity compensation plans and is defined as the number of shares granted under our equity incentive plans divided by the weighted average number of common shares outstanding at the end of the year. We have calculated the burn rate under the Plan for the past three years, as set forth in the following table:

	Options Granted	Full-Value Shares Granted ⁽¹⁾	Total Granted = Options + Full-Value Shares	Weighted Average Number of Common Shares Outstanding	Burn Rate
Fiscal 2018	996,775	198,888	1,195,663	43,493,497	2.7%
Fiscal 2017	1,958,843	21,290	1,980,133	44,004,303	4.5%
Fiscal 2016	1,630,552	20,960	1,651,512	43,761,724	3.8%
Three-Year Average	1,528,723	80,379	1,609,103	43,753,175	3.7%

(1) These figures reflect time-based full-value awards granted during the applicable fiscal year and both time-based and performance-based stock option awards granted during the applicable fiscal year.

An additional metric that we use to measure the cumulative impact of our equity program is overhang (the number of shares subject to equity awards outstanding but not exercised or settled, plus the number of shares available to be granted, divided by the sum of the total number of shares our common stock outstanding, plus the number of shares subject to equity awards outstanding but not exercised or settled, plus the number of shares available to be granted). Of the shares subject to outstanding awards under our equity plans as of March 31, 2019, approximately 5.5 million shares, or approximately 68.4% of the total shares subject to outstanding awards, were subject to stock options with exercise prices greater than \$117.37. If the Plan is approved, our overhang calculated on this basis would increase to approximately 20 percent, and then would be expected to decline as awards are exercised and/or become vested.

When considering the Plan, our Board of Directors also reviewed, among other things, projected future share usage and projected future forfeitures. The projected future usage of shares for long-term incentive awards under the Plan was reviewed under scenarios based on a variety of assumptions. Depending on assumptions, with the 450,000 additional shares to be made available under the Plan, the 2019 Restatement of the Plan is expected to satisfy our equity compensation needs for approximately 2-3 years of similar levels of awards based on current utilization levels. Our Board of Directors is committed to effectively managing the number of shares reserved for issuance under the Plan while minimizing shareholder dilution.

Plan Summary

The following summary of the material terms of the Plan is qualified in its entirety by reference to the complete statement of the Plan, which is set forth in Annex A to this Proxy Statement.

Administration

The Plan will be administered by our Compensation Committee. Subject to the express provisions of the Plan, the administrator is authorized and empowered to do all things that it determines to be necessary or appropriate in connection with the administration of the Plan. All decisions, determinations and interpretations by our Compensation Committee regarding the Plan and awards granted under the Plan will be final and binding on all participants and other persons holding or claiming rights under the Plan or an award under the Plan. Our Compensation Committee may authorize one or more officers of our company to perform any or all things that the administrator is authorized and empowered to do or perform under the Plan. Our Compensation Committee may delegate any or all aspects of the day-to-day administration of the Plan to one or more officers or employees of our company or any subsidiary, and/or to one or more agents.

Participants

Any person who is a current or prospective officer or employee of our company or of any subsidiary may be eligible for selection by the administrator for the grant of awards under the Plan. In addition, non-employee directors and any service providers who have been retained to provide consulting, advisory or other services to our company or to any subsidiary may be eligible for the grant of awards under the Plan. Options intended to qualify as “incentive stock options” (ISOs) within the meaning of Section 422 of the Code may be granted only to employees of our company or any subsidiary. Approximately 873 officers and employees and 10 non-employee directors currently qualify to participate in the Plan.

Shares Subject to the Plan and to Awards

Subject to changes in our capitalization, the aggregate number of shares of our common stock issuable pursuant to all awards under the Plan will not exceed 9,500,000 shares; provided that any shares granted under options or stock appreciation rights will be counted against this limit on a one-for-one basis and any shares granted as awards other than options or stock appreciation rights will be counted against this limit as 2.14 shares for every one (1) share subject to such award. The shares issued pursuant to awards granted under the Plan may be shares that are authorized and unissued or issued shares that were reacquired by our company, including shares purchased in the open market.

For purposes of determining the share limits described in the paragraph above, the aggregate number of shares issued under the Plan at any time will equal only the number of shares actually issued upon exercise or settlement of an award. Notwithstanding the foregoing, shares subject to an award under the Plan may not again be made available for issuance under the Plan if such shares are: (i) shares that were subject to a stock-settled stock appreciation right and were not issued upon the net settlement or net exercise of such stock appreciation right; (ii) shares used to pay the exercise price of an option; (iii) shares delivered to or withheld by our company to pay the withholding taxes related to an award; or (iv) shares repurchased on the open market with the proceeds of an option exercise.

Shares subject to awards that have been canceled, expired, forfeited or otherwise not issued under an award and shares subject to awards settled in cash will not count as shares issued under the Plan.

Subject to certain adjustments, the aggregate number of shares subject to awards granted under the Plan during any calendar year to any one participant will not exceed 1,000,000 and the aggregate number of shares that may be issued pursuant to the exercise of ISOs granted under the Plan will not

exceed 9,500,000. The maximum amount payable pursuant to that portion of a cash incentive award granted in any calendar year to any participant under the Plan will not exceed \$5 million.

In addition, the aggregate dollar value of awards (based on the aggregate accounting value on the date of grant) granted pursuant to the Plan during any calendar year to any non-employee director may not exceed \$400,000 for annual equity grants (plus, for the year an individual first becomes a non-employee director (x) an initial equity grant valued at \$400,000, plus (y) a pro-rata portion of the \$400,000 annual equity-based award value based on the number of months remaining in the Board of Directors service year at the date of grant). The annual equity award may be payable in options, restricted stock units, or a combination, as elected by the non-employee director. The Plan further provides that the cash compensation paid or payable by the Company to a non-employee director with respect to any calendar year may not exceed \$60,000 (with additional cash compensation of \$35,000 for the lead independent director, \$25,000 for each committee chairmanship, and \$15,000 for each other committee membership), plus a pro-rated portion of the aggregate cash compensation for the roles in which the Nonemployee Director serves for the year an individual first becomes a non-employee director.

Option Awards

The administrator will establish the exercise price per share under each option, which, other than in the event of options granted in connection with a merger or other acquisition, will not be less than the fair market value (or 110 percent of the fair market value in the case of ISOs granted to individuals who own more than 10 percent of our common stock) of a share on the date the option is granted. The administrator will establish the term of each option, which in no case may exceed a period of ten (10) years from the date of grant (or five (5) years in the case of ISOs granted to individuals who own more than 10 percent of our common stock). Options granted under the Plan may either be ISOs or options which are not intended to qualify as ISOs, or nonqualified stock options (NQSOs). Unless the administrator determines otherwise; (i) upon termination of employment other than due to death, disability or termination for cause, participants may continue to exercise their options for ninety (90) days (or until the expiration date of the option, if earlier) to the extent that they were exercisable upon the date of termination; (ii) upon death or disability, options become fully vested and remain exercisable for one (1) year (or until the expiration date of the option, if earlier) following such event; and (iii) upon termination of employment for cause, all options are forfeited. Stock options may not include any “reload” feature. In no event shall any stock option fully vest before the first anniversary of the date of grant; provided that, if so determined by the administrator, an option may fully vest before such anniversary in the event of the Participant’s death or disability or a change in control of our company.

Stock Appreciation Rights

A stock appreciation right provides the right to receive the monetary equivalent of the increase in value of a specified number of the shares over a specified period of time after the right is granted. Stock appreciation rights may be granted to participants either in tandem with or as a component of other awards granted under the Plan (tandem SARs) or not in conjunction with other awards (freestanding SARs). All freestanding SARs will be granted subject to the same terms and conditions applicable to options as set forth above and in the Plan, and all tandem SARs will have the same exercise price, vesting, exercisability, forfeiture and termination provisions as the award to which they relate.

Restricted Stock and Restricted Stock Units

Restricted stock is an award or issuance of shares the grant, issuance, retention, vesting and/or transferability of which is subject during specified periods of time to such conditions (including

continued employment or performance conditions) and terms as the administrator deems appropriate. Restricted stock units are awards denominated in units of shares under which the issuance of shares is subject to such conditions (including continued employment or performance conditions) and terms as the administrator deems appropriate. Notwithstanding the satisfaction of any performance goals, the number of shares granted, issued, retainable and/or vested under a restricted stock award or restricted stock units because of either financial performance or personal performance evaluations may be reduced, but not increased, by the administrator based on such further consideration as the administrator may determine.

In no event shall any restricted stock or restricted stock units fully vest before the first anniversary of the date of grant; provided that, if so determined by the administrator, restricted stock or restricted stock units may fully vest before such anniversary in the event of the Participant's death or disability or a change in control of our company. Unless the administrator determines otherwise, (i) upon termination of employment for any reason other than death or disability, all restricted stock and restricted stock units still subject to restrictions as of the date of termination will be forfeited, and (ii) upon death or disability, the restrictions remaining on a participant's restricted stock and restricted stock units will lapse.

Unless otherwise determined by the administrator, participants holding shares of restricted stock granted under the Plan may exercise full voting rights with respect to those shares during the period of restriction, and participants will have no voting rights with respect to shares underlying restricted stock units unless and until such shares are reflected as issued and outstanding shares in our stock ledger. Participants in whose name restricted stock is granted will be entitled to receive all dividends and other distributions paid with respect to those shares, unless determined otherwise by the administrator. Participants will be entitled to receive dividends or dividend equivalents with respect to shares underlying restricted stock units only to the extent provided by the administrator. However, in no event will dividends, distributions or dividend equivalents be payable with respect to unvested or unearned awards that are subject to performance criteria until such awards vest.

Stock Awards

The administrator may grant stock awards under the Plan, which will be subject to the terms and conditions determined by the administrator. Participants will have all voting, dividend, liquidation and other rights with respect to shares underlying a stock award, subject to any restrictions on transfer determined by the administrator. In no event shall any stock award fully vest before the first anniversary of the date of grant; provided that, if so determined by the administrator, a stock award may fully vest before such anniversary in the event of the Participant's death or disability or a change in control.

Cash Incentive Awards

Each cash incentive award will confer upon the participant the opportunity to earn a future payment tied to the level of achievement with respect to one or more performance criteria established for a performance period of not less than one (1) year. The administrator will establish the performance criteria and level of achievement of these criteria that will determine the target and maximum amount payable under a cash incentive award, which criteria may be based on financial performance and/or personal performance evaluations. Notwithstanding the satisfaction of any performance goals, the amount paid under a cash incentive award because of either financial performance or personal performance evaluations may be reduced, but not increased, by the administrator based on such further consideration as the administrator may determine.

Suspension or Termination of Awards

Unless otherwise determined by the administrator, (i) if our Chairman and Chief Executive Officer or any other person designated by the administrator reasonably believes that a participant may have committed an act of misconduct (as defined in the Plan), then the participant's rights to exercise any option, vest in any award and/or receive payment for or shares in settlement of an award may be suspended pending a determination of whether an act of misconduct has been committed; and (ii) if the administrator, our Chairman and Chief Executive Officer or any other person designated by the administrator determines that a participant has committed an act of misconduct, then the participant (a) may not exercise any option or stock appreciation right, vest in, have restrictions on an award lapse or otherwise receive payment of an award; (b) will forfeit all outstanding awards; and (c) may be required, at the discretion of the committee, to return or repay to our company any then-unvested shares previously issued under the Plan.

Amendment and Termination

Our Board of Directors may amend, alter or discontinue the Plan, and the administrator may amend or alter any agreement or other document evidencing an award made under the Plan, except no such amendment may, without the approval of the shareholders of our company: (i) increase the maximum number of shares for which awards may be granted under the Plan; (ii) reduce the minimum price set forth in the Plan at which options or stock appreciation rights may be granted; (iii) reduce the exercise price of outstanding options or stock appreciation rights; (iv) extend the term of the Plan, (v) change the class of persons eligible to be participants; (vi) otherwise amend the Plan in any manner requiring shareholder approval by law or under Nasdaq listing requirements (or the listing requirements of any successor exchange that is the primary stock exchange for trading of our shares); or (vii) increase the individual maximum limits set forth in the Plan.

No amendment or alteration to the Plan or an award or award agreement may be made that would impair the rights of the holder of an award without such holder's consent, provided that no such consent will be required if the administrator determines in its sole discretion and prior to the date of any change in control that such amendment or alteration either is required or advisable in order for our company, the Plan or the award to satisfy any law or regulation or to meet the requirements of or avoid adverse financial accounting consequences under any accounting standard. In addition, the Plan may not be amended in any way that causes the Plan to fail to comply with or be exempt from Section 409A of the Code, unless our Board expressly determines to amend the Plan to be subject to Section 409A of the Code.

Change in Control

The administrator may determine the effect of a change in control (as defined in the Plan) on outstanding awards in a manner that is fair and equitable to participants (as determined by the administrator in its reasonable discretion). These effects, which need not be the same for all participants, may include, but are not limited to (i) substituting for the shares subject to an outstanding award or portion thereof the stock or securities of the surviving corporation or any successor corporation, in which event the aggregate exercise price of the award will remain the same; and/or (ii) converting any outstanding award or portion thereof into a right to receive cash or other property following the consummation of the change in control in an amount equal to the value of consideration to be received for one share of our common stock in connection with such transaction less the purchase or exercise price of the shares subject to the award, multiplied by the number of shares subject to the award or portion thereof.

Adjustments

The number and kind of shares available for issuance under the Plan, and the number and kind of shares subject to the individual and ISO limits set forth under the Plan, will be equitably adjusted by the administrator to reflect any reorganization, reclassification, combination of shares, stock split, reverse stock split, spin-off, dividend or distribution of securities, property or cash (other than regular, quarterly cash dividends), or any other event or transaction that affects the number or kind of shares of our company outstanding. The terms of any outstanding award will also be equitably adjusted by the administrator as to price, number or kind of shares subject to such award and other terms to reflect the foregoing events, which adjustments need not be uniform as between different awards or different types of awards.

