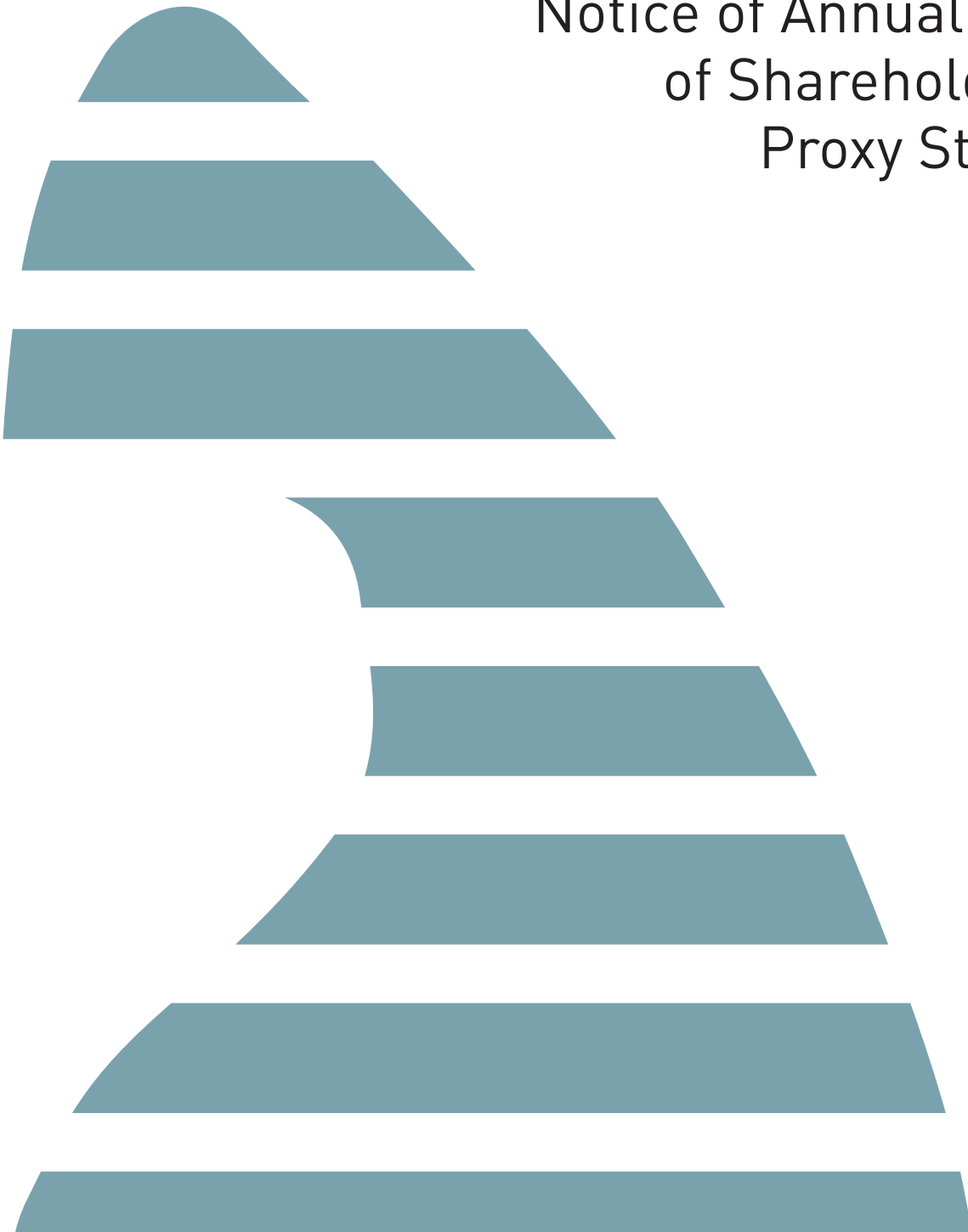




2020

Notice of Annual Meeting
of Shareholders and
Proxy Statement



About United Therapeutics

United Therapeutics Corporation focuses on the strength of a balanced, value-creating biotechnology model. We are confident in our future thanks to our fundamental attributes, namely our obsession with quality and innovation, the power of our brands, our entrepreneurial culture and our bioinformatics leadership. We also believe that our determination to be responsible citizens — having a positive impact on patients, the environment and society — will sustain our success in the long term.

Our Strategic Objectives

- Develop the best medicines possible from our intellectual property
- Conduct the most insightful clinical trials of our medicines
- Achieve superior communication and awareness of our products among physicians
- Grow our business to be in the top quintile of our peers
- Achieve our goals by doing the right thing and using the highest ethical standards

Our Commitment to Corporate Social Responsibility



PATIENT-CENTRIC APPROACH

The parents of a child with pulmonary arterial hypertension (**PAH**) founded United Therapeutics, so we take our **commitment to patients** very personally. Through our patient support and assistance programs, and our relentless pursuit of life-changing therapies, medical devices and technologies, we are striving to improve the lives of patients with PAH and other life-threatening diseases.



ENVIRONMENTAL STEWARDSHIP

Our work doesn't stop with addressing unmet medical needs. We seek to operate in a way that is environmentally sustainable, as we believe that reducing the community's carbon footprint benefits us all. Through our focus on constructing site net zero buildings, we are taking a leadership role in driving the use of sustainable technologies forward.



OUR PEOPLE

We are proud of our **Unitherian** employees, and ever grateful to them. Without their hard work and ingenuity, none of our successes would be possible, and our goals would not be achievable. We believe in work-life integration and personal development, and that has led us to adopt a company-wide minimum **living wage**, on-site subsidized day care, and a number of health and wellness programs.

AWARDS AND RECOGNITION

Fortune's 2019 Great Places to Work



The Washington Post's 2019 Top Places To Work



Women in Technology's 2019 Corporate Board Award



LEAD INDEPENDENT DIRECTOR'S LETTER

To Our Shareholders,

United Therapeutics had another solid year in 2019. Our significant revenue streams and conservative annual budgeting algorithm generated substantial free cash flow that contributed to our extremely healthy financial condition, including \$1.4 billion in net cash, cash equivalents and marketable securities as of December 31, 2019 (net of indebtedness). This fortress balance sheet places our company in a very strong position to weather successfully the COVID-19 pandemic.