In the event there is a change in the number or kind of outstanding shares under the Plan as a result of a change of control, other merger, consolidation or otherwise, then the administrator will determine the appropriate and equitable adjustment to be effected. In addition, in the event of such a change, the administrator may accelerate the time or times at which any award may be exercised and may provide for cancellation of such accelerated awards that are not exercised within a time prescribed by the administrator in its sole discretion.

Transferability

Unless the administrator determines otherwise, awards may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated by a participant other than by will or the laws of descent and distribution, and each option or stock appreciation right may be exercisable only by the participant during his or her lifetime. To the extent permitted by the administrator, the person to whom an award is initially granted may make certain limited transfers to certain family members, family trusts, or family partnerships.

Effective Date and Termination of the Plan

The Plan was initially adopted by our Board on April 29, 2015 and approved by our shareholders at the 2015 annual meeting of shareholders. The 2018 Restatement was adopted on by our Board on April 25, 2018 and approved by our shareholders at the 2018 annual meeting of shareholders. The 2019 Restatement was adopted by our Board on April 25, 2019 and will become effective upon approval by our shareholders at the 2019 annual meeting. The Plan will remain available for the grant of awards until June 26, 2028.

Federal Income Tax Treatment

The following tax discussion is a general summary as of the date of this Proxy Statement of the U.S. federal income tax consequences to our company and the participants in the Plan. The discussion is intended solely for general information and does not make specific representations to any participant. The discussion does not address state, local or foreign income tax rules or other U.S. tax provisions, such as estate or gift taxes. A recipient's particular situation may be such that some variation of the basic rules is applicable to him or her. In addition, the federal income tax laws and regulations frequently have been revised and may be changed again at any time. Therefore, each recipient is urged to consult a tax advisor before exercising any award or before disposing of any shares acquired under the Plan both with respect to federal income tax consequences as well as any foreign, state or local tax consequences.

Stock Options

ISOs and NQSOs are treated differently for federal income tax purposes. ISOs are intended to comply with the requirements of Section 422 of the Code. NQSOs need not comply with such requirements.

An optionee is not taxed on the grant or exercise of an ISO. The difference between the exercise price and the fair market value of the shares on the exercise date will, however, be a preference item for purposes of the alternative minimum tax. If an optionee holds the shares acquired upon exercise of an ISO until the later of two years following the option grant date and one year following exercise, the optionee's gain, if any, upon a subsequent disposition of such shares is long term capital gain. The measure of the gain is the difference between the proceeds received on disposition and the optionee's basis in the shares (which generally equals the exercise price). If an optionee disposes of stock acquired pursuant to exercise of an ISO before satisfying these holding periods, the optionee will recognize ordinary income in the year of disposition an amount equal to the excess of the fair market value of the shares at the time of exercise (or, if less, the amount realized on the disposition of the shares), over the exercise price paid for the shares, and capital gain or loss for any other difference between the sale price and the exercise price. Our company is not entitled to an income tax deduction on the grant or exercise of an ISO or on the optionee's disposition of the shares after satisfying the holding period requirement described above. If the holding periods are not satisfied, our company will be entitled to a deduction in the year the optionee disposes of the shares in an amount equal to the ordinary income recognized by the optionee.

In order for an option to qualify for ISO tax treatment, the grant of the option must satisfy various other conditions more fully described in the Code. We do not guarantee that any option will qualify for ISO tax treatment even if the option is intended to qualify for such treatment. In the event an option intended to be an ISO fails to so qualify, it will be taxed as an NQSO described below.

An optionee is not taxed on the grant of an NQSO. On exercise, the optionee recognizes ordinary income equal to the difference between the exercise price and the fair market value of the shares acquired on the date of exercise. Our company is entitled to an income tax deduction in the year of exercise in the amount recognized by the optionee as ordinary income. The optionee's gain (or loss) on subsequent disposition of the shares is long-term capital gain (or loss) if the shares are held for at least one year following exercise, and otherwise is short-term capital gain (or loss). Our company does not receive a deduction for any such capital gain.

Stock Appreciation Rights

Generally, the recipient of a freestanding SAR will not recognize any taxable income at the time the freestanding SAR is granted. If the freestanding SAR is settled in cash, the cash will be taxable as ordinary income to the recipient at the time that it is received. If the freestanding SAR is settled in shares, the recipient will recognize ordinary income equal to the excess of the fair market value of the shares on the day they are received over any amounts paid by the recipient for the shares.

With respect to tandem SARs, if a holder elects to surrender the underlying option in exchange for cash or stock equal to the appreciation inherent in the underlying option, the tax consequences to the employee will be the same as discussed above relating to freestanding SARs. If the employee elects to exercise the underlying option, the holder will be taxed at the time of exercise as if he or she had exercised an NQSO (discussed above).

Our company generally is entitled to a deduction with respect to a SAR at the same time the recipient recognizes ordinary income with respect thereto.

Restricted Stock and Restricted Stock Units

Grantees of restricted stock or restricted stock units do not recognize income at the time of the grant. When the award vests or is paid, grantees generally recognize ordinary income in an amount equal to the fair market value of the stock or units at such time, and our company will receive a corresponding deduction. Dividends (if any) paid with respect to unvested shares of restricted stock generally will be taxable as ordinary income to the participant at the time the dividends are received.

Subject to Section 162(m) of the Code, our company generally will be entitled to a deduction with respect to restricted stock and restricted stock units at the same time the recipient recognizes ordinary income with respect thereto.

Stock Awards

Grantees of stock awards generally are required to recognize ordinary income in an amount equal to the excess of the fair market value of the shares on the date the shares are granted over the purchase price (if any) paid for the shares. Subject to Section 162(m) of the Code, our company generally will be entitled to a deduction with respect to stock awards at the same time the recipient recognizes ordinary income with respect thereto.

Cash Incentive Awards

A participant will have taxable income at the time a cash incentive award is paid or, if the participant has timely elected deferral to a later date, such later date. At that time, the participant will recognize ordinary income equal to the value of the amount then payable and, subject to Section 162(m) of the Code, our company will be entitled to a corresponding deduction.

Company Deduction and Section 162(m)

Our company generally will be entitled to a deduction for federal income tax purposes as described above with respect to each type of award. However, pursuant to the Jobs and Tax Cuts Act that was signed into law in December 2017, for taxable years beginning on or after January 1, 2018, the compensation deductible with respect to the Chief Executive Officer, the Chief Financial Officer, and the individuals serving as officers of our company or a subsidiary at the end of such year who are among the three highest compensated executive officers (other than the Chief Executive Officer and Chief Financial Officer) for proxy reporting purposes, as well as for individuals who were proxy officers for any taxable year beginning after December 31, 2016, Section 162(m) limits the amount of compensation otherwise deductible by our company and its subsidiaries for such year to \$1,000,000. The “performance-based compensation” exception to this limitation generally is no longer applicable for awards granted after November 3, 2017 (but may be available for tax deductions for grants made on or prior to that date).

New Plan Benefits

The benefits that will be awarded or paid under the Plan are not currently determinable. Awards granted under the Plan are within the discretion of our Compensation Committee, and our Compensation Committee has not determined future awards or who might receive them. Information about awards granted in fiscal year 2018 under our prior plans to our Named Executive Officers can be found in the table under the heading Grants of Plan-Based Awards. As of March 31, 2019, the closing price of a share of our common stock on the Nasdaq was \$117.37.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table presents information as of December 31, 2018, regarding our securities authorized for issuance under equity compensation plans:

Plan category	Number of securities to be issued upon exercise of outstanding options and restricted stock units (a)	Weighted average exercise price of outstanding options (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plan approved by security holders . .	6,486,058	120.78	7,080,024
Equity compensation plans not approved by security holders . .	<u>—</u>	<u>—</u>	<u>—</u>
Total	<u>6,486,058</u>	<u>120.78</u>	<u>7,080,024</u>

Vote Required and Board Recommendation

Approval of the Plan requires the affirmative vote of the holders of a majority of the outstanding shares present, in person or by proxy, at the meeting and entitled to vote on the proposal.

***OUR BOARD OF DIRECTORS RECOMMENDS THAT SHAREHOLDERS VOTE “FOR”
THE APPROVAL OF THE 2019 AMENDMENT AND RESTATEMENT OF THE UNITED
THERAPEUTICS CORPORATION AMENDED AND RESTATED 2015 STOCK INCENTIVE PLAN.***

PROPOSAL NO. 4
RATIFICATION OF THE APPOINTMENT OF
ERNST & YOUNG LLP AS UNITED THERAPEUTICS CORPORATION'S
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR 2019

The Audit Committee of our Board has appointed Ernst & Young LLP as our independent registered public accounting firm for the year 2019. Services provided to us and our subsidiaries by Ernst & Young LLP in 2018 are described under the section entitled *Principal Accountant Fees and Services* below.

We ask that our shareholders vote to ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm. Although ratification is not required by our By-laws or otherwise, our Board has chosen to submit the ratification of Ernst & Young LLP's appointment to our shareholders as a matter of good corporate practice. In the event our shareholders do not ratify the appointment of Ernst & Young LLP, such appointment will be reconsidered by our Audit Committee and our Board. Following such reconsideration, our Audit Committee may still appoint Ernst & Young LLP if it determines doing so to be in the best interests of the company and our shareholders. Even if the appointment of Ernst & Young LLP is ratified, our Audit Committee, in its discretion, may select a different independent registered public accounting firm at any time during the year if it determines that such a change would be in our best interests and those of our shareholders.

Representatives of Ernst & Young LLP are expected to be present at our Annual Meeting to respond to appropriate shareholder questions and to make such statements as they may desire.

OUR BOARD OF DIRECTORS RECOMMENDS THAT SHAREHOLDERS VOTE "FOR"
RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP AS OUR
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR 2019.

REPORT OF OUR AUDIT COMMITTEE AND INFORMATION ON OUR INDEPENDENT AUDITORS

Report of our Audit Committee

As the members of the Audit Committee, we oversee United Therapeutics' financial reporting process on behalf of our Board of Directors. We are all independent directors under the listing standards of Nasdaq and the independence standards set forth in Rule 10A-3(b)(1) of the Exchange Act. Our Board has determined that Richard Giltner, our Audit Committee Chairman, is an audit committee financial expert as defined under the rules and regulations of the SEC (based on the relevant experience described in his biography above) and that each member of our Audit Committee meets the financial sophistication requirement of the Nasdaq listing standards. Our Audit Committee operates under a written charter, which we review periodically, and which was adopted by our Board. Our charter is consistent with the provisions of the Sarbanes-Oxley Act of 2002, as well as the corporate governance rules issued by the SEC and Nasdaq, as they relate to audit committee requirements.

We have met and held discussions with management and our independent auditors. Management is responsible for the financial reporting process and preparation of United Therapeutics' quarterly and annual consolidated financial statements, including maintaining a system of internal controls and disclosure controls and procedures. Our Audit Committee is directly responsible for the appointment, compensation, retention, oversight and termination of our independent auditors. Ernst & Young LLP functioned as our independent auditors for 2018. Ernst & Young LLP is responsible for expressing an opinion on (i) the conformity of our financial statements with generally accepted accounting principles and (ii) our internal control over financial reporting. Our Audit Committee does not prepare financial statements or conduct audits.

In conjunction with the December 31, 2018, audited consolidated financial statements, we have:

- reviewed and discussed United Therapeutics' 2018 audited consolidated financial statements with our management and Ernst & Young LLP, including discussions about critical accounting policies, other financial accounting and reporting principles and practices appropriate for us, and the reasonableness of significant judgments;
- reviewed and discussed management's assessments of the effectiveness of internal controls over financial reporting and Ernst & Young LLP's related assessments and auditing procedures;
- discussed with Ernst & Young LLP the overall scope of and plans for our audits and reviews. Our Audit Committee has met with Ernst & Young LLP, with and without management present, to discuss our financial reporting processes and internal accounting controls. We have reviewed all important audit findings prepared by Ernst & Young LLP;
- discussed with Ernst & Young LLP matters that are required to be discussed by applicable Public Company Accounting Oversight Board (PCAOB) requirements. Ernst & Young LLP also provided to our Audit Committee the written disclosures and the letter required by applicable requirements of the PCAOB regarding its communications with our Audit Committee concerning independence. We also discussed with Ernst & Young LLP their independence, including any relationships that may have an impact on their objectivity and independence, and satisfied ourselves as to Ernst & Young LLP's independence. We also reviewed and pre-approved the scope and fees for all audit and other services performed by Ernst & Young LLP for us; and
- met and reviewed with members of senior management and Ernst & Young LLP the certifications provided by our Chairman and Chief Executive Officer and our Chief Financial

Officer under the Sarbanes-Oxley Act of 2002 and the rules and regulations of the SEC relating to these certifications and the overall certification process.

Based on these reviews and discussions, our Audit Committee recommended to our Board of Directors that our audited consolidated financial statements for 2018 be included in our Annual Report on Form 10-K for the year ended December 31, 2018, as filed with the SEC.

Submitted by the Audit Committee:
 Richard Giltner (Chair)
 Christopher Patusky
 Tommy Thompson

Principal Accountant Fees and Services

Fees for professional services provided by Ernst & Young LLP in each of the last two years in each of the following categories were:

	<u>2018</u>	<u>2017</u>
Audit fees	\$2,418,456	\$2,207,518
Audit-related fees	—	194,000
Tax fees:		
Fees for tax compliance services	248,725	398,373
Fees for tax consulting services (including tax advice and tax planning)	<u>66,458</u>	<u>228,256</u>
Total tax fees	315,183	626,629
All other fees	<u>7,200</u>	<u>1,995</u>
	<u>\$2,740,839</u>	<u>\$3,030,142</u>

Audit fees include the aggregate fees billed for the audit of our consolidated annual financial statements, reviews of our interim consolidated financial statements included in quarterly reports, accounting and financial reporting consultations and services in connection with registration statements. Audit-related fees include the aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements and are not reported as audit fees. Tax fees include the aggregate fees billed for professional services for tax compliance, tax advice and tax planning. All other fees included license fees for an accounting research online software tool.

The Audit Committee of our Board of Directors has considered and determined that the provision of non-audit services by Ernst & Young LLP is compatible with maintaining Ernst & Young LLP's independence. Since Ernst & Young LLP's appointment as our independent registered public accounting firm, our Audit Committee has pre-approved all of the services performed by Ernst & Young LLP.

Policy on Audit Committee Pre-Approval of Audit Services and Permissible Non-Audit Services of our Independent Auditors

Our Audit Committee's policy is to pre-approve all audit and permissible non-audit services performed by our independent auditors. These services may include audit services, audit-related services, tax services and other services. For audit services, our independent auditor provides an engagement letter to our Audit Committee prior to commencing its second-quarter review work, which letter outlines the scope of the proposed audit and audit-related fees. Our Audit Committee reviews the letter and negotiates with and formally engages the auditor.

For non-audit services, our senior management may from time to time recommend to our Audit Committee that it engage our independent auditor to provide non-audit services, and request our Audit Committee to approve such engagement. Our senior management and our independent auditor will each confirm to our Audit Committee that each non-audit service is permissible under all applicable legal requirements. A budget estimating non-audit service spending for the fiscal year will be provided to our Audit Committee along with the request. Our Audit Committee must approve the permissible non-audit services and the budget for such services. Our Audit Committee will be informed periodically as to the non-audit services actually provided by our independent auditor pursuant to this pre-approval process.

PROPOSAL NO. 5
SHAREHOLDER PROPOSAL REQUESTING DECLASSIFICATION OF
OUR BOARD OF DIRECTORS

James McRitchie and Myra K. Young (the proponents), 9295 Yorkship Court, Elk Grove, CA 95758, have advised us that they own 16 shares of our common stock and that they plan to present the following proposal at our 2019 annual meeting of shareholders. We have included the proponents' proposal in this proxy statement pursuant to SEC rules (shown in the box below), and our Board's response to it follows. The proponents' proposal contains assertions about our company and other statements that we believe are incorrect. We have not attempted to refute all such statements.

Shareholder Proposal:

ITEM 5—Elect Each Director Annually

RESOLVED: United Therapeutics Corporation (“Company”) shareholders ask that our Board take the steps necessary to reorganize the Board of Directors into one class with each director subject to election each year and to provide that this will not affect the unexpired terms of directors elected prior to the Proposal’s implementation.

Supporting Statement: Arthur Levitt, former Chairman of the Securities and Exchange Commission said, “In my view it’s best for the investor if the entire board is elected once a year. Without annual election of each director shareholders have far less control over who represents them.”

In 2010 over 70% of S&P 500 companies had annual election of directors. Now that number stands at 89%.

Shareholder resolutions on this topic won an average of 86% support in 2018 as of early November. Wins included 96% at Haemonetics, 94% at Hecla Mining, 88.4% at FleetCor Technologies, and 84.4% at Illumina Inc. No shareholder on this topic was recorded as winning less than 67.3% of the vote. That low support was at Axon Enterprise Inc. ISS and Glass Lewis did not recommended [sic] against any of these proposals.

According to our largest shareholder; BlackRock, “Directors should be elected annually to discourage entrenchment and allow shareholders sufficient opportunity to exercise their oversight of the board.” BlackRock voted for shareholder proposals to declassify boards 6 times out of 6 in 2018, as did Vanguard.

According to Equilar; “A classified board creates concern among shareholders because poorly performing directors may benefit from an electoral reprieve. Moreover, a fraternal atmosphere may form from a staggered board that favors the interests of management above those of shareholders. Since directors in a declassified board are elected and evaluated each year, declassification promotes responsiveness to shareholder demands and pressures directors to perform to retain their seat. Notably, proxy advisory firms ISS and Glass Lewis both support declassified structures.”

This proposal should also be evaluated in the context of our Company’s overall corporate governance as of the date of this submission: Shareholders cannot call special meetings. Shareholders have no right to act by written consent. A supermajority vote of 80% is required to amend all bylaw provisions. The combined effect is to lock the board into an out-dated corporate governance structure and reduce board accountability to shareholders.

Please vote for: Elect Each Director Annually—Proposal 5

The Board's Statement in Response

Our Board has carefully considered the shareholder proposal, including weighing the advantages and disadvantages of classified boards and current investor sentiment on classified boards, and recommends that shareholders vote **FOR** Proposal No. 5.

We are committed to strong corporate governance, and our Board regularly reviews our governance structure, including our classified board structure. Our amended and restated certificate of incorporation divides our Board into three classes, with each class elected to serve a three-year term. As a result, at each annual meeting of shareholders, approximately one-third of our directors are elected to serve for a three-year term. Our Board has periodically considered the continued appropriateness of this classified board structure, including previously engaging a respected corporate governance expert and professor at a leading graduate business school to conduct a study on, among other things, the benefits and costs associated with classified boards (the Governance Study). Based upon the results of the Governance Study, as well as consideration of our company's particular circumstances, our Board believes that our classified board structure provides important benefits, including:

- **Promoting Stability and Continuity.** The environment in which we operate and our specific circumstances are constantly evolving. Our classified board structure enhances stability and continuity of leadership because our Board will always include directors with prior experience with our operating and regulatory environment, business, strategic goals, competition, trends and risks. We believe that these experienced directors help our Board maintain a long-term perspective, leading to decisions that are both in the long-term interests of our company and our shareholders and responsive to short-term needs and objectives.
- **Maximizing Shareholder Value.** We believe that a classified board enhances our ability to achieve value for our shareholders in the event of an unsolicited takeover. Without a classified board, a potential acquirer could gain control of our Board at a single annual meeting by replacing a majority of directors with its own nominees without paying a premium to our shareholders.
- **Enhancing Director Independence.** We believe that a classified board with three-year terms enhances non-management directors' independence from special interest groups or other parties whose goals may not be in the best interests of all of our shareholders.

In addition, our Board has already adopted strong corporate governance practices that enhance director accountability and independent oversight, including:

- **Majority Voting in Uncontested Director Elections.** In 2015, as part of our Board's ongoing review of our corporate governance policies, we amended our By-laws to provide that director nominees will be elected by a majority of votes cast in uncontested director elections. Our Board also adopted a director resignation policy set forth in our Corporate Governance Guidelines, providing that any director who is not elected by a majority of the votes cast is expected to tender his or her resignation.
- **Proxy Access.** After careful consideration of shareholder feedback, our Board amended our By-laws in 2015 to implement proxy access. Our Board believes that our thoughtfully designed and balanced approach to proxy access mitigates the risk of abuse and protects the interests of all of our shareholders, while affording a meaningful proxy access right.
- **Lead Independent Director.** Our Board has a strong Lead Independent Director who is selected annually by our independent directors and has robust responsibilities.
- **Performance-Based Compensation.** We believe that our compensation programs effectively incentivize our executive officers and directors to act in the best interests of shareholders. As

described in detail under *Compensation Discussion and Analysis* in this Proxy Statement, our compensation programs for executive officers are heavily weighted toward at-risk, equity-linked, performance-based compensation. In addition, we maintain robust stock ownership guidelines for our executive officers and directors.

However, our Board also recognizes that many shareholders and others believe that boards should be declassified so that all directors are elected annually. The shareholder proposal, which is advisory in nature, would constitute a recommendation to the Board, if approved by shareholders, to declassify the Board. Our Board believes that this proposal provides shareholders with the opportunity to express their views on this important topic, and the Board will respond accordingly. Moreover, given our Board's commitment to strong corporate governance, our Board recommends that shareholders vote **FOR** this shareholder proposal.

***OUR BOARD OF DIRECTORS RECOMMENDS THAT YOU VOTE "FOR"
THE SHAREHOLDER PROPOSAL REQUESTING DECLASSIFICATION OF
OUR BOARD OF DIRECTORS.***

OTHER MATTERS

Certain Relationships and Related Party Transactions

Review and Approval of Related Party Transactions

We have adopted a written policy for review of transactions, arrangements and relationships between our company and our directors, director nominees, executive officers, greater-than-five-percent shareholders, and their immediate family members where the amount involved exceeds \$100,000. The policy provides that our Audit Committee reviews certain transactions subject to the policy and determines whether to approve or ratify those transactions. In doing so, our Audit Committee considers, among other things, whether the transaction is on terms that are no less favorable to our company than terms generally available to an unaffiliated third party under similar circumstances and the extent of the related person's interest in the transaction. The policy also provides the Chairman of our Audit Committee with the authority to approve or ratify transactions in which the amount involved is expected to be less than \$500,000. Information on transactions approved or ratified by the Chair of our Audit Committee is provided to our Audit Committee at its next regularly scheduled meeting.

Our Audit Committee has considered and adopted standing pre-approvals under the policy for certain limited transactions with related persons that meet specific criteria. Information on transactions subject to pre-approval is provided to our Audit Committee at its next regularly scheduled meeting. Pre-approved transactions are limited to:

- executive officers' compensation that is subject to required proxy statement disclosure or Compensation Committee approval;
- non-employee director compensation that is subject to required proxy statement disclosure;
- certain transactions with other companies and certain charitable contributions that do not exceed the greater of \$200,000 or 5 percent of the other company's or non-profit organization's total annual revenues or receipts; and
- transactions where all shareholders receive proportional benefits.

Other Relationships

In March 2006, we entered into an agreement with the University of Oxford to fund an annual lecture in virology at the University of Oxford through 2022. Under this agreement, we are obligated to make 16 annual payments of \$27,600, totaling \$442,200 (using the exchange rate as of the date of the agreement). In February 2019, we amended this agreement to extend it for an additional five years, through 2027, for five additional annual payments of £20,000 (or \$26,000 using the exchange rate as of the date of the amendment). We paid Oxford £16,000 or \$21,168 during 2018 under this Agreement.

Our director Raymond Dwek is a co-discoverer of our former iminosugar platform (which we sold in late 2015), was a co-principal investigator under our former research agreement with the University of Oxford (which was transferred to the purchaser of our iminosugar business in late 2015) and is Director of the Glycobiology Institute and Professor of Glycobiology at the University of Oxford. As described above under *Director Independence*, from 2011 until April 2019, our Board determined not to designate Professor Dwek as "independent" under the Nasdaq listing standards in an abundance of caution, based on these historical relationships. Our Audit Committee approved these transactions and determined that these transactions do not constitute related party transactions with respect to Professor Dwek. Given the length of time since we sold our iminosugar business in late 2015, our Board re-designated Professor Dwek as "independent" in April 2019.

From time to time, we employ family members of certain executive officers. During 2018, Dr. Rothblatt's daughter, Jenesis Rothblatt, was employed as Project Leader, Corporate Telepresence & Robotics, and received total compensation valued at approximately \$127,000.

Beneficial Ownership of Common Stock

The following table sets forth certain information as of April 10, 2019 (unless otherwise noted), with respect to the beneficial ownership of our common stock by: (i) each person or entity who we know beneficially owns more than 5 percent of the outstanding shares of our common stock; (ii) each director and director nominee; (iii) each of our Named Executive Officers (which, for 2018, included our Chairman and Chief Executive Officer, our Chief Financial Officer and Treasurer, our President and Chief Operating Officer and our Executive Vice President and General Counsel; and (iv) all of our directors and executive officers as a group. Unless otherwise noted, the address of each person listed below is our co-headquarters address at 1040 Spring Street, Silver Spring, Maryland 20910. In accordance with SEC rules, the number of shares of common stock beneficially owned and the percentage of outstanding shares shown in this table exclude any STAP awards held by our directors and executive officers because they are cash-settled awards that do not involve the issuance of shares of common stock.

<u>Name</u>	<u>Number of Common Stock Beneficially Owned⁽¹⁾</u>	<u>Percentage of Outstanding Shares⁽²⁾</u>	<u>Vested STAP Awards⁽³⁾</u>
BlackRock, Inc. ⁽⁴⁾ 55 East 52nd Street New York, NY 10055	4,941,999	11.3%	—
The Vanguard Group ⁽⁵⁾ 100 Vanguard Boulevard Malvern, PA 19355	3,907,279	8.9%	—
FMR LLC ⁽⁶⁾ 245 Summer Street Boston, Massachusetts 02210	2,870,524	6.6%	—
AQR Capital Management, LLC ⁽⁷⁾ Two Greenwich Plaza Greenwich, CT 06830	2,514,563	5.7%	—
Renaissance Technologies LLC ⁽⁸⁾ 800 Third Avenue New York, NY 10022	2,196,778	5.0%	—
Martine Rothblatt ⁽⁹⁾	3,387,198	7.3%	—
Paul Mahon ⁽¹⁰⁾	226,688	*	229,750
Michael Benkowitz ⁽¹¹⁾	149,348	*	223,800
James Edgemon ⁽¹²⁾	107,810	*	47,571
Tommy Thompson ⁽¹³⁾	54,440	*	53,059
Richard Giltner ⁽¹⁴⁾	50,000	*	60,000
Judy Olian ⁽¹⁵⁾	41,130	*	—
Katherine Klein ⁽¹⁶⁾	33,230	*	29,375
Ray Kurzweil ⁽¹⁷⁾	27,490	*	33,750
Louis Sullivan ⁽¹⁸⁾	25,490	*	51,000
Christopher Patusky ⁽¹⁹⁾	25,420	*	40,000
Christopher Causey ⁽²⁰⁾	20,185	*	27,000
Raymond Dwek ⁽²¹⁾	15,000	*	65,000
Nilda Mesa ⁽²²⁾	—	*	—
All directors and executive officers as a group (14 persons) ⁽²³⁾ .	4,163,429	8.8%	860,305

* Less than one percent.

(1) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes ownership of those shares over which the person has sole or shared voting or investment power. Beneficial ownership also includes ownership of shares of our common stock subject to rights and options currently exercisable or convertible, or exercisable or convertible within 60 days after April 10, 2019. Except where indicated otherwise, and subject to community property laws where

applicable, to our knowledge, the persons listed in the table above have sole voting and investment power with respect to their shares of our common stock.