Many expected that 2019 would mark a significant downturn in the face of new generic competition for two of our lead therapies, Adcirca® and Remodulin®. However, although we saw Adcirca revenues decline as expected, revenues for our other therapies grew by 3% in the aggregate in 2019 compared to 2018, largely fueled by continued growth in our existing treprostinil franchise that includes oral, inhaled and infused therapies approved to treat a rare disease called pulmonary arterial hypertension (PAH). In fact, to the surprise of some, but not to us, Remodulin reached its highest number of new patient starts in ten years during 2019, a period that included nine months of generic competition. We are also anticipating revenue growth driven by several significant recent developments, including the launch of an expanded Orenitram® label, the approval of the Remunity™ subcutaneous pump for Remodulin, and the successful results of our pivotal *INCREASE* study of Tyvaso® in a new indication for which there are no approved treatment options. Finally, we are anticipating several exciting clinical trial readouts and potential product launches over the near term that we expect will drive substantial additional revenue growth, profitability and enhanced stock price performance in the future. Our Board remains confident that the power of our research and development teams will keep our company at the forefront of improving the lives of patients with pulmonary hypertension and other rare diseases for years to come. We are also confident in the ability of our commercial teams to communicate the benefits of our therapies so that all appropriate patients can benefit from them.

WE'RE EXECUTING OUR BUSINESS STRATEGY

United Therapeutics was founded in 1996 to address the acute shortage of options for patients suffering from PAH, following the PAH diagnosis for the daughter of our Founder, Chairman and Chief Executive Officer, Martine Rothblatt. We currently market and sell four therapies for this terrible disease, and one drug for a rare pediatric cancer. Our revenues from these medicines in 2019 added up to approximately \$1.45 billion. Three of these drugs, Remodulin, Tyvaso, and Orenitram, contain the active ingredient treprostinil, and we saw revenue growth in 2019 for these three therapies, combined, despite the onset of generic competition for Remodulin in March 2019. We plan to continue to grow revenue from our treprostinil-based therapies through label expansions, new indications, new formulations, and the introduction of new delivery devices. We are also working on a number of entirely new therapies to treat PAH and other rare diseases that we hope to launch over the next several years. Longer-term, we have set the ambitious goal of solving the acute national shortage of transplantable organs through our innovative organ manufacturing programs.

WE'RE ENGAGING WITH OUR SHAREHOLDERS

We continue to maintain strong relationships with our shareholders as part of our corporate governance commitment. In 2019, members of our Board of Directors continued dialogue with our shareholders on many issues, including our capital allocation priorities, governance practices, Board composition, and our sustainability efforts. In 2019, members of our Board of Directors invited discussions with our 25 largest shareholders in the spring and in the fall, who collectively hold about 70% of our outstanding shares. We plan to continue these conversations into 2020. These conversations gave us deeper insight into our shareholders' perspectives and helped inform our Board's decisions on strategy, governance, and sustainability.



We continue to maintain strong relationships with our shareholders as part of our corporate governance commitment.

WE'RE DECLASSIFYING THE BOARD

In 2019, our Board supported a shareholder proposal requesting declassification of our Board so that directors are elected annually for one-year terms. This proposal received overwhelming shareholder support, and this year we are seeking to implement the proposal by way of a declassification amendment to our Certificate of Incorporation, which is proposed for shareholder approval in this Proxy Statement.

WE'RE ONBOARDING NEW VOICES

We've worked to bring new voices and perspectives onto our Board, most recently with the addition of Nilda Mesa, who brings substantial environmental, social and governance (ESG) experience to our Board. Nilda served as Director of the New York City Mayor's Office of Sustainability and she successfully led efforts to develop the city's first sustainability plan. In recent years we also recruited strong board members such as Judy Olian, a thought leader in organizational development, and Katherine Klein, an award-winning organizational psychologist and Vice Chair of the Wharton Social Impact Initiative.

CORPORATE RESPONSIBILITY HAS ALWAYS BEEN A BOARD PRIORITY

We strive to operate with an eye toward corporate responsibility, environmental sustainability, and solid governance. With the addition of Nilda Mesa to our Board, we're taking a proactive approach to recording and reporting our ESG efforts with additional disclosures in this Proxy Statement, the development of a corporate responsibility website, and the inaugural publication of our annual Corporate Social Responsibility Report, which we anticipate later this year.

RISK OVERSIGHT IS CRITICAL TO OUR SUCCESS

We take our risk oversight role very seriously. Our Board committees each tackle various risks facing our company, to ensure management is focused on identifying and mitigating the material risks to our company. Our Nominating and Governance Committee has overseen substantial enhancements to our compliance program over the past several years, and is actively overseeing our enterprise risk management program. Our Audit Committee oversees risks related to auditing, accounting and financial matters, as well as cybersecurity. Our Compensation Committee annually assesses the risks created by our compensation programs.

WITH UNITED THERAPEUTICS THERE'S ALWAYS MORE TO COME...

While we expect our near-term development programs to help overcome the loss of Adcirca revenue and the threat posed by generics to Remodulin, we're also excited about the potential for our company's longer-term development programs. Ralinepag — an oral prostacyclin receptor agonist we licensed from Arena Pharmaceuticals in 2019 — is in phase III development for pulmonary arterial hypertension. If successful, we think the drug could help improve PAH outcomes with a much more convenient dosing route and schedule than existing or planned therapies on the market. We are also working with our Canadian affiliate, Northern Therapeutics, to explore the use of gene therapy for disease modification in PAH. While potentially revolutionary in their own right, we think these and other development programs are stepping stones for what we believe is the ultimate cure for PAH: a lung transplant. Our efforts in the organ transplant space — ex-vivo lung perfusion, xenotransplantation, regenerative medicine, and organ printing, among others — seek to address the acute shortage of transplantable lungs and other organs.

...AND WE'RE NOT GOING TO CONFORM TO THE BIOTECH NORM.

United Therapeutics has always been a unique biotech leader and we on our Board appreciate and nurture our company's unique perspective to addressing unmet medical needs of patients.

Onward!



CHRISTOPHER PATUSKY, J.D., M.G.A.

Lead Independent Director
Vice Chairman of the Board
Chairman of the Nominating and Governance Committee



Our Board remains confident that the power of our research and development teams will keep our company at the forefront of improving lives of patients with pulmonary hypertension and other rare diseases for years to come.