- (2) Ownership percentage is based on 43,810,721 shares of our common stock outstanding on April 10, 2019, plus, as to the holder thereof and no other person, the number of shares (if any) that the person has the right to acquire as of April 10, 2019, or within 60 days thereafter, through the exercise of stock options or other similar rights (including, in the case of Dr. Rothblatt, stock options held by trusts beneficially owned by Dr. Rothblatt and her spouse).
- (3) Represents the number of outstanding, vested STAP awards on April 10, 2019. None of the individuals in the table above have STAP awards scheduled to vest within 60 days after April 10, 2019. Because STAP awards are cash-settled and do not involve the issuance of shares of stock, they are excluded from the other columns of this table.
- (4) Beneficial ownership information obtained from a Schedule 13G/A filed by BlackRock, Inc. on January 31, 2019 reporting beneficial ownership as of December 31, 2018. According to the Schedule 13G/A, BlackRock, Inc. has sole voting power over 4,645,487 shares, shared voting power over zero shares, sole investment power over 4,941,999 shares, and shared investment power over zero shares.
- (5) Beneficial ownership information obtained from a Schedule 13G/A filed by The Vanguard Group on February 11, 2019, reporting beneficial ownership as of December 31, 2018. According to the Schedule 13G/A, The Vanguard Group has sole voting power over 29,475 shares, shared voting power over 7,590 shares, sole investment power over 3,869,057 shares, and shared investment power over 38,222 shares.
- (6) Beneficial ownership information obtained from a Schedule 13G/A filed by FMR LLC (FMR) and Abigail Johnson on February 13, 2019, reporting beneficial ownership as of December 31, 2018. According to the Schedule 13G/A, FMR has sole voting power over 469,150 shares, shared voting power over zero shares, sole investment power over 2,870,524 shares, and shared investment power over zero shares, while Ms. Johnson has sole investment power over 2,870,524 shares, sole and shared voting power over zero shares, and shared investment power over zero shares. According to the Schedule 13G/A, neither FMR nor Ms. Johnson has sole power to vote or direct the voting of shares owned directly by various investment companies registered under the Investment Company Act advised by Fidelity Management & Research Company, a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Board of Trustees.
- (7) Beneficial ownership information obtained from a Schedule 13G filed by AQR Capital Management, LLC and AQR Capital Management Holdings, LLC (together, AQR) on February 14, 2019, reporting beneficial ownership as of December 31, 2018. According to the Schedule 13G, AQR has shared voting and dispositive power over 2,514,563 shares and sole voting and dispositive power with regard to zero shares.
- (8) Beneficial ownership information obtained from a Schedule 13G filed by the Renaissance Technologies LLC and Renaissance Technologies Holdings Corporation (together, Renaissance) on February 13, 2019, reporting beneficial ownership as of December 31, 2018. According to the Schedule 13G, Renaissance has sole voting power over 2,010,433 shares, shared voting power over zero shares, sole investment power over 2,056,438 shares, and shared investment power over 140,340 shares.
- (9) Includes currently exercisable options held by Dr. Rothblatt to purchase 972,289 shares, and options held by trusts beneficially owned by Dr. Rothblatt and her spouse to purchase 1,723,869 shares. Also includes 683,489 shares held indirectly by trust, 166 shares held by Dr. Rothblatt's spouse and 7,245 shares held by charitable organizations, and over which Dr. Rothblatt has investment and voting power.

- (10) Includes currently exercisable options to purchase 190,865 shares.
- (11) Includes currently exercisable options to purchase 147,658 shares.
- (12) Includes currently exercisable options to purchase 107,057 shares.
- (13) Includes currently exercisable options to purchase 34,370 shares.
- (14) Includes currently exercisable options to purchase 50,000 shares.
- (15) Includes currently exercisable options to purchase 35,000 shares.
- (16) Includes currently exercisable options to purchase 33,230 shares.
- (17) Includes currently exercisable options to purchase 24,120 shares.
- (18) Includes currently exercisable options to purchase 24,120 shares.
- (19) Includes currently exercisable options to purchase 24,120 shares. Also includes 1,300 shares held in a family trust with Mr. Patusky as trustee.
- (20) Includes currently exercisable options to purchase 19,210 shares. Also includes 975 shares held jointly by Mr. Causey and his children.
- (21) Includes currently exercisable options to purchase 15,000 shares.
- (22) Ms. Mesa was appointed to the Board of Directors on October 31, 2018, and her equity awards have not yet vested.
- (23) Includes currently exercisable options to purchase 3,400,908 shares.

Delinquent Section 16(a) Reports

Section 16(a) of the Exchange Act requires our directors, executive officers and 10 percent shareholders to file reports of ownership of our equity securities with the SEC and to furnish copies of all such reports to us. We routinely assist our officers and directors in preparing and filing these reports. To our knowledge, based on a review of the copies of such forms in our possession and on written representations from reporting persons, we believe that for the year ended December 31, 2018, all reporting persons filed the required reports on a timely basis under Section 16(a), with the exception of one late filing for each Named Executive Officer reporting one transaction for each person, which resulted from administrative error.

Shareholder Proposals and Director Nominations

Proposals for Inclusion in the Proxy Statement for the 2020 Annual Meeting

Shareholder proposals intended for inclusion in our Proxy Statement and form of proxy for our 2020 annual meeting of shareholders pursuant to Rule 14a-8 of the Exchange Act must be received by us at the address indicated below no later than 5:00 p.m. Eastern Time on January 8, 2020, unless the date of the 2020 annual meeting is more than thirty (30) days before or after the anniversary of the Annual Meeting, in which case the deadline is a reasonable time before we begin to print and send our proxy materials. In addition, proposals must otherwise comply with the rules of the SEC for inclusion in our Proxy Statement and form of proxy relating to that meeting.

Director Nominees for Inclusion in the Proxy Statement for the 2020 Annual Meeting

In 2015, we amended our By-laws to implement proxy access, which allows a shareholder or a group of up to 20 shareholders owning shares representing at least 3% of the outstanding voting stock of our company entitled to vote in the election of directors continuously for at least three years, to

nominate and include in our Proxy Statement their own director nominees constituting up to 20% of the total number of directors then serving on our Board (or up to 25% if fewer than 10 directors are then serving on our Board), provided that the shareholder(s) and the nominee(s) satisfy the requirements in our By-laws. Notice of director nominees submitted under these By-law provisions must include the information required under our By-laws. Such notice must be received by our Corporate Secretary at the address indicated below no earlier than the close of business on December 9, 2019 and no later than the close of business on January 8, 2020 unless the date of the 2020 annual meeting is more than thirty (30) days before or forty-five (45) days after the anniversary of the Annual Meeting, in which case such notice must be received by our Corporate Secretary no later than the close of business on the later of the one hundred twentieth (120th) day prior to the 2020 annual meeting or the close of business on the tenth (10th) day following the day on which public announcement of the date of the 2020 annual meeting is first made.

Other Proposals or Nominees for Presentation at the 2020 Annual Meeting

In order for a shareholder to properly bring other business before the 2020 annual meeting of shareholders, including shareholder proposals and director nominations that are not submitted for inclusion in our Proxy Statement, our By-laws require that the shareholder give timely notice of the proposal or nomination, as applicable, to our Corporate Secretary at the address indicated below in advance of the meeting. Such notice must be given no less than ninety (90) days nor more than one hundred and twenty (120) days prior to the anniversary of the Annual Meeting unless the date of the 2020 annual meeting is advanced by more than thirty (30) days or delayed (other than as a result of adjournment) by more than thirty (30) days from the anniversary of the Annual Meeting, in which case notice of a proposal or nomination, as applicable, must be received by our Corporate Secretary no later than the close of business on the later of the ninetieth (90th) day prior to the 2020 annual meeting or the tenth (10th) day following the date on which public announcement of the date of the 2020 annual meeting of shareholders is first made. Accordingly, for the 2020 annual meeting, notice of a proposal or nomination, as applicable, must be received by our Corporate Secretary no later than March 28, 2020 and no earlier than February 27, 2020. In addition, the notice of such proposal or nomination must meet all other requirements contained in our By-laws. These requirements are separate from the requirements a shareholder must meet to have a proposal or director nomination included in our Proxy Statement. If a shareholder fails to meet these requirements or fails to satisfy the requirements of Rule 14a-4 under the Exchange Act, we may exercise discretionary voting authority under proxies that we solicit to vote on any such proposal or nomination in accordance with our best judgment.

All notices of proposals or nominations, as applicable, must be given in writing to our Corporate Secretary by overnight mail, acceptance signature required, to United Therapeutics Corporation, Attention: Corporate Secretary, 1735 Connecticut Avenue N.W., Washington, D.C. 20009.

Other Business

Management knows of no matters to be presented for action at the Annual Meeting other than as described above. However, if any other matter properly comes before the meeting, it is intended that the persons named in the accompanying form of proxy will vote on such matters in accordance with their judgment of the best interests of our company.

Shareholders Sharing the Same Address

SEC rules permit the delivery of a single copy of a company's annual report and Proxy Statement, or Notice of Internet Availability, as applicable, to any household at which two or more shareholders reside. Each shareholder will continue to receive a separate proxy card. This procedure, referred to as householding, reduces the volume of duplicate information shareholders receive, reduces mailing and printing expenses and benefits the environment.

The bank, broker, trust or other holder of record for any shareholder who is a beneficial owner, but not the record holder, of United Therapeutics shares may deliver only one copy of our 2018 Annual Report on Form 10-K and this Proxy Statement, or one copy of the Notice of Internet Availability, as applicable, to multiple shareholders who share the same address, unless the bank, broker, trust or other holder of record has received contrary instructions from one or more of the shareholders. Beneficial owners sharing an address who are receiving multiple copies of the 2018 Annual Report on Form 10-K and this Proxy Statement, or the Notice of Internet Availability, as applicable, and who would prefer to receive a single copy in the future should contact their bank, broker, trust or other holder of record to request delivery of a single copy in the future.

Our 2018 Annual Report on Form 10-K and this Proxy Statement are available at our website at <http://ir.unither.com/annual-and-proxy>. We will deliver promptly upon written or oral request a separate copy of the 2018 Annual Report on Form 10-K and this Proxy Statement, or the Notice of Internet Availability, as applicable, to any shareholder of record at a shared address to which a single copy of any of those documents was delivered. To receive a separate copy of these materials, now or in the future, write to: **Investor Relations, 1040 Spring Street, Silver Spring, Maryland 20910** or call (301) 608-9292 and ask for Investor Relations. Shareholders of record sharing an address who are receiving multiple copies of proxy materials and annual reports and wish to receive a single copy of such materials in the future should submit their request by contacting us in the same manner.

Annual Report

A copy of our Annual Report on Form 10-K for the year ended December 31, 2018, has been delivered or made available concurrently with this Proxy Statement to all shareholders entitled to notice of and to vote at our Annual Meeting. The Annual Report is not incorporated into this Proxy Statement and is not considered proxy-soliciting material. **Shareholders may obtain printed copies of our Annual Report on Form 10-K for the year ended December 31, 2018, as filed with the SEC, without charge by mailing a request to United Therapeutics Corporation, Attention: Investor Relations, 1040 Spring Street, Silver Spring, Maryland 20910. Our copying costs will be charged if copies of exhibits to the Annual Report on Form 10-K are requested.** An electronic copy is available on our website: <http://ir.unither.com/annual-and-proxy>.

Attending the Annual Meeting

Admission to the Annual Meeting is limited to shareholders of United Therapeutics as of the Record Date and their authorized proxy holders or representatives. Each shareholder may appoint only one proxy holder or representative to attend the Annual Meeting on his or her behalf. In order to be admitted to the Annual Meeting, attendees must both pre-register and bring the required materials to the Annual Meeting, each as described below. If you have any questions regarding the procedures described below, please call (301) 608-9292 and ask for Investor Relations.

Preregistration. In order to attend the Annual Meeting, you must preregister for the Annual Meeting by emailing IR@unither.com by 5:00 p.m. Eastern Time on Friday, June 21, 2019 to confirm that you or your proxy holder or representative plan to attend. If you hold your shares in street name, your preregistration email must include proof of ownership as of the record date. Acceptable forms of proof of ownership include your Notice of Internet Availability of Proxy Materials, your proxy card or voting instruction form if you received one, or an account or brokerage statement showing share ownership as of the Record Date. If your proxy holder or representative will attend, your preregistration email must also include the name of the proxy holder or representative and a valid proxy authorizing the proxy holder or representative to act on your behalf.

Admission. In order to be admitted to the Annual Meeting, all attendees must present valid, government-issued photo identification (such as a driver's license) that includes the same name as in

the preregistration email and related materials as well as a copy of the preregistration email or, if you are a record holder, the top half of your proxy card or your Notice of Internet Availability as your admission ticket. If you hold your shares in street name, and if you want to vote those shares in person, you also must get a legal proxy in your name from the broker, bank or other nominee that holds your shares, and submit it with your vote at the Annual Meeting.

Future Meetings. Our 2019 annual meeting of shareholders will be held at our co-headquarters located at 1110 Spring Street, Silver Spring, Maryland 20910. Future annual meetings may be held in various locations, including without limitation locations where United Therapeutics has operations. A map and directions to this year's meeting are provided on the inside back cover page of this Proxy Statement. If you need additional information regarding directions or parking, please call (301) 608-9292 and ask for Investor Relations.

ANNEX A
UNITED THERAPEUTICS CORPORATION
AMENDED AND RESTATED
2015 STOCK INCENTIVE PLAN

(effective June 26, 2019)

1. Purpose

The purpose of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan (this “Plan”) is to advance the interests of United Therapeutics Corporation (the “Company”) by stimulating the efforts of employees, officers, non-employee directors and other service providers, in each case who are selected to be participants, by heightening the desire of such persons to continue working toward and contributing to the success and progress of the Company. This Plan amends and restates, effective June 26, 2019 (the “Effective Date”), the Amended and Restated United Therapeutics Corporation 2015 Stock Incentive Plan, which was approved by stockholders on June 26, 2018, and which amended and restated the United Therapeutics Corporation 2015 Stock Incentive Plan (the “Original 2015 Plan”). The Original 2015 Plan was approved by shareholders on June 26, 2015 (the “Original Effective Date”), and superseded the Company’s Amended and Restated Equity Incentive Plan (as amended effective as of September 24, 2004) (the “Prior Plan”). This Plan provides for the grant of Incentive and Nonqualified Stock Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units and Stock Awards, any of which may be performance-based, and for Incentive Bonuses, which may be paid in cash or stock or a combination thereof, as determined by the Administrator. No new awards were to be issued under the Prior Plan following the Original Effective Date, but outstanding awards under the Prior Plan as of the Original Effective Date shall continue to be governed by the Prior Plan. The Plan is hereby amended and restated effective as of the Effective Date to increase the number of Shares issuable pursuant to Awards.