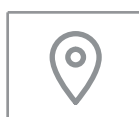
UNITED THERAPEUTICS CORPORATION

NOTICE OF 2020 ANNUAL MEETING OF SHAREHOLDERS



DATE AND TIME

Friday, June 26, 2020
10:15 a.m. Eastern Time



LOCATION

www.virtualshareholdermeeting.com/UTHR2020



WHO CAN VOTE

Shareholders as of April 30, 2020 are entitled to notice of, and to vote at, our 2020 annual meeting of shareholders

Voting Items

Proposals	Board Vote Recommendation	For Further Details
1 Election of the three directors named in the Proxy Statement	"FOR" each director nominee	Page 19
2 Approval of an amendment to our Amended and Restated Certificate of Incorporation to declassify our Board of Directors and provide for the annual election of our directors	"FOR"	Page 37
3 Advisory resolution to approve executive compensation	"FOR"	Page 39
4 Approval of the amendment and restatement of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan	"FOR"	Page 77
5 Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for 2020	"FOR"	Page 86

Shareholders will also consider and act upon such other business as may properly come before the annual meeting of shareholders and any adjournment or postponement thereof. Proxy materials or a Notice of Internet Availability are being distributed to shareholders on or about May 4, 2020. This year's Annual Meeting will be conducted solely virtually via live audio webcast. Our Board reached this decision after careful consideration and in light of the ongoing developments related to COVID-19. A virtual format will enable shareholders to participate from any location and at no cost, while safeguarding the health of our shareholders, management and Board. To attend the meeting online, vote your shares electronically, or submit questions, go to the website listed above. The annual meeting will begin at 10:15 a.m. Eastern Time on Friday, June 26, 2020, and you are encouraged to login early to avoid any delay from technical issues. Please review the information in the Proxy Statement for additional information. 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. Our list of shareholders as of the Record Date will also be available for inspection for the ten days prior to the Annual Meeting. To inspect the list, please email our Investor Relations department at IR@unither.com.

By Order of the Board of Directors,

PAUL A. MAHON
Corporate Secretary
April 29, 2020

How to Vote



INTERNET

Before the meeting, go to www.proxyvote.com
During the meeting, go to
www.virtualshareholdermeeting.com/UTHR2020



TELEPHONE

(800) 690-6903



MAIL

Mark, sign, date and promptly mail the enclosed proxy card in the postage-paid envelope

Important Notice Regarding the Availability of Proxy Materials for United Therapeutics Corporation's 2020 Annual Meeting of Shareholders to Be Held on Friday, June 26, 2020: United Therapeutics Corporation's Proxy Statement and Annual Report on Form 10-K are available at: <http://ir.unither.com/annual-and-proxy>

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FORWARD-LOOKING STATEMENTS

*This Proxy Statement contains forward-looking statements made pursuant to the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995 (PSLRA). These statements, which are based on our beliefs and expectations as to future outcomes, include, among others, statements about our future operating results, business plans, objectives, pipeline advancements, benefits of our products, and any others that contain the words **believe, seek, expect, anticipate, forecast, project, intend, estimate, should, could, may, will, plan,** or similar expressions, and any other statements contained or incorporated by reference into this Proxy Statement that are not historical facts. These forward-looking statements are subject to certain risks and uncertainties, such as those described in our periodic reports filed with the Securities and Exchange Commission (SEC), as well as risks stemming from COVID-19, that could cause actual results to differ materially from anticipated results. These statements may also be based on standards for measuring progress that are still developing and on assumptions that are subject to change in the future. Consequently, such forward-looking statements are qualified by the cautionary statements, cautionary language and risk factors set forth in our periodic reports and documents filed with the SEC, including our most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K. We claim the protection of the safe harbor contained in the PSLRA for forward-looking statements. We are providing this information as of April 29, 2020, and assume no obligation to update or revise the information contained in this Proxy Statement whether as a result of new information, future events or any other reason.*

WEBSITE REFERENCES

Website references included throughout this Proxy Statement are provided for convenience. The content on the referenced websites are not incorporated herein and are not part of this Proxy Statement.

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BUSINESS OVERVIEW

Our Business and Revenue Cycles

United Therapeutics markets four products for pulmonary arterial hypertension (PAH) and one product for pediatric high-risk neuroblastoma (NB).

<p style="text-align: center;">PAH Portfolio</p>				<p style="text-align: center;">NB Product</p>
---------------------------------------------------------	--	--	--	------------------------------------------------------

Innovation and Revenue Growth Despite Generic Challengers

Our commercial product portfolio includes three prostacyclin analogue products based on the molecule treprostinil: Remodulin (delivered parenterally, via intravenous (IV) or subcutaneous (subQ) pumps), Tyvaso (an inhaled product), and Orenitram (an oral tablet). We also market and sell Adcirca, a PDE-5 inhibitor in-licensed from Eli Lilly and Company for treatment of PAH, and a monoclonal antibody called Unituxin® for treatment of high-risk NB.

In late August 2018, generic versions of Adcirca were introduced, leading to a decline in our revenue for this product from its peak of \$420 million in 2017, to \$324 million in 2018, to \$107 million in 2019. This sharp decline is typical of the generic erosion curve for a small-molecule oral product.

In addition, we saw the market entry of a generic version of Remodulin in March 2019. Although many analysts predicted similar declines for Remodulin, we expected and saw a resilient response, with relatively few patients choosing the generic version over branded Remodulin. Despite generic competition, our Remodulin revenues declined by only 2%, or \$12 million, from 2018 to 2019.

Going forward, we are actively working to improve the treprostinil molecule and each of its delivery systems to enhance convenience, safety and patient outcomes. We are also exploring other pulmonary indications where treprostinil may be able to address unmet medical needs. We expect these efforts will result in revenue growth for each of our treprostinil-based products.

Remodulin: Next-generation parenteral pump systems. Our next-generation IV and subQ treprostinil pump systems are designed to improve patient convenience and potentially bring on board the 30-40% of PAH patients who refuse parenteral therapy because of site pain, the inconvenience of current pump designs or interference with lifestyle choices.⁽¹⁾

New Remodulin Pump Systems

<p>IMPLANTABLE SYSTEM FOR REMODULIN</p> <ul style="list-style-type: none"> Ease of use and reduced risk of bloodstream infections Once-monthly refills or longer <p>FDA APPROVED, Launch expected 2021</p>	<p>30-40% OF PAH PATIENTS REFUSE PARENTERAL THERAPY</p> <p>PAH PATIENTS</p> <p>BECAUSE OF CONCERNS AROUND IV USE, SUBQ PAIN, OR LIFESTYLE INTERFERENCE⁽¹⁾</p>	<p>TREVENT®</p> <ul style="list-style-type: none"> First pre-filled, pre-programmed infusion system Simplification for subQ via disposable PatchPump® technology
<p>REMUNITY</p> <ul style="list-style-type: none"> Small, lightweight, durable subQ pump with disposable cartridges Flexible dosing via an acoustic volume sensing technology <p>FDA Cleared, Launch Planning in Progress</p>		<p>REMOLIFE</p> <ul style="list-style-type: none"> Next-generation ambulatory infusion pump with smartphone compatibility Development-stage program

(1) Based on UT market research.

Orenitram: FREEDOM-EV label expansion. In October 2019, the FDA approved a label expansion for Orenitram that incorporated the results of our *FREEDOM-EV* study. The *FREEDOM-EV* study showed that Orenitram, when taken with an oral PAH background therapy, decreased the risk of a clinical worsening event versus placebo by 25% ($p=0.0391$), driven by a 61% decrease in the risk of disease progression for patients taking Orenitram, when compared to placebo ($p=0.0002$). Orenitram is now indicated to delay disease progression and improve exercise capacity. We believe this will drive continued growth in Orenitram revenues.

Tyvaso: INCREASE and PERFECT studies in two new pulmonary hypertension indications. We recently announced the successful results of the *INCREASE* study of our Tyvaso inhaled treprostinil therapy in pulmonary hypertension (PH) associated with interstitial lung disease (PH-ILD). We plan to request FDA approval to update Tyvaso's label to add an indication for PH-ILD. In addition, we are conducting a pivotal study of Tyvaso in patients with PH associated with chronic obstructive pulmonary disease (PH-COPD) called the *PERFECT* study. PH-ILD and PH-COPD are distinct indications from Tyvaso's current PAH indication. We believe there are approximately 30,000 PH-ILD patients and 100,000 PH-COPD patients in the United States, and presently there are **no FDA-approved therapies** indicated to treat either of these life-threatening conditions.

Treprostinil Label Expansion Efforts

	FREEDOM-EV	INCREASE	Perfect CLINICAL TRIAL
Potential U.S. Population	45,000	30,000	100,000
Data Read-Out	✓	✓	study ongoing
FDA Approval	✓	sNDA planned mid-2020	TBD

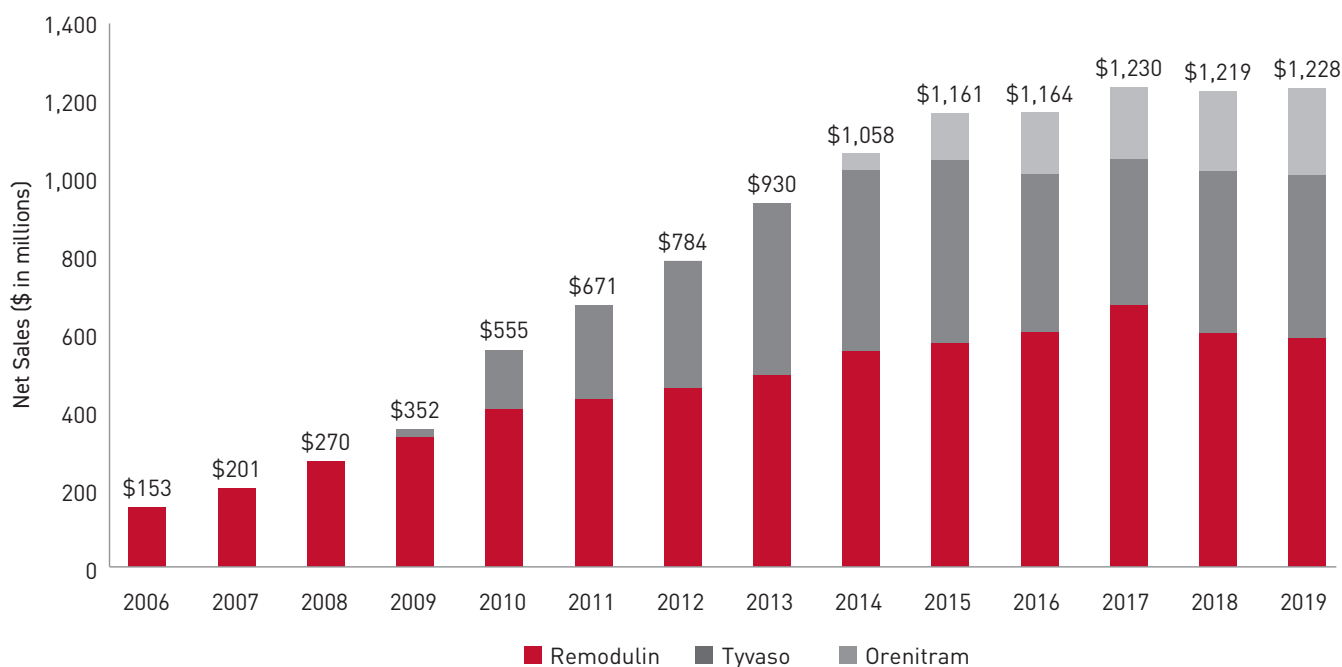
Treprostinil Technosphere®. We are developing a dry powder formulation of treprostinil called Treprostinil Technosphere for the treatment of PAH, under a license from MannKind Corporation (**MannKind**). Treprostinil Technosphere incorporates the dry powder formulation technology and Dreamboat® inhalation device technology used in MannKind's Afrezza® (insulin human) Inhalation Powder product, which was approved by the FDA in 2014. We believe this product, which is a small, pocket-sized inhaler that does not need electricity, will have significant convenience advantages over current inhaled prostacyclin alternatives, which rely on the use of lengthy breathing sessions with nebulizers that need to be plugged in. We expect to file for FDA approval of this therapy in the near term, once we complete the necessary studies.

Prodrug development: RemoPro™ and OreniPro™. We are conducting a series of phase I studies to develop a new prodrug of treprostinil called RemoPro, which is intended to enable subcutaneous delivery of treprostinil therapy without the site pain currently associated with subcutaneous Remodulin. As a prodrug, RemoPro is designed to be inactive in the subcutaneous tissue, which should decrease or eliminate site pain, and to metabolize into treprostinil once it is absorbed into the blood. We are also developing an oral prodrug version of Orenitram we call OreniPro, in order to provide increased tolerability and convenience through a once-daily dosing regimen.

Generics Have Had Little Impact on our Total Treprostinil Revenue

Despite the launch of generic versions of treprostinil, the number of new U.S. patients starting to use Remodulin in 2019 reached the highest level in the last ten years. A small percentage of higher dose Remodulin patients transitioned to generic treprostinil when the first generic version became available in 2019, but these transitions declined to a negligible amount in the fourth quarter of 2019.

United Therapeutics Treprostinil Historical Annual Net Sales



We're Moving Beyond Treprostinil...

While we believe that treprostinil will be one of the standards of care in PAH for some time to come, we are also working on programs beyond treprostinil that we think could have an outsized impact on patients with PAH and other lung diseases.