2. Definitions

As used in the Plan, the following terms shall have the meanings set forth below:

- (a) “Act” means the Securities Exchange Act of 1934, as amended.
- (b) “Administrator” means the Administrator of the Plan in accordance with Section 19.
- (c) “Affiliate” means, with respect to any entity, any other corporation, organization, association, partnership, sole proprietorship or other type of entity, whether incorporated or unincorporated, directly or indirectly controlling or controlled by or under direct or indirect common control with such entity.
- (d) “Award” means an Incentive Stock Option, Nonqualified Stock Option, Stock Appreciation Right, Restricted Stock, Restricted Stock Unit, Stock Award or Incentive Bonus granted to a Participant pursuant to the provisions of the Plan, any of which the Administrator may structure to qualify in whole or in part as a Performance Award.
- (e) “Award Agreement” means a written agreement or other instrument as may be approved from time to time by the Administrator implementing the grant of each Award. An Agreement may be in the form of an agreement to be executed by both the Participant and the Company (or an authorized representative of the Company) or certificates, notices or similar instruments as approved by the Administrator.
- (f) “Board” means the board of directors of the Company.
- (g) “Cause” has the meaning specified in the Participant’s employment agreement (if any) or otherwise means (1) any act of personal dishonesty taken by the Participant in connection with his or

her responsibilities as an employee or other service provider and intended to result in substantial personal enrichment of the Participant; (2) the Participant's conviction of a felony; (3) an act by the Participant which constitutes willful or gross misconduct and which is demonstrably and materially injurious to the Company; or (4) continued substantial willful violations by the Participant of the Participant's duties after there has been delivered to the Participant a written demand for performance from the Company which specifically sets forth the factual basis for the Company's belief that the Participant has not substantially performed his or her duties.

(h) "Change in Control" means, and shall be deemed to have occurred:

(1) if any person or group (as used in Section 13(d) of the Act) (other than the Company, any trustee or other fiduciary holding securities under an employee benefit plan of the Company, or any company owned, directly or indirectly, by the shareholders of the Company in substantially the same proportions as their ownership of stock of the Company) becomes the "beneficial owner" (as defined in Rule 13d-3 under the Act) of securities of the Company representing more than 30% of (a) the Shares then outstanding or (b) the combined voting power (other than in the election of directors) of all voting securities of the Company then outstanding; or

(2) if, during any period of 24 consecutive months, individuals who at the beginning of such period constituted the Board, and any director whose election or nomination for election by the Company's shareholders was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved (the "Incumbent Board"), cease for any reason (other than death or disability) to constitute at least a majority thereof; or

(3) upon the consummation of a reorganization, merger, statutory share exchange or consolidation or similar transaction involving the Company or any of its subsidiaries unless, following such event, (A) all or substantially all of the individuals and entities that were the beneficial owners of the Company's common stock or the combined voting power of all voting securities of the Company immediately prior to such transaction beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock (or, for a non-corporate entity, equivalent securities) and the combined voting power of the then-outstanding voting securities entitled to vote generally in the election of directors (or, for a non-corporate entity, equivalent governing body), as the case may be, of the entity resulting from such transaction (including, without limitation, an entity that, as a result of such transaction, owns the Company either directly or through one or more subsidiaries) in substantially the same proportions as their ownership immediately prior to such transaction of the Company's common stock or voting securities, as the case may be, (B) no person (excluding any corporation resulting from such transaction or any employee benefit plan (or related trust) of the Company or such corporation resulting from such transaction) beneficially owns, directly or indirectly, 30% or more of, respectively, the then-outstanding shares of common stock of the corporation resulting from such transaction or the combined voting power of the then-outstanding voting securities of such corporation, except to the extent that such ownership existed prior to the transaction, and (C) at least a majority of the members of the board of directors (or, for a non-corporate entity, equivalent governing body) of the entity resulting from such transaction were members of the Incumbent Board at the time of the execution of the initial agreement or of the action of the Board providing for such transaction; or

(4) upon the complete liquidation of the Company or the sale or disposition by the Company of all or substantially all of the Company's assets, other than a liquidation of the Company into a wholly-owned subsidiary.

(i) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and the rulings and regulations issues thereunder.

- (j) “Company” means United Therapeutics Corporation.
- (k) “Disability” means, in the Company’s reasonable judgment, either (a) the Participant has been unable to perform the Participant’s duties because of a physical or mental impairment for 80% or more of the normal working days during six consecutive calendar months or 50% or more of the normal working days during twelve consecutive calendar months, or (b) the Participant has become totally and permanently incapable of performing the usual duties of his or her employment with the Company on account of a physical or mental impairment.
- (l) “Fair Market Value” means, as of any date, the closing price of a Share on the principal exchange on which Shares are then trading, if any (or as reported on any composite index which includes such principal exchange). If Shares are not traded as of a particular date, the Fair Market Value of a Share as of such date shall be the closing price on the preceding trading date. If Shares not publicly traded on an exchange and not quoted on Nasdaq or a successor quotation system, the Fair Market Value of a Share shall be established by the Administrator in good faith.
- (m) “Incentive Bonus” means a bonus opportunity awarded under Section 10 pursuant to which a Participant may become entitled to receive an amount based on satisfaction of such performance criteria as are specified in the Award Agreement or otherwise.
- (n) “Incentive Stock Option” means a stock option that is intended to qualify as an “incentive stock option” within the meaning of Section 422 of the Code.
- (o) “Nonemployee Director” means each person who is, or is elected to be, a member of the Board and who is not an employee of the Company or any Subsidiary.
- (p) “Nonqualified Stock Option” means a stock option that is not intended to qualify as an “incentive stock option” within the meaning of Section 422 of the Code.
- (q) “Option” means an Incentive Stock Option and/or a Nonqualified Stock Option granted pursuant to Section 6 of the Plan.
- (r) “Participant” means any individual described in Section 3 to whom Awards have been granted from time to time by the Administrator and any authorized transferee of such individual.
- (s) “Person” has the same meaning as set forth in Sections 13(d) and 14(d)(2) of the Act.
- (t) “Performance Award” means an Award, the grant, issuance, retention, vesting or settlement of which is subject to satisfaction of one or more Qualifying Performance Criteria established pursuant to Section 14.
- (u) “Plan” means the 2015 United Therapeutics Corporation Stock Incentive Plan as set forth herein and as amended from time to time.
- (v) “Qualifying Performance Criteria” has the meaning set forth in Section 14(b).
- (w) “Restricted Stock” means Shares granted pursuant to Section 8 of the Plan.
- (x) “Restricted Stock Unit” means an Award granted to a Participant pursuant to Section 8 pursuant to which Shares or cash in lieu thereof may be issued in the future.
- (y) “Share” means a share of the Company’s par value common stock, subject to adjustment as provided in Section 13.
- (z) “Stock Appreciation Right” means a right granted pursuant to Section 7 of the Plan that entitles the Participant to receive, in cash or Shares or a combination thereof, as determined by the Administrator, value equal to or otherwise based on the excess of (i) the Fair Market Value of a specified number of Shares at the time of exercise over (ii) the exercise price of the right, as established by the Administrator on the date of grant.

(aa) “Stock Award” means an award of Shares to a Participant pursuant to Section 9 of the Plan.

(bb) “Subsidiary” means any corporation (other than the Company), limited liability company or other form of entity in an unbroken chain of entities beginning with the Company where each of the entities in the unbroken chain other than the last entity owns stock possessing at least 50 percent or more of the total combined voting power of all classes of stock in one of the other entities in the chain, and if specifically determined by the Administrator in the context other than with respect to Incentive Stock Options, may include an entity in which the Company has a significant ownership interest or that is directly or indirectly controlled by the Company.

(cc) “Substitute Awards” means Awards granted or Shares issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, by a company acquired by the Company or any Subsidiary or with which the Company or any Subsidiary combines.

(dd) “Termination of Employment” means ceasing to serve as an employee of the Company and its Subsidiaries or, with respect to a Nonemployee Director or other non-employee service provider, ceasing to serve as such for the Company, except that with respect to all or any Awards held by a Participant (i) the Administrator may determine that a transition of employment to service with a partnership, joint venture or corporation not meeting the requirements of a Subsidiary in which the Company or a Subsidiary is a party is not considered a Termination of Employment, (ii) unless otherwise determined by the Administrator, service as a member of the Board or other service provider shall not be deemed to constitute continued employment with respect to Awards granted to a Participant while he or she served as an employee, (iii) service as an employee of the Company or a Subsidiary shall constitute continued employment with respect to Awards granted to a Participant while he or she served as a member of the Board or other service provider, and (iv) the Administrator may determine that an approved leave of absence or approved employment on a less than full-time basis is considered a Termination of Employment. The Administrator shall determine whether any corporate transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in a Termination of Employment with the Company and its Subsidiaries for purposes of any affected Participant’s Awards, and the Administrator’s decision shall be final and binding.

3. Eligibility

Any person who is a current or prospective officer or employee of the Company or of any Subsidiary shall be eligible for selection by the Administrator for the grant of Awards hereunder. In addition, Nonemployee Directors and any other service providers who have been retained to provide consulting, advisory or other services to the Company or to any Subsidiary shall be eligible for the grant of Awards hereunder as determined by the Administrator. Options intended to qualify as Incentive Stock Options may only be granted to employees of the Company or any Subsidiary, as selected by the Administrator.

4. Effective Date and Termination of Plan

The Original 2015 Plan was adopted by the Board as of April 29, 2015 and approved by shareholders on the Original Effective Date. This Plan hereby amends and restates the Plan as previously amended and restated effective as of June 26, 2018 as of the Effective Date. All Awards granted under this Plan in excess of the aggregate limitation approved by shareholders at the 2018 annual meeting of shareholders are subject to, and may not be exercised before, the approval of this Plan by the shareholders prior to the first anniversary of the date the Board adopts the Plan, by the affirmative vote of the holders of a majority of the outstanding Shares of the Company present, or represented by proxy, and entitled to vote, at a meeting of the Company’s shareholders or by written consent in accordance with the laws of the State of Delaware; provided that if such approval by the

shareholders of the Company is not forthcoming, all Awards previously granted under this Plan in excess of the aggregate limitation approved by shareholders at the 2018 annual meeting of shareholders shall be void. The Plan shall remain available for the grant of Awards until June 26, 2028. Notwithstanding the foregoing, the Plan may be terminated at such earlier time as the Board may determine. Termination of the Plan will not affect the rights and obligations of the Participants and the Company arising under Awards theretofore granted and then in effect.

5. Shares Subject to the Plan and to Awards

(a) *Aggregate Limits.* The aggregate number of Shares issuable pursuant to all Awards shall not exceed 9,500,000; provided that any Shares granted under Options or Stock Appreciation Rights shall be counted against this limit on a one-for-one basis and any Shares granted as Awards other than Options or Stock Appreciation Rights shall be counted against this limit as 2.14 Shares for every one (1) Share subject to such Award. The aggregate number of Shares available for grant under this Plan and the number of Shares subject to outstanding Awards shall be subject to adjustment as provided in Section 13. The Shares issued pursuant to Awards granted under this Plan may be shares that are authorized and unissued or shares that were reacquired by the Company, including shares purchased in the open market.

(b) *Issuance of Shares.* For purposes of Section 5(a), the aggregate number of Shares issued under this Plan at any time shall equal only the number of Shares actually issued upon exercise or settlement of an Award. Notwithstanding the foregoing, Shares subject to an Award under the Plan may not again be made available for issuance under the Plan if such Shares are: (i) Shares that were subject to a stock-settled Stock Appreciation Right and were not issued upon the net settlement or net exercise of such Stock Appreciation Right, (ii) Shares used to pay the exercise price of an Option, (iii) Shares delivered to or withheld by the Company to pay the withholding taxes related an Award, or (iv) Shares repurchased on the open market with the proceeds of an Option exercise. Shares subject to Awards that have been canceled, expired, forfeited or otherwise not issued under an Award and Shares subject to Awards settled in cash shall not count as Shares issued under this Plan.

(c) *Individual and Tax Code Limits.* The aggregate number of Shares subject to Awards granted under this Plan during any calendar year to any one Participant shall not exceed 1,000,000, which number shall be calculated and adjusted pursuant to Section 13 only to the extent that such calculation or adjustment will not affect the status of any Award intended to qualify as “performance-based compensation” under Section 162(m) of the Code but which number shall not count any tandem SARs (as defined in Section 7). The aggregate number of Shares that may be issued pursuant to the exercise of Incentive Stock Options granted under this Plan shall not exceed 9,500,000, which number shall be calculated and adjusted pursuant to Section 13 only to the extent that such calculation or adjustment will not affect the status of any option intended to qualify as an Incentive Stock Option under Section 422 of the Code. The maximum cash amount payable pursuant to that portion of an Incentive Bonus granted in any calendar year to any Participant under this Plan that is intended to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code shall not exceed \$5,000,000.

(d) *Director Awards.*

(1) The aggregate dollar value of Awards (based on the aggregate accounting value on the date of grant) granted pursuant to this Plan during any calendar year to any Nonemployee Director shall not exceed \$400,000 for annual equity grants (plus, for the year an individual first becomes a Nonemployee Director (x) an initial equity grant valued at \$400,000, plus (y) a pro-rata portion of the \$400,000 annual equity-based award value based on the number of months remaining in the Board service year at the date of grant), payable in Options, Restricted Stock

Units, or a split evenly between Options and Restricted Stock Units, based on an election by the Nonemployee Director. Such dollar limits shall be converted into a number of Awards as follows:

(A) *Options*: The number of Options shall be calculated by dividing the equity value (e.g., \$400,000) by the fair value of each Option, calculated in accordance with the Black-Scholes methodology utilized by the Company in calculating share-based compensation for financial reporting purposes. Black-Scholes inputs shall be the same as those used in the Company's most recent quarterly report on Form 10-Q or Annual Report on Form 10-K, except that the Share price input shall be the average closing price of the Shares over a recent time period prior to the date of grant (May 10 through June 10, in the case of annual grants made in June).