Ralinepag. Ralinepag is a next-generation, oral, selective and potent prostacyclin receptor agonist in development for the treatment of PAH. We are conducting two phase III studies of ralinepag: (1) *ADVANCE OUTCOMES*, which is an event-driven study of ralinepag in PAH patients with a primary endpoint of time to first clinical event; and (2) *ADVANCE CAPACITY*, which will study the effect of ralinepag on exercise capacity in PAH patients with a primary endpoint of change in peak oxygen uptake via a cardiopulmonary exercise test. Both of these studies are global, multi-center, placebo-controlled trials of patients on approved oral background PAH therapies. We believe ralinepag's once-daily dosing will make it highly competitive with the existing approved oral prostacyclin agonist, selexipag, which is a competitor's product that generated U.S. revenues of more than \$700 million in 2019.

Aurora-GT™. We're conducting a phase II/III study (called *SAPPHIRE*) of a gene therapy product called Aurora-GT, in which a PAH patient's own endothelial progenitor cells are isolated, transfected with the gene for human endothelial nitric oxide synthase, expanded ex-vivo and then delivered to the same patient. This product is intended to rebuild the blood vessels in the lungs that are destroyed by PAH. This study is being conducted in Canada, and is sponsored by Northern Therapeutics, Inc., a Canadian entity in which we have a 49.7 percent voting stake and a 71.8 percent financial stake. We have the exclusive right to pursue this technology in the United States, and plan to seek FDA approval of Aurora-GT if *SAPPHIRE* is successful.

LNG01. We're developing LNG01, a Wnt pathway inhibitor formerly known as SM04646, which we licensed from Samumed LLC (**Samumed**) in September 2018, for the treatment of idiopathic pulmonary fibrosis (**IPF**). The Wnt pathway is one of the primary signaling pathways essential for the normal development of all multicellular animals, and for the growth and maintenance of various adult tissues. Recent evidence suggests that aberrant Wnt signaling may be involved in the pathogenesis of chronic lung disease such as IPF. Samumed completed a phase I, multiple dose clinical trial in April 2019, and our subsidiary, Lung Biotechnology PBC, is planning additional clinical and non-clinical studies.

...and Seeking a Cure

We believe that the ultimate solution for PAH patients and patients with many other life-threatening diseases is a cure through transplantation. Each year, end-stage organ failure kills millions of people. A significant number of these patients could have benefited from an organ transplant. Unfortunately, the number of usable, donated organs available for transplantation has not grown significantly over the past half century, while the need has soared. Our long-term goals are aimed at addressing this shortage. With advances in technology, we believe that creating an unlimited supply of tolerable manufactured organs is now principally an engineering challenge, and we are dedicated to finding engineering solutions.

We are heavily engaged in the early-stage research and development of a number of organ transplantation-related technologies including regenerative medicine, organ bio-printing, xenotransplantation, biomechanical lungs, and ex-vivo lung perfusion.

2019 Performance in Review



STABILITY IN THE FACE OF REMODULIN® GENERICS

- Although overall revenue decreased 11% in 2019 compared to 2018, revenues from our other products increased by 3%
- Remodulin revenue down only 2% compared to 2018, despite generic launches in 2019
- New Remodulin patient starts at highest level in ten years
- Orenitram revenue up 10% compared to 2018, with the *FREEDOM-EV* label expansion
- Unituxin revenue up 34% compared to 2018



INDUSTRY-LEADING ADJUSTED PROFITABILITY

- GAAP Diluted EPS of \$(2.39), and non-GAAP Diluted EPS of \$12.94
- (7.2)% net profit margin and 51.6% adjusted EBITDASO margin*, compared to (1.6)% average net profit margin and 27.3% average adjusted EBITDASO margin for our compensation peer group
- \$1.6 million in 2019 revenue per employee compared to Nasdaq Biotechnology Index median of \$0.2 million



CONTINUED PIPELINE PROGRESSION & INVESTMENT

- Acquisition of ralinepag rights, January 2019
- Remunity patient-fill FDA clearance, May 2019
- Trevyent NDA accepted for filing, September 2019
- Orenitram *FREEDOM-EV* label expansion approved, October 2019
- Full enrollment of phase III *INCREASE* study in 2019, leading to positive read-out in early 2020



STRONG BALANCE SHEET POISED FOR FUTURE INVESTMENT

- \$2.3 billion in cash and investments at December 31, 2019
- \$850 million in debt outstanding at December 31, 2019; \$200 million paid down in 2019
- Strong balance sheet well-positioned to endure economic downturn driven by COVID-19

* A reconciliation of our non-GAAP measures and other information relating to such measures can be found in Annex C.

A Note About COVID-19

Like all companies, we are closely monitoring developments related to the COVID-19 pandemic. We are making every effort to ensure we remain focused on the health and well-being of our patients and our employees. Thus far we have avoided any supply interruptions or other significant disruptions to our business, and we believe our healthy balance sheet makes us well-positioned to endure the impact of this pandemic. That said, it is too early to predict what impact this pandemic, and the associated economic downturn, will have on our business. While we remain optimistic about our prospects over the longer term, our near-term revenue growth prospects and product development plans may be negatively impacted. In addition, we are engaged in the fight and are committed to deploying our research teams and development partners to investigate potential therapies for COVID-19 and related pulmonary conditions.

Our strong profitability and conservative budgeting algorithm have generated strong free cash flow resulting in an extremely healthy balance sheet. At December 31, 2019, we had net cash, cash equivalents and marketable securities totaling \$1.4 billion, net of our outstanding indebtedness of \$850 million. This is incredibly important, now more than ever in light of the COVID-19 pandemic. **On March 23, 2020, Jefferies Equity Research screened over 1,000 companies, and highlighted United Therapeutics among a list of just six companies (along with Home Depot, Honeywell and T. Rowe Price, for example) with a so-called **Fortress Balance Sheet**, therefore making them best positioned to weather the expected economic storm caused by the pandemic.**

SUSTAINABILITY AND SOCIAL RESPONSIBILITY AT UNITED THERAPEUTICS



Dear United Therapeutics Shareholders,

As the newest member of our Board of Directors, I am thrilled to join the leadership of a forward-thinking company that prioritizes environmental stewardship, human capital management, ethics and social impact. I strongly believe that our values will drive not only long-term shareholder value, but also contribute to our shared future.

I'd like to highlight a few key accomplishments. We believe we have the first and largest net zero office building amongst public biotechnology companies, that we are the first public biotechnology company to create a public benefit subsidiary, and the first to have a company-wide minimum living wage. These are in addition to our outstanding track record of developing and commercializing innovative therapies for underserved patient populations. We also strive to share what we have learned so that others may benefit.

I am also excited to work with **Katherine Klein**, our Board member who is Vice Chair of the **Wharton Social Impact Initiative**.

1 Sustainability

Overview. We make energy efficiency and lower carbon emissions a key criteria in the design of all of our facilities.

Net Zero Buildings. Our site net zero facility portfolio includes:

- A 135,000 square foot commercial site net zero energy building — the Unisphere, Silver Spring, Maryland (see www.utunisphere.com)
- A site net zero energy call center — Melbourne, Florida
- A site net zero laboratory on the campus of Mayo Clinic — Jacksonville, Florida
- A site net zero energy day care center — Research Triangle Park, North Carolina

Going forward, we strive to ensure all new non-manufacturing buildings are “site net zero” — meaning the building’s carbon-equivalent emissions are at zero as it produces as much renewable energy on-site as it consumes in a year. This is accomplished through a variety of technologies, including solar power, geothermal exchange, earth-coupled heating and cooling, and an intelligent building automation system.

LEED Certifications. Our facilities include one Platinum LEED-certified building and two Gold LEED-certified buildings.



Renewable Energy.

- Currently, we operate eleven solar arrays that generate over 20% of the electricity that we consume on an annual basis
- We buy renewable energy credits (**RECs**) to offset 100% of the electrical consumption at our Silver Spring, Maryland campus other than our site net zero Unisphere facility
- For our North Carolina campus, where RECs are not currently available for purchase via the local utility, we constructed a four-megawatt solar array, which offsets about 30% of annual electrical consumption at the campus

Waste Reduction. We reduce our waste through our efficient use of water, and our recycling and composting programs.



NILDA MESA
Director

Adjunct Professor and senior researcher at Columbia University’s School of International and Public Affairs and the Earth Institute’s Center for Sustainable Urban Development, where she teaches, speaks, and writes about sustainable development and planning at the urban and global scale. Visiting Professor at SciencesPo Paris School of International Affairs

Former Founding Director of the NYC Mayor’s Office of Sustainability

Director, author and editor of OneNYC (2015), New York City’s first long-term sustainability plan, which for the first time for a major U.S. city tied environmental initiatives with economic development, equity and resilience

Past senior environmental positions include Assistant Director, White House Council on Environmental Quality. Graduate, Harvard Law School and Northwestern University

2 Employees

In 2019, we achieved \$1.6 million in revenue per employee, which ranks ninth among all 200+ companies in the Nasdaq Biotechnology Index, and fourth among our compensation peer group. We feel strongly that such industry-leading productivity cannot be maintained without a core focus on our family of Unitherians, and a dedication to ensuring they are healthy and engaged.

Unitherian Culture

At United Therapeutics, we are crystal clear about our purpose and talk about it often — developing innovative therapies for unmet needs, with the ultimate objective of finding a cure for end-stage lung disease by creating an unlimited supply of transplantable lungs. We strive to hire the best and brightest people who are passionately committed to our goals.

Our people mission is to provide our employees with the opportunity to work on innovative, revolutionary projects, the autonomy and freedom to operate in a manner they believe is best to complete the project, and inspiring surroundings with state of the art facilities in which to think, work and problem solve. Where possible, we try to keep our work groups and divisions small and free from unneeded bureaucracy so that innovation can flourish.

We are intentional in our effort to maintain our small, entrepreneurial culture. We believe this differentiated approach instills a greater sense of ownership, meaning, and commitment in our employees, motivating them to work as hard as possible to achieve our lofty goals.

Living Wage of \$75,000

We have adopted a minimum “living wage” for all employees of approximately \$75,000 per year (cash salary and bonus, not including company-wide equity compensation).

People Programs

To best support our workforce and retain employees of the highest caliber, we offer a competitive benefits package focused on fostering work/life integration, including:

Caregiver Leave. Twelve weeks of paid caregiver leave and three weeks of secondary caregiver leave.

Wellness. On-site gym facilities including access to many classes and personal training, and free cafeterias at our main locations, which focus on providing locally-sourced, sustainable food.

Daycare. Subsidized, on-site daycare at our main locations.

Development Opportunities. We offer up to \$30,000 per employee for tuition assistance, and we make available a variety of instructor-led and online training programs for our employees.

COVID-19. The developing COVID-19 pandemic has led to unique challenges, and we are striving to ensure the health, safety and general well-being of our employees who are working hard to support a continuous supply of medicines to our patients.

Low turnover compared to peer group

Our voluntary turnover is well below that of our industry peers. In 2019 our voluntary turnover was 6.3%, compared to the median turnover of 12.0% for the biotech industry⁽¹⁾.

Recognition



2019 Awards:

- Fortune Magazine Certified Great Place to Work
- #2 in Best Workplaces in Health Care & Biopharma
- #26 in Best Small & Medium Companies
- 6th year on Triangle Business Journal Best Places to Work list (4th)
- 6th year on The Washington Post's Top Workplace list (22nd)

Gender Diversity

In 2019, we received the Women in Technology's Corporate Board award. Women comprise one-half of our workforce, and hold 47% of our management positions. Additionally, 36% of the seats on our board of directors are held by women. We have also launched two internal initiatives, Women in Manufacturing and the Inspire Initiative, both of which are intended to promote leadership development and peer-to-peer networking for women at United Therapeutics.

(1) Based on data from Radford's Global Turnover Results survey for the Life Sciences Sector for the fourth quarter of 2019.

3 Public Benefit Corporation

The **public benefit corporation (PBC)** is a new corporate form that enables a company's fiduciaries to target a clear public benefit mission alongside the emphasis on shareholder value. In 2015, we created the first-ever PBC subsidiary of a public biotech or pharma company, called Lung Biotechnology PBC, chartered in Delaware with the express purpose of "address[ing] the acute national shortage of transplantable lungs and other organs with a variety of technologies that either delay the need for such organs or expand the supply." These technologies include xenotransplantation, regenerative medicine, organ bioprinting, mechanical artificial lungs and ex-vivo lung perfusion.



Rehabilitating discarded lungs into life-saving organs. Since 2014, we have been developing technologies to convert lungs deemed unsuitable for transplantation into usable lungs through ex-vivo lung perfusion (**EVLP**). Through our clinical trial of the Centralized Lung Evaluation System, developed at Toronto General Hospital, we have already performed over 130 procedures that resulted in successfully transplanted lungs for patients with end-stage lung disease. We have also begun commercializing EVLP procedures using XPS™, a technology developed by XVIVO Perfusion, Inc. that has been cleared by the FDA. We have two facilities dedicated to these technologies, including a site **net zero** facility we recently constructed on the campus of Mayo Clinic Jacksonville.