(B) *Restricted Stock Units*: The number of Restricted Stock Units shall be calculated by dividing the equity value (e.g., \$400,000) by the average closing price of the Shares over a recent time period prior to the date of grant (May 10 through June 10, in the case of annual grants paid in June).

(C) *Rounding*: The resulting number of Options and/or Restricted Stock Units, calculated as above, shall be rounded to the nearest 10 Shares.

(2) In addition, the amount of cash compensation paid or payable by the Company to a Nonemployee Director with respect to any calendar year shall not exceed \$60,000 (with additional cash compensation of \$35,000 for the lead independent director, \$25,000 for each committee chairmanship, and \$15,000 for each other committee membership), plus a pro-rated portion of the aggregate cash compensation for the roles in which the Nonemployee Director serves for the year an individual first becomes a Nonemployee Director, to reflect the number of months then remaining in the Board service year as of the date the individual becomes a Nonemployee Director. For the avoidance of doubt, cash compensation shall be counted towards the limit specified in this subclause in the year earned (regardless of whether deferred), and any interest or other earnings on such compensation shall not count towards the limit.

(e) *Substitute Awards*. Substitute Awards shall not reduce the Shares authorized for issuance under the Plan or authorized for grant to a Participant in any calendar year. Additionally, in the event that a company acquired by the Company or any Subsidiary, or with which the Company or any Subsidiary combines, has shares available under a pre-existing plan approved by shareholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may be used for Awards under the Plan and shall not reduce the Shares authorized for issuance under the Plan; provided that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were employees, directors or other service providers of such acquired or combined company before such acquisition or combination.

6. Options

(a) *Option Awards*. Options may be granted at any time and from time to time prior to the termination of the Plan to Participants as determined by the Administrator. No Participant shall have any rights as a shareholder with respect to any Shares subject to Options hereunder until said Shares have been issued. Each Option shall be evidenced by an Award Agreement. Options granted pursuant to the Plan need not be identical but each Option must contain and be subject to the terms and conditions set forth below.

(b) *Price.* The Administrator will establish the exercise price per Share under each Option, which, in no event will be less than the Fair Market Value of the Shares on the date of grant; provided, however, that the exercise price per Share with respect to an Option that is granted in connection with a merger or other acquisition as a substitute or replacement award for options held by optionees of the acquired entity may be less than 100% of the Fair Market Value of the Shares on the date such Option is granted if such exercise price is based on a formula set forth in the terms of the options held by such optionees or in the terms of the agreement providing for such merger or other acquisition. The exercise price of any Option may be paid in Shares, cash or a combination thereof, as determined by the Administrator, including an irrevocable commitment by a broker to pay over such amount from a sale of the Shares issuable under an Option, the delivery of previously owned Shares and withholding of Shares deliverable upon exercise, or in such other form as is acceptable to the Administrator.

(c) *Provisions Applicable to Options.* The date on which Options become exercisable shall be determined at the sole and absolute discretion of the Administrator and set forth in an Award Agreement. However, in no event shall any Option vest before the first anniversary of the date of grant; provided that, if so determined by the Committee, an Option may fully or partially vest before such anniversary in the event of the Participant's death or disability or a Change in Control. Unless otherwise determined by the Administrator, an approved leave of absence or employment on a less than full-time basis shall not result in an adjustment to the vesting period and/or exercisability of an Option to reflect the effects of any period during which the Participant is on an approved leave of absence or is employed on a less than full-time basis. In no event may any Option include a reload feature.

(d) *Term of Options and Termination of Employment:* The Administrator shall establish the term of each Option, which in no case shall exceed a period of ten (10) years from the date of grant. Unless an Option earlier expires upon the expiration date established pursuant to the foregoing sentence, upon the Participant's Termination of Employment, his or her rights to exercise an Option then held shall be only as follows, unless the Administrator specifies otherwise:

(1) *General.* If a Participant's Termination of Employment is for any reason other than the Participant's death, Disability, or termination for Cause, Options granted to the Participant may continue to be exercised in accordance with their terms for a period of ninety (90) days after such Termination of Employment, but only to the extent the Participant was entitled to exercise the Options on the date of such termination.

(2) *Death.* If a Participant dies either while an employee or officer of the Company or a Subsidiary or member of the Board, or after the Termination of Employment other than for Cause but during the time when the Participant could have exercised an Option, the Options issued to such Participant shall become fully vested and exercisable by the personal representative of such Participant or other successor to the interest of the Participant for one year after the Participant's death.

(3) *Disability.* If a Participant's Termination of Employment is due to Disability, then all of the Participant's Options shall immediately fully vest, and the Options held by the Participant at the time of such Termination of Employment shall be exercisable by the Participant or the personal representative of such Participant for one year following such Termination of Employment.

(4) *Termination for Cause.* If a Participant is terminated for Cause, the Participant shall have no further right to exercise any Options previously granted. The Administrator or one or more officers designated by the Administrator shall determine whether a termination is for Cause.

(e) *Incentive Stock Options.* Notwithstanding anything to the contrary in this Section 6, in the case of the grant of an Option intending to qualify as an Incentive Stock Option: (i) if the Participant owns stock possessing more than 10 percent of the combined voting power of all classes of stock of the Company, the exercise price of such Option must be at least 110 percent of the Fair Market Value of the Shares on the date of grant and the Option must expire within a period of not more than five (5) years from the date of grant, and (ii) Termination of Employment will occur when the person to whom an Award was granted ceases to be an employee (as determined in accordance with Section 3401(c) of the Code and the regulations promulgated thereunder) of the Company and its corporate Subsidiaries. Notwithstanding anything in this Section 6 to the contrary, options designated as Incentive Stock Options shall not be eligible for treatment under the Code as Incentive Stock Options (and will be deemed to be Nonqualified Stock Options) to the extent that either (a) the aggregate Fair Market Value of Shares (determined as of the time of grant) with respect to which such Options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any corporate Subsidiary) exceeds \$100,000, taking Options into account in the order in which they were granted, or (b) such Options otherwise remain exercisable but are not exercised within three (3) months of Termination of Employment (or such other period of time provided in Section 422 of the Code).

7. Stock Appreciation Rights

Stock Appreciation Rights may be granted to Participants from time to time either in tandem with or as a component of other Awards granted under the Plan (“tandem SARs”) or not in conjunction with other Awards (“freestanding SARs”) and may, but need not, relate to a specific Option granted under Section 6. The provisions of Stock Appreciation Rights need not be the same with respect to each grant or each recipient. Any Stock Appreciation Right granted in tandem with an Award may be granted at the same time such Award is granted or at any time thereafter before exercise or expiration of such Award. All freestanding SARs shall be granted subject to the same terms and conditions applicable to Options as set forth in Section 6 (including, without limitation, the vesting provisions of Section 6(c)) and all tandem SARs shall have the same exercise price, vesting, exercisability, forfeiture and termination provisions as the Award to which they relate. Subject to the provisions of Section 6 and the immediately preceding sentence, the Administrator may impose such other conditions or restrictions on any Stock Appreciation Right as it shall deem appropriate. Stock Appreciation Rights may be settled in Shares, cash or a combination thereof, as determined by the Administrator and set forth in the applicable Award Agreement.

8. Restricted Stock and Restricted Stock Units

(a) *Restricted Stock and Restricted Stock Unit Awards.* Restricted Stock and Restricted Stock Units may be granted at any time and from time to time prior to the termination of the Plan to Participants as determined by the Administrator. Restricted Stock is an award or issuance of Shares the grant, issuance, retention, vesting and/or transferability of which is subject during specified periods of time to such conditions (including continued employment or performance conditions) and terms as the Administrator deems appropriate. Restricted Stock Units are Awards denominated in units of Shares under which the issuance of Shares is subject to such conditions (including continued employment or performance conditions) and terms as the Administrator deems appropriate. Each grant of Restricted Stock and Restricted Stock Units shall be evidenced by an Award Agreement. Unless determined otherwise by the Administrator, each Restricted Stock Unit will be equal to one Share and will entitle a Participant to either the issuance of Shares or payment of an amount of cash determined with reference to the value of Shares. To the extent determined by the Administrator, Restricted Stock and Restricted Stock Units may be satisfied or settled in Shares, cash or a combination thereof. Restricted Stock and Restricted Stock Units granted pursuant to the Plan need not be identical but each grant of

Restricted Stock and Restricted Stock Units must contain and be subject to the terms and conditions set forth below.

(b) *Contents of Agreement.* Each Award Agreement shall contain provisions regarding (i) the number of Shares or Restricted Stock Units subject to such Award or a formula for determining such number, (ii) the purchase price of the Shares, if any, and the means of payment, (iii) the performance criteria, if any, and level of achievement versus these criteria that shall determine the number of Shares or Restricted Stock Units granted, issued, retainable and/or vested, (iv) such terms and conditions on the grant, issuance, vesting and/or forfeiture of the Shares or Restricted Stock Units as may be determined from time to time by the Administrator, (v) the term of the performance period, if any, as to which performance will be measured for determining the number of such Shares or Restricted Stock Units, and (vi) restrictions on the transferability of the Shares or Restricted Stock Units. Shares issued under a Restricted Stock Award may be issued in the name of the Participant and held by the Participant or held by the Company, in each case as the Administrator may provide.

(c) *Vesting and Performance Criteria.* The grant, issuance, retention, vesting and/or settlement of shares of Restricted Stock and Restricted Stock Units will occur when and in such installments as the Administrator determines or under criteria the Administrator establishes, which may include Qualifying Performance Criteria. However, in no event shall any shares of Restricted Stock or Restricted Stock Units vest before the first anniversary of the date of grant; provided that, if so determined by the Committee, shares of Restricted Stock and Restricted Stock Units may fully or partially vest before such anniversary in the event of the Participant's death or disability or a Change in Control. Notwithstanding anything in this Plan to the contrary, the performance criteria for any Restricted Stock or Restricted Stock Unit that is intended to satisfy the requirements for "performance-based compensation" under Section 162(m) of the Code will be a measure based on one or more Qualifying Performance Criteria selected by the Administrator and specified when the Award is granted.

(d) *Termination of Employment.* Unless the Administrator provides otherwise:

(i) *General.* In the event of Termination of Employment for any reason other than death or Disability, any Restricted Stock or Restricted Stock Units still subject in full or in part to restrictions at the date of such Termination of Employment shall automatically be forfeited and returned to the Company.

(ii) *Death or Disability.* In the event a Participant's Termination of Employment is because of death or Disability, the restrictions remaining on any or all Shares remaining subject to a Restricted Stock or Restricted Stock Unit Award shall lapse.

(e) *Discretionary Adjustments and Limits.* Subject to the limits imposed under Section 162(m) of the Code for Awards that are intended to qualify as "performance-based compensation," notwithstanding the satisfaction of any performance goals, the number of Shares granted, issued, retainable and/or vested under an Award of Restricted Stock or Restricted Stock Units on account of either financial performance or personal performance evaluations may, to the extent specified in the Award Agreement, be reduced, but not increased, by the Administrator on the basis of such further considerations as the Administrator shall determine.

(f) *Voting Rights.* Unless otherwise determined by the Administrator, Participants holding shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those shares during the period of restriction. Participants shall have no voting rights with respect to Shares underlying Restricted Stock Units unless and until such Shares are reflected as issued and outstanding shares on the Company's stock ledger.

(g) *Dividends and Distributions.* Participants in whose name Restricted Stock is granted shall be entitled to receive all dividends and other distributions paid with respect to those Shares, unless determined otherwise by the Administrator. The Administrator will determine whether any such

dividends or distributions will be automatically reinvested in additional shares of Restricted Stock and subject to the same restrictions on transferability as the Restricted Stock with respect to which they were distributed or whether such dividends or distributions will be paid in cash. Shares underlying Restricted Stock Units shall be entitled to dividends or dividend equivalents only to the extent provided by the Administrator. Notwithstanding anything herein to the contrary, in no event shall dividends, distributions or dividend equivalents be currently payable with respect to unvested or unearned Performance Awards.

(h) *Payment of Restricted Stock Units.* In all events, unless payment with respect to a Restricted Stock Unit is deferred in a manner consistent with Section 409A of the Code, the Shares and/or cash underlying such Restricted Stock Unit shall be paid to the Participant no later than two and one-half months following the end of the year in which the Restricted Stock Unit is no longer subject to a substantial risk of forfeiture.

(i) *Legending of Restricted Stock.* The Administrator may also require that certificates representing shares of Restricted Stock be retained and held in escrow by a designated employee or agent of the Company or any Subsidiary until any restrictions applicable to shares of Restricted Stock so retained have been satisfied or lapsed. Any certificates evidencing shares of Restricted Stock awarded pursuant to the Plan shall bear the following legend:

The shares represented by this certificate were issued subject to certain restrictions under the United Therapeutics Corporation 2015 Stock Incentive Plan (the "Plan"). This certificate is held subject to the terms and conditions contained in a restricted stock agreement that includes a prohibition against the sale or transfer of the stock represented by this certificate except in compliance with that agreement and that provides for forfeiture upon certain events. Copies of the Plan and the restricted stock agreement are on file in the office of the Secretary of the Company.

9. Stock Awards

(a) *Grant.* Stock Awards may be granted at any time and from time to time prior to the termination of the Plan to Participants as determined by the Administrator. Stock Awards shall be subject to such terms and conditions, consistent with the other provisions of the Plan, as may be determined by the Administrator. However, in no event shall any Stock Award vest before the first anniversary of the date of grant; provided that, if so determined by the Committee, a Stock Award may fully or partially vest before such anniversary in the event of the Participant's death or disability or a Change in Control.

(b) *Rights as a Shareholder.* A Participant shall have all voting, dividend, liquidation and other rights with respect to Shares issued to the Participant as a Stock Award under this Section 9 upon the Participant becoming the holder of record of the Shares granted pursuant to such Stock Award; provided, that the Administrator may impose such restrictions on the assignment or transfer of Shares awarded pursuant to a Stock Award as it considers appropriate.