4 Community Impact

We support an annual service day at each of our main sites and support smaller service projects throughout the year. At United Therapeutics, we are committed to giving back to the communities in which we live and work. Unitherians have partnered through volunteer efforts or sponsorships with many organizations such as A Wider Circle, Habitat for Humanity, Capital Area Food Bank, Salvation Army/Boys & Girls Club, Durham Literacy Center, Shade Tree and Soles4Souls, to name a few. At our **net zero** Unisphere facility, we regularly provide educational opportunities to local schools and community groups to learn about sustainable building practices.

In April 2020, the International Society of Pharmaceutical Engineers granted us the **2020 Facility of the Year** award for our newest manufacturing facility in Silver Spring, Maryland, in the category of **Social Impact**. Our facility was noted for its innovative design, location — providing high paying, skilled jobs in an urban area close to mass transit and improved community aesthetics — our partnership with local governments to change legislation allowing the facility to be built, and the fact that the primary product to be manufactured in the facility will treat a pediatric orphan disease.

5 Ethics

Our company was founded under the principle of "do the right thing". It is a core aspect of our culture that has been translated into various policies and programs at our company. To reinforce that it is part of our DNA, we have built a first-class compliance foundation to live and breathe these values, including the following core compliance principles.

Our Principles

We are passionate for patients.

We don't pay to play.

We respect privacy.

We communicate ethically and honestly.

We do the right thing.

Next Steps

In the coming months, I will be working with senior management at United Therapeutics to provide enhanced transparency regarding the company's outstanding ESG track record for shareholders and other key stakeholders. By the end of this year, we plan to launch a new website devoted to these topics. We are also working on our first Corporate Sustainability Report, with both the Global Reporting Initiative and the Sustainable Accounting Standards Board standards in mind.

With warm regards,

NILDA MESA

PROXY SUMMARY

Voting Matters

Shareholders will be asked to vote on the following matters at the Annual Meeting:

1 Election of Directors

This year at our Annual Meeting, Professor Raymond Dwek, Mr. Christopher Patusky, and Governor Tommy Thompson are nominees for election as Class III directors to serve three-year terms until our 2023 annual meeting of shareholders or until their successors are duly elected and qualified or their office is otherwise vacated.

Our Board recommends a vote **FOR** each director nominee.

See page 19

2 Approval of Amendment to our Amended and Restated Certificate of Incorporation to Declassify our Board of Directors

We are asking our shareholders to approve an amendment to our Amended and Restated Certificate of Incorporation to phase out the classification of our Board and provide for the annual election of all directors.

Our Board recommends a vote **FOR** this proposal.

See page 37

3 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 recommends a vote **FOR** this proposal.

See page 39

4 Approval of the Amendment and Restatement of The United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan (the **Plan**)

The Amendment and Restatement makes the following changes to the Plan:

- Increases the maximum number of shares of our common stock that may be issued under the Plan by 500,000 shares
- Changes the fungible share ratio to 1.35:1
- Removes certain references to Section 162(m) of the Internal Revenue Code (**Code**) that are no longer relevant
- Extends the expiration date of the Plan to April 29, 2030

Our Board recommends a vote **FOR** this proposal.

See page 77

5 Ratification of the Appointment of Ernst & Young LLP as United Therapeutics Corporation's Independent Registered Public Accounting Firm for 2020












The Audit Committee of our Board has appointed Ernst & Young LLP as our independent registered public accounting firm for the year 2020. We ask that our shareholders vote to ratify this appointment.

Our Board recommends a vote **FOR** this proposal.

See page 86

Governance Highlights

Board of Directors

	Name and Primary Occupation	Age	Director Since	Committee Membership		
				AC	CC	NGC
Nominees as Class III Directors	 Raymond Dwek, C.B.E., F.R.S. IND Professor Emeritus and Director of the Glycobiology Institute, University of Oxford	78	2002			
	 Christopher Patusky, J.D., M.G.A. IND Founder, Patusky Associates, LLC Vice Chairman and Lead Independent Director, United Therapeutics	57	2002	●		★
	 Governor Tommy Thompson, J.D. IND Former Governor of Wisconsin Former Secretary, U.S. Department of Health and Human Services	78	2010	●		
Class I Directors	 Katherine Klein, Ph.D. IND Professor of Management, The Wharton School Vice Dean, Wharton Social Impact Initiative	63	2014			
	 Ray Kurzweil IND A Director of Engineering, Google	72	2002			
	 Martine Rothblatt, Ph.D., J.D., M.B.A. Founder, Chairman and Chief Executive Officer, United Therapeutics	65	1996			
	 Louis Sullivan, M.D. IND President Emeritus, Morehouse School of Medicine Former Secretary, U.S. Department of Health and Human Services	86	2002		●	●
Class II Directors	 Christopher Causey, M.B.A. IND Principal, Causey Consortium	57	2003		★	●
	 Richard Giltner IND Former Portfolio Manager, Lyxor Asset Management	56	2009	★		●
	 Nilda Mesa, J.D. IND Adjunct Professor, Columbia University Former Director, NYC Mayor's Office of Sustainability	60	2018		●	
	 Judy Olian, Ph.D. IND President, Quinnipiac University Former Dean, UCLA Anderson School of Management	68	2015			

AC – Audit Committee

CC – Compensation Committee

NGC – Nominating and Governance Committee

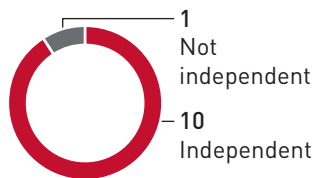
● Member

★ Chair

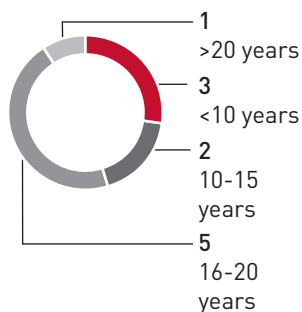
IND – Independent

Board Snapshot

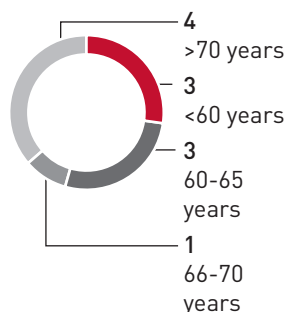
Independence



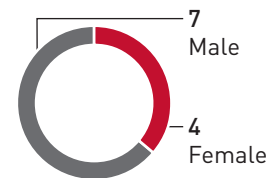
Tenure



Age



Gender



Our Governance Best Practices

We have taken great strides over recent years to implement best corporate governance practices, often acting ahead of the curve in terms of our industry peers and the Russell 3000.