10. Incentive Bonuses

(a) *General.* Each Incentive Bonus Award will confer upon the Participant the opportunity to earn a future payment tied to the level of achievement with respect to one or more performance criteria established for a performance period of not less than one year.

(b) *Incentive Bonus Document.* Unless otherwise determined by the Administrator, the terms of any Incentive Bonus will be set forth in an Award Agreement. Each Award Agreement evidencing an Incentive Bonus shall contain provisions regarding (i) the target and maximum amount payable to the Participant as an Incentive Bonus, (ii) the performance criteria and level of achievement versus these criteria that shall determine the amount of such payment, (iii) the term of the performance period as

to which performance shall be measured for determining the amount of any payment, (iv) the timing of any payment earned by virtue of performance, (v) restrictions on the alienation or transfer of the Incentive Bonus prior to actual payment, (vi) forfeiture provisions and (vii) such further terms and conditions, in each case not inconsistent with this Plan as may be determined from time to time by the Administrator.

(c) *Performance Criteria.* The Administrator shall establish the performance criteria and level of achievement versus these criteria that shall determine the target and maximum amount payable under an Incentive Bonus, which criteria may be based on financial performance and/or personal performance evaluations. The Administrator may specify the percentage of the target Incentive Bonus that is intended to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code (to the extent applicable to the Incentive Bonus). Notwithstanding anything to the contrary herein, the performance criteria for any portion of an Incentive Bonus that is intended by the Administrator to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code for taxable years to which it applies shall be a measure based on one or more Qualifying Performance Criteria (as defined in Section 14(b)) selected by the Administrator and specified at the time the Incentive Bonus is granted. The Administrator shall certify the extent to which any Qualifying Performance Criteria has been satisfied, and the amount payable as a result thereof, prior to payment of any Incentive Bonus that is intended to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code.

(d) *Timing and Form of Payment.* The Administrator shall determine the timing of payment of any Incentive Bonus. Payment of the amount due under an Incentive Bonus may be made in cash or in Shares, as determined by the Administrator. The Administrator may provide for or, subject to such terms and conditions as the Administrator may specify, may permit a Participant to elect for the payment of any Incentive Bonus to be deferred to a specified date or event. In all events, unless payment of an Incentive Bonus is deferred in a manner consistent with Section 409A of the Code, any Incentive Bonus shall be paid to the Participant no later than two and one-half months following the end of the year in which the Incentive Bonus is no longer subject to a substantial risk of forfeiture.

(e) *Discretionary Adjustments.* Notwithstanding satisfaction of any performance goals, the amount paid under an Incentive Bonus on account of either financial performance or personal performance evaluations may, to the extent specified in the Award Agreement or other document evidencing the Award, be reduced, but not increased, by the Administrator on the basis of such further considerations as the Administrator shall determine.

11. Deferral of Awards

The Administrator may, in an Award Agreement or otherwise, provide for the deferred delivery of Shares upon settlement, vesting or other events with respect to Restricted Stock or Restricted Stock Units, or in payment or satisfaction of an Incentive Bonus. Notwithstanding anything herein to the contrary, in no event will any deferral of the delivery of Shares or any other payment with respect to any Award be allowed if the Administrator determines, in its sole and absolute discretion, that the deferral would result in the imposition of the additional tax under Section 409A(a)(1)(B) of the Code. No award shall provide for deferral of compensation that does not comply with Section 409A of the Code, unless the Board, at the time of grant, specifically provides that the Award is not intended to comply with Section 409A of the Code. The Company shall have no liability to a Participant, or any other party, if an Award that is intended to be exempt from, or compliant with, Section 409A of the Code is not so exempt or compliant or for any action taken by the Board.

12. Conditions and Restrictions Upon Securities Subject to Awards

The Administrator may provide that the Shares issued upon exercise of an Option or Stock Appreciation Right or otherwise subject to or issued under an Award shall be subject to such further agreements, restrictions, conditions or limitations as the Administrator in its sole and absolute discretion may specify prior to the exercise of such Option or Stock Appreciation Right or the grant, vesting or settlement of such Award, including without limitation, conditions on vesting or transferability, forfeiture or repurchase provisions and method of payment for the Shares issued upon exercise, vesting or settlement of such Award (including the actual or constructive surrender of Shares already owned by the Participant) or payment of taxes arising in connection with an Award. Without limiting the foregoing, such restrictions may address the timing and manner of any resales by the Participant or other subsequent transfers by the Participant of any Shares issued under an Award, including without limitation (i) restrictions under an insider trading policy or pursuant to applicable law, (ii) restrictions designed to delay and/or coordinate the timing and manner of sales by Participant and holders of other Company equity compensation arrangements, (iii) restrictions as to the use of a specified brokerage firm for such resales or other transfers and (iv) provisions requiring Shares to be sold on the open market or to the Company in order to satisfy tax withholding or other obligations.

13. Adjustment of and Changes in the Stock

(a) *General.* The number and kind of Shares available for issuance under this Plan (including under any Awards then outstanding), and the number and kind of Shares subject to the limits set forth in Section 5 of this Plan, shall be equitably adjusted by the Administrator to reflect any reorganization, reclassification, combination of shares, stock split, reverse stock split, spin-off, dividend or distribution of securities, property or cash (other than regular, quarterly cash dividends), or any other event or transaction that affects the number or kind of Shares outstanding. Such adjustment shall be designed to comply with Sections 409A and 424 of the Code as applicable, or, except as otherwise expressly provided in Section 5(c) of this Plan, may be designed to treat the Shares available under the Plan and subject to Awards as if they were all outstanding on the record date for such event or transaction or to increase the number of such Shares to reflect a deemed reinvestment in Shares of the amount distributed to the Company's securityholders. The terms of any outstanding Award shall also be equitably adjusted by the Administrator as to price, number or kind of Shares subject to such Award, vesting, and other terms to reflect the foregoing events, which adjustments need not be uniform as between different Awards or different types of Awards.

In the event there shall be any other change in the number or kind of outstanding Shares, or any stock or other securities into which such Shares shall have been changed, or for which it shall have been exchanged, by reason of a change of control, other merger, consolidation or otherwise, then the Administrator shall determine the appropriate and equitable adjustment to be effected.

No right to purchase fractional shares shall result from any adjustment in Awards pursuant to this Section 13. In case of any such adjustment, the Shares subject to the Award shall be rounded up to the nearest whole share for Awards other than Options and Stock Appreciation Rights, and shall be rounded down to the nearest whole Share with respect to Options and Stock Appreciation Rights. The Company shall notify Participants holding Awards subject to any adjustments pursuant to this Section 13 of such adjustment, but (whether or not notice is given) such adjustment shall be effective and binding for all purposes of the Plan.

(b) *Change in Control.* The Administrator may determine the effect of a Change in Control on outstanding Awards in a manner that, in the Administrator's discretion, is fair and equitable to Participants. Such effects, which need not be the same for every Participant, may include, without limitation: (x) the substitution for the Shares subject to any outstanding Award, or portion thereof, of stock or other securities of the surviving corporation or any successor corporation to the Company, or a

parent or subsidiary thereof, in which event the aggregate purchase or exercise price, if any, of such Award, or portion thereof, shall remain the same, and/or (y) the conversion of any outstanding Award, or portion thereof, into a right to receive cash or other property upon or following the consummation of the Change in Control in an amount equal to the value of the consideration to be received by holders of Shares in connection with such transaction for one Share, less the per share purchase or exercise price of such Award, if any, multiplied by the number of Shares subject to such Award, or a portion thereof.

14. Qualifying Performance-Based Compensation

(a) *General.* The Administrator may establish performance criteria and level of achievement versus such criteria that shall determine the number of Shares to be granted, retained, vested, issued or issuable under or in settlement of or the amount payable pursuant to an Award, which criteria may be based on Qualifying Performance Criteria or other standards of financial performance and/or personal performance evaluations. In addition, the Administrator may specify that an Award or a portion of an Award is intended to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code to the extent applicable, provided that the performance criteria for such Award or portion of an Award that is intended by the Administrator to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code shall be a measure based on one or more Qualifying Performance Criteria selected by the Administrator and specified at the time the Award is granted. The Administrator shall certify the extent to which any Qualifying Performance Criterion has been satisfied, and the amount payable as a result thereof, prior to payment, settlement or vesting of any Award that is intended to satisfy the requirements for “performance-based compensation” under Section 162(m) of the Code.

(b) *Qualifying Performance Criteria.* For purposes of this Plan, the term “Qualifying Performance Criteria” shall mean any one or more of the following performance criteria, or derivations of such performance criteria, either individually, alternatively or in any combination, applied to either the Company as a whole or to a business unit or Subsidiary, either individually, alternatively or in any combination, and measured either annually or cumulatively over a period of years, on an absolute basis or relative to a pre-established target, to previous years’ results or to a designated comparison group, in each case as specified by the Administrator: (i) net earnings or earnings per share (including earnings before interest, taxes, depreciation, license fees, share-based compensation, and/or amortization, or other non-GAAP profitability measures), (ii) income, net income or operating income, (iii) revenues, (iv) net sales, (v) return on sales, (vi) return on equity, (vii) return on capital (including return on total capital or return on invested capital), (viii) return on assets or net assets, (ix) economic value added measurements, (x) return on invested capital, (xi) return on operating revenue, (xii) cash flow (before or after dividends), (xiii) stock price, (xiv) total shareholder return, (xv) market capitalization, (xvi) economic value added, (xvii) debt leverage (debt to capital), (xviii) operating profit or net operating profit, (xix) operating margin or profit margin, (xx) cash from operations, (xxi) market share, (xxii) product development or release schedules, (xxiii) new product innovation, (xxiv) cost reductions, (xxv) customer service, or (xxvi) customer satisfaction. To the extent consistent with Section 162(m) of the Code, the Committee (A) shall appropriately adjust any evaluation of performance under a Qualifying Performance Criterion to eliminate the effects of charges for restructurings, discontinued operations, extraordinary items and all items of gain, loss or expense determined to be extraordinary or unusual in nature or related to the disposal of a segment of a business or related to a change in accounting principle all as determined in accordance with applicable accounting provisions, as well as the cumulative effect of accounting changes, in each case as determined in accordance with generally accepted accounting principles or identified in the Company’s financial statements or notes to the financial statements, and (B) may appropriately adjust any evaluation of performance under a Qualifying Performance Criterion to exclude any of the following events that occurs during a performance period: (i) asset write-downs, (ii) litigation, claims, judgments or settlements, (iii) the

effect of changes in tax law or other such laws or provisions affecting reported results, and (iv) accruals of any amounts for payment under this Plan or any other compensation arrangement maintained by the Company.

15. Transferability

Unless the Administrator determines otherwise, each Award may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated by a Participant other than by will or the laws of descent and distribution, and each Option or Stock Appreciation Right shall be exercisable only by the Participant during his or her lifetime. To the extent permitted by the Administrator, the person to whom an Award is initially granted (the “Grantee”) may transfer an Award to any “family member” of the Grantee (as such term is defined in Section 1(a)(5) of the General Instructions to Form S-8 under the Securities Act of 1933, as amended (“Form S-8”)), to trusts solely for the benefit of such family members and to partnerships in which such family members and/or trusts are the only partners; provided that, (i) as a condition thereof, the transferor and the transferee must execute a written agreement containing such terms as specified by the Administrator, and (ii) the transfer is pursuant to a gift or a domestic relations order to the extent permitted under the General Instructions to Form S-8. Except to the extent specified otherwise in the agreement the Administrator provides for the Grantee and transferee to execute, all vesting, exercisability and forfeiture provisions that are conditioned on the Grantee’s continued employment or service shall continue to be determined with reference to the Grantee’s employment or service (and not to the status of the transferee) after any transfer of an Award pursuant to this Section 15, and the responsibility to pay any taxes in connection with an Award shall remain with the Grantee notwithstanding any transfer other than by will or intestate succession.

16. Suspension or Termination of Awards

Except as otherwise provided by the Administrator, if at any time (including after a notice of exercise has been delivered or an award has vested) the Company’s chairman and co-chief executive officer or any other person designated by the Administrator (each such person, an “Authorized Officer”) reasonably believes that a Participant may have committed an Act of Misconduct as described in this Section 16, the Authorized Officer, Administrator or the Board may suspend the Participant’s rights to exercise any Option, to vest in an Award, and/or to receive payment for or receive Shares in settlement of an Award pending a determination of whether an Act of Misconduct has been committed.

If the Administrator or an Authorized Officer determines a Participant has committed an act of embezzlement, fraud, dishonesty, nonpayment of any obligation owed to the Company or any Subsidiary, breach of fiduciary duty, violation of Company ethics policy or code of conduct, or deliberate disregard of the Company or Subsidiary rules resulting in loss, damage or injury to the Company or any Subsidiary, or if a Participant makes an unauthorized disclosure of any Company or Subsidiary trade secret or confidential information, solicits any employee or service provider to leave the employ or cease providing services to the Company or any Subsidiary, breaches any intellectual property or assignment of inventions covenant, engages in any conduct constituting unfair competition, breaches any non-competition agreement, induces any Company or Subsidiary customer to breach a contract with the Company or any Subsidiary or to cease doing business with the Company or any Subsidiary, or induces any principal for whom the Company or any Subsidiary acts as agent to terminate such agency relationship (any of the foregoing acts, an “Act of Misconduct”), then except as otherwise provided by the Administrator, (i) neither the Participant nor his or her estate nor transferee shall be entitled to exercise any Option or Stock Appreciation Right whatsoever, vest in or have the restrictions on an Award lapse, or otherwise receive payment of an Award, (ii) the Participant will forfeit all outstanding Awards and (iii) the Participant may be required, at the Administrator’s sole and absolute discretion, to return and/or repay to the Company any then unvested Shares previously issued

under the Plan. In making such determination, the Administrator or an Authorized Officer shall give the Participant an opportunity to appear and present evidence on his or her behalf at a hearing before the Administrator or its designee or an opportunity to submit written comments, documents, information and arguments to be considered by the Administrator.

17. Compliance with Laws and Regulations

This Plan, the grant, issuance, vesting, exercise and settlement of Awards thereunder, and the obligation of the Company to sell, issue or deliver Shares under such Awards, shall be subject to all applicable foreign, federal, state and local laws, rules and regulations, stock exchange rules and regulations, and to such approvals by any governmental or regulatory agency as may be required. The Company shall not be required to register in a Participant's name or deliver any Shares prior to the completion of any registration or qualification of such shares under any foreign, federal, state or local law or any ruling or regulation of any government body which the Administrator shall determine to be necessary or advisable. To the extent the Company is unable to or the Administrator deems it infeasible to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, the Company and its Subsidiaries shall be relieved of any liability with respect to the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained. No Option shall be exercisable and no Shares shall be issued and/or transferable under any other Award unless a registration statement with respect to the Shares underlying such Option is effective and current or the Company has determined that such registration is unnecessary.

In the event an Award is granted to or held by a Participant who is employed or providing services outside the United States, the Administrator may, in its sole and absolute discretion, modify the provisions of the Plan or of such Award as they pertain to such individual to comply with applicable foreign law or to recognize differences in local law, currency or tax policy. The Administrator may also impose conditions on the grant, issuance, exercise, vesting, settlement or retention of Awards in order to comply with such foreign law and/or to minimize the Company's obligations with respect to tax equalization for Participants employed outside their home country.

18. Withholding

To the extent required by applicable federal, state, local or foreign law, a Participant shall be required to satisfy, in a manner satisfactory to the Company, any withholding tax obligations that arise by reason of an Option exercise, disposition of Shares issued under an Incentive Stock Option, the vesting of or settlement of an Award, an election pursuant to Section 83(b) of the Code or otherwise with respect to an Award. To the extent a Participant makes an election under Section 83(b) of the Code, within ten days of filing such election with the Internal Revenue Service, the Participant must notify the Company in writing of such election. The Company and its Subsidiaries shall not be required to issue Shares, make any payment or to recognize the transfer or disposition of Shares until all such obligations are satisfied. The Administrator may provide for or permit these obligations to be satisfied through the mandatory or elective sale of Shares and/or by having the Company withhold a portion of the Shares that otherwise would be issued to him or her upon exercise of the Option or the vesting or settlement of an Award, or by tendering Shares previously acquired.

19. Administration of the Plan

(a) *Administrator of the Plan.* The Plan shall be administered by the Administrator who shall be the Compensation Committee of the Board or, in the absence of a Compensation Committee, the Board itself. Any power of the Administrator may also be exercised by the Board, except to the extent that the grant or exercise of such authority would cause any Award or transaction to become subject to (or lose an exemption under) the short-swing profit recovery provisions of Section 16 of the Act or

cause an Award designated as a Performance Award not to qualify for treatment as performance-based compensation under Section 162(m) of the Code. To the extent that any permitted action taken by the Board conflicts with action taken by the Administrator, the Board action shall control. The Compensation Committee may by resolution authorize one or more officers of the Company to perform any or all things that the Administrator is authorized and empowered to do or perform under the Plan, and for all purposes under this Plan, such officer or officers shall be treated as the Administrator; provided, however, that no such officer shall designate himself or herself as a recipient of any Awards granted under authority delegated to such officer. The Compensation Committee may delegate any or all aspects of the day-to-day administration of the Plan to one or more officers or employees of the Company or any Subsidiary, and/or to one or more agents.

(b) *Powers of Administrator:* Subject to the express provisions of this Plan, the Administrator shall be authorized and empowered to do all things that it determines to be necessary or appropriate in connection with the administration of this Plan, including, without limitation: (i) to prescribe, amend and rescind rules and regulations relating to this Plan and to define terms not otherwise defined herein; (ii) to determine which persons are Participants, to which of such Participants, if any, Awards shall be granted hereunder and the timing of any such Awards; (iii) to grant Awards to Participants and determine the terms and conditions thereof, including the number of Shares subject to Awards and the exercise or purchase price of such Shares and the circumstances under which Awards become exercisable or vested or are forfeited or expire, which terms may but need not be conditioned upon the passage of time, continued employment, the satisfaction of performance criteria, the occurrence of certain events (including a Change in Control), or other factors; (iv) to establish and verify the extent of satisfaction of any performance goals or other conditions applicable to the grant, issuance, exercisability, vesting and/or ability to retain any Award; (v) to prescribe and amend the terms of the agreements or other documents evidencing Awards made under this Plan (which need not be identical) and the terms of or form of any document or notice required to be delivered to the Company by Participants under this Plan; (vi) to determine the extent to which adjustments are required pursuant to Section 13; (vii) to interpret and construe this Plan, any rules and regulations under this Plan and the terms and conditions of any Award granted hereunder, and to make exceptions to any such provisions in if the Administrator, in good faith, determines that it is necessary to do so in light of extraordinary circumstances and for the benefit of the Company (provided that nothing in this Section 19(b) permits the Committee to provide that any Award may vest before the first anniversary of the date of grant other than in connection with the Participant's death or disability or a Change in Control); (viii) to approve corrections in the documentation or administration of any Award; and (ix) to make all other determinations deemed necessary or advisable for the administration of this Plan. The Administrator may, in its sole and absolute discretion, without amendment to the Plan, waive or amend the operation of Plan provisions respecting exercise after termination of employment or service to the Company or an Affiliate and, except as otherwise provided herein, adjust any of the terms of any Award (subject to the proviso in item (vii) of the immediately preceding sentence). Except in connection with a corporate transaction involving the Company (including, without limitation, any stock dividend, distribution (whether in the form of cash, Shares, other securities or other property), stock split, extraordinary cash dividend, recapitalization, Change in Control, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of Shares or other securities, or similar transaction(s)), the Company may not, without obtaining shareholder approval: (w) amend the terms of outstanding Options or Stock Appreciation Rights to reduce the exercise price of such outstanding Options or Stock Appreciation Rights; (x) cancel outstanding Options or Stock Appreciation Rights in exchange for Options or Stock Appreciation Rights with an exercise price that is less than the exercise price of the original Options or Stock Appreciation Rights; (y) cancel outstanding Options or Stock Appreciation Rights with an exercise price above the current stock price in exchange for cash or other securities; or (z) otherwise amend, exchange or reprice Options or Stock Appreciation Rights.

(c) *Determinations by the Administrator.* All decisions, determinations and interpretations by the Administrator regarding the Plan, any rules and regulations under the Plan and the terms and conditions of or operation of any Award granted hereunder, shall be final and binding on all Participants, beneficiaries, heirs, assigns or other persons holding or claiming rights under the Plan or any Award. The Administrator shall consider such factors as it deems relevant, in its sole and absolute discretion, to making such decisions, determinations and interpretations including, without limitation, the recommendations or advice of any officer or other employee of the Company and such attorneys, consultants and accountants as it may select.

(d) *Subsidiary Awards.* In the case of a grant of an Award to any Participant employed by a Subsidiary, such grant may, if the Administrator so directs, be implemented by the Company issuing any subject Shares to the Subsidiary, for such lawful consideration as the Administrator may determine, upon the condition or understanding that the Subsidiary will transfer the Shares to the Participant in accordance with the terms of the Award specified by the Administrator pursuant to the provisions of the Plan. Notwithstanding any other provision hereof, such Award may be issued by and in the name of the Subsidiary and shall be deemed granted on such date as the Administrator shall determine.

(e) *Indemnification of Administrator.* Neither any member nor former member of the Administrator nor any individual to whom authority is or has been delegated shall be personally responsible or liable for any act or omission in connection with the performance of powers or duties or the exercise of discretion or judgment in the administration and implementation of the Plan. Each person who is or shall have been a member of the Administrator shall be indemnified and held harmless by the Company from and against any cost, liability or expense imposed or incurred in connection with such person's or the Administrator's taking or failing to take any action under the Plan. Each such person shall be justified in relying on information furnished in connection with the Plan's administration by any employee, officer, agent or expert employed or retained by the Administrator or the Company.

20. Amendment of the Plan or Awards

The Board may amend, alter or discontinue this Plan and the Administrator may amend or alter any agreement or other document evidencing an Award made under this Plan but, except as provided pursuant to the provisions of Section 13, no such amendment shall, without the approval of the shareholders of the Company:

- (a) increase the maximum number of Shares for which Awards may be granted under this Plan;
- (b) reduce the price at which Options or Stock Appreciation Rights may be granted below the price provided for in Section 6(a);
- (c) amend the last sentence of Section 19(b) (relating to direct and indirect repricings of outstanding Options and Stock Appreciation Rights);
- (d) amend the proviso in Section 19(b)(vii);
- (e) extend the term of this Plan;
- (f) change the class of persons eligible to be Participants;
- (g) otherwise amend the Plan in any manner requiring shareholder approval by law or under Nasdaq Global Select Market listing requirements (or the listing requirements of any successor exchange or market that is the primary stock exchange or market for trading of Shares); or
- (h) increase the individual maximum limits in Sections 5(c) and (d).

No amendment or alteration to the Plan or an Award or Award Agreement shall be made which would impair the rights of the holder of an Award, without such holder's consent, provided that no

such consent shall be required if the Administrator determines in its sole and absolute discretion and prior to the date of any Change in Control that such amendment or alteration either is required or advisable in order for the Company, the Plan or the Award to satisfy any law or regulation or to meet the requirements of or avoid adverse financial accounting consequences under any accounting standard. In addition, the Plan may not be amended in any way that causes the Plan to fail to comply with or be exempt from Section 409A of the Code, unless the Board expressly determines to amend the Plan to be subject to Section 409A of the Code.

21. No Liability of Company

The Company and any Subsidiary or Affiliate which is in existence or hereafter comes into existence shall not be liable to a Participant or any other person as to: (a) the non-issuance or sale of Shares as to which the Company has been unable to obtain from any regulatory body having jurisdiction the authority deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder; and (b) any tax consequence expected, but not realized, by any Participant or other person due to the receipt, exercise or settlement of any Award granted hereunder.

22. Non-Exclusivity of Plan

Neither the adoption of this Plan by the Board nor the submission of this Plan to the shareholders of the Company for approval shall be construed as creating any limitations on the power of the Board or the Administrator to adopt such other incentive arrangements as either may deem desirable, including without limitation, the granting of restricted stock or stock options otherwise than under this Plan or an arrangement not intended to qualify under Code Section 162(m), and such arrangements may be either generally applicable or applicable only in specific cases.

23. Governing Law

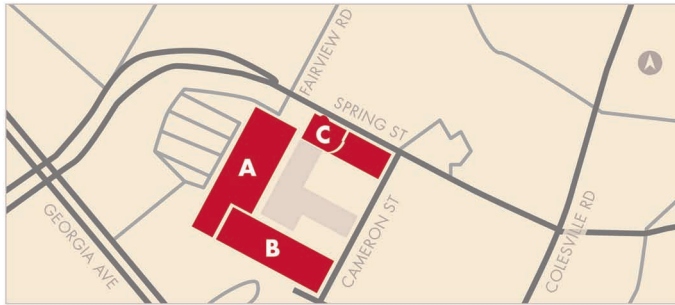
This Plan and any agreements or other documents hereunder shall be interpreted and construed in accordance with the laws of the Delaware and applicable federal law. Any reference in this Plan or in the agreement or other document evidencing any Awards to a provision of law or to a rule or regulation shall be deemed to include any successor law, rule or regulation of similar effect or applicability.

24. No Right to Employment, Reelection or Continued Service

Nothing in this Plan or an Award Agreement shall interfere with or limit in any way the right of the Company, its Subsidiaries and/or its Affiliates to terminate any Participant's employment, service on the Board or service for the Company at any time or for any reason not prohibited by law, nor shall this Plan or an Award itself confer upon any Participant any right to continue his or her employment or service for any specified period of time. Neither an Award nor any benefits arising under this Plan shall constitute an employment contract with the Company, any Subsidiary and/or its Affiliates. Subject to Sections 4 and 20, this Plan and the benefits hereunder may be terminated at any time in the sole and exclusive discretion of the Board without giving rise to any liability on the part of the Company, its Subsidiaries and/or its Affiliates.

25. Unfunded Plan

The Plan is intended to be an unfunded plan. Participants are and shall at all times be general creditors of the Company with respect to their Awards. If the Administrator or the Company chooses to set aside funds in a trust or otherwise for the payment of Awards under the Plan, such funds shall at all times be subject to the claims of the creditors of the Company in the event of its bankruptcy or insolvency.



A

Spring Street Public Parking Garage

Intersection of Spring Street and Fairview Road

B

Cameron Street Public Parking Garage

Intersection of Cameron Street and Fenton Street

C

Shareholder Meeting Entrance

1110 Spring Street

Driving Directions from Washington D.C.

Head north on 16th Street NW
At the traffic circle, continue north onto 16th Street
Bear right onto Spring Street

- A** Spring Street Public Parking Garage entrance will be on the right hand side, at the intersection of Fairview Road and Spring Street.
- B** Turn right on Cameron Street. Cameron Street Public Parking Garage entrance will be on the right hand side at the intersection of Cameron Street and Fenton Street.
- C** Shareholder Meeting entrance is on the right hand side, 200 feet past the intersection of Fairview Road and Spring Street.

Driving Directions from I-95

Take exit 27 to merge onto I-495 W toward Silver Spring
Take exit 30 to merge onto US-29 S/Colesville Road toward Silver Spring
Turn Right on Spring Street

- A** Spring Street Public Parking Garage entrance will be on the left hand side, at the intersection of Fairview Road and Spring Street.
- B** Turn left on Cameron Street. Cameron Street Public Parking Garage entrance will be on the right hand side at the intersection of Cameron Street and Fenton Street.
- C** Shareholder Meeting entrance is on the left hand side, 200 feet before the intersection of Fairview Road and Spring Street

Walking Directions from the Silver Spring Metro Station

Head north on Colesville Road towards 2nd Avenue
Turn left on 2nd Avenue
Turn Right on Cameron Street

- C** Turn left on Spring Street. Shareholder Meeting entrance is on the left hand side, 200 feet before the intersection of Fairview Road and Spring Street.