<p>✓ MAJORITY VOTING</p> <p>In 2015, we adopted a majority voting standard with a director resignation policy</p> <ul style="list-style-type: none"> Only 47.8% of other Russell 3000 companies* have adopted majority voting for uncontested director elections Only 19.3% of our industry peers** have adopted majority voting for uncontested director elections and a director resignation policy 	<p>✓ BOARD DESTAGGERING</p> <p>In 2019, our Board supported a shareholder proposal to declassify our Board. That proposal was approved and will be implemented this year through an amendment to our Certificate of Incorporation, if approved by our shareholders (See Proposal 2).</p>	<p>✓ DIVERSITY AND REFRESHMENT</p> <p>Diversity and refreshment are also key areas of focus where we are largely in-line with our peers or ahead of the curve. For example, our Board is 36% female, compared with 20% for the Russell 3000. We have also refreshed our Compensation Committee in 2019.</p>
<p>✓ PROXY ACCESS</p> <p>In 2015, we also adopted a market-standard form of proxy access</p> <ul style="list-style-type: none"> Only 20.4% of Russell 3000 companies* provide their shareholders a similar right Only 8.8% of our industry peers** provide their shareholders with proxy access 	<p>✓ SHAREHOLDER FEEDBACK</p> <p>Our Nominating and Governance Committee has taken shareholder feedback on governance seriously — even commissioning external experts to study these issues and advise the Committee</p>	<p>✓ OVERBOARDING</p> <p>We recently reduced our overboarding limit such that our directors may not serve on more than four public company boards (down from the previous limit of five), in direct response to shareholder feedback</p>

* Data as of November 2019.

** Industry peers are defined as U.S.-domiciled, NYSE- or Nasdaq-listed companies with the same first two primary Standard Industrial Classification code digits as our company (28: Chemicals and Allied Products), but excluding our company from peer results. There were 513 companies in this dataset in the Sharkrepellent.net database as of November 4, 2019.

Executive Compensation Highlights

Shareholder Engagement

We have actively engaged with our shareholders on compensation matters during the past five years, and have made significant changes to our compensation programs as a result of those discussions. During the spring of 2019, and again in the fall of 2019 following our annual meeting of shareholders, we reached out to shareholders whose holdings represented approximately 70% of our then outstanding shares, and ultimately held discussions with shareholders whose holdings represented approximately 30% of our then outstanding shares.

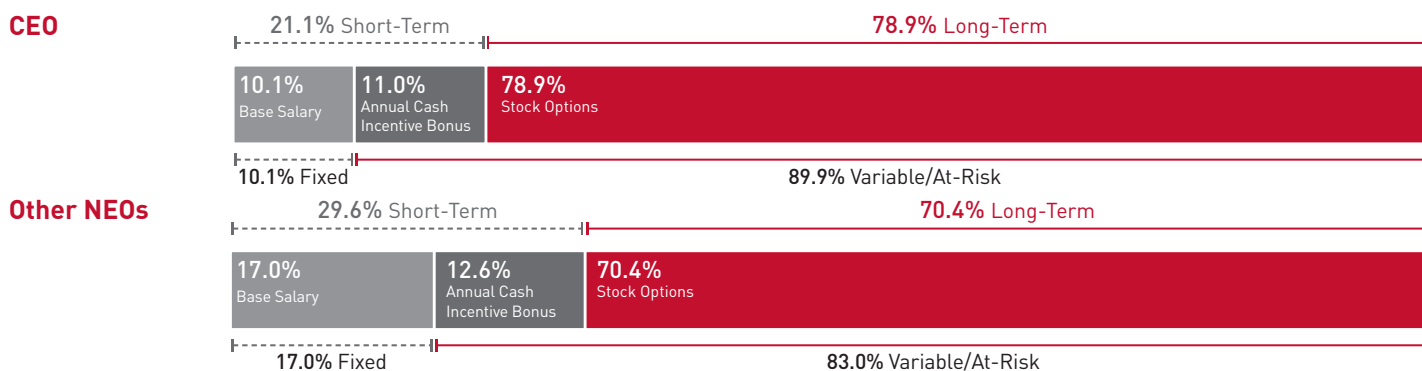
The purpose of these meetings was to gather feedback regarding our executive compensation and governance policies, understand their say-on-pay vote, and to share the structure and design of our 2019 equity compensation program. We believe our new equity program responds to many of the concerns raised by shareholders and proxy advisory firms that led to our low say-on-pay result. The information gathered was also shared with our Compensation Committee as it considered other potential changes to our executive compensation program, along with information on how our 2019 equity program addresses many of the concerns we heard from our shareholders. Our Compensation Committee Chairman and our Compensation Committee’s independent compensation consultant participated in these calls, along with our head of investor relations and a member of our human resources department.

As detailed in our **Compensation Discussion and Analysis**, we believe that changes implemented in 2019 (including the new long-term incentive program described below) are directly responsive to feedback we have received from shareholders and serve to motivate and retain our leadership team, who are critical to our company’s continued success.

Total Compensation Mix — Pay for Performance

The following charts illustrate the extent to which pay for our Chief Executive Officer and our other Named Executive Officers (as defined below under **Compensation Discussion and Analysis—Our Named Executive Officers**) is “at risk”, meaning payout levels are based entirely on performance due to the use of performance targets, in the case of our cash incentive program, or an inherent stock price performance criterion, in the case of stock options. For each chart, the amounts shown represent 2019 base salary (on an annualized basis, following the February 2019 salary increases), 2019 target cash bonus opportunity, and the **annualized** grant-date fair value of long-term incentive awards granted in March 2019, one-half of which were awarded as premium-priced stock options (granted with an exercise price at a 15% premium to our stock price at the time of grant), and one-half of which were granted with an exercise price equal to our stock price on the date of grant.

2019 CEO and Other NEOs Pay Mix



New Long-Term Incentive Program

We implemented a new long-term incentive compensation program in 2019, awarding a four-year equity grant to our Named Executive Officers, intended to cover equity awards for the performance years 2019 through 2022. The four-year awards were granted in March 2019 and were divided equally into the following two forms of stock options:

- **Premium-Priced Stock Options.** 50% of each Named Executive Officer’s equity award covering grants for 2019-2022 was granted with a premium-priced performance condition by virtue of an exercise price equal to 115% of our closing stock price on the date of the grant. Therefore, our stock price will have to grow by more than 15% above the share price on the grant date before our Named Executive Officers can realize any value from the award. These stock options will not vest (*i.e.*, “cliff” vest) until the fourth anniversary of the grant date.
- **Market-Priced Stock Options.** 50% of each Named Executive Officer’s equity award covering grants for the period of 2019-2022 was granted with an exercise price equal to our closing stock price on the date of grant. These awards will vest in equal thirds on the second, third and fourth anniversaries of the date of the grant, as retention incentive.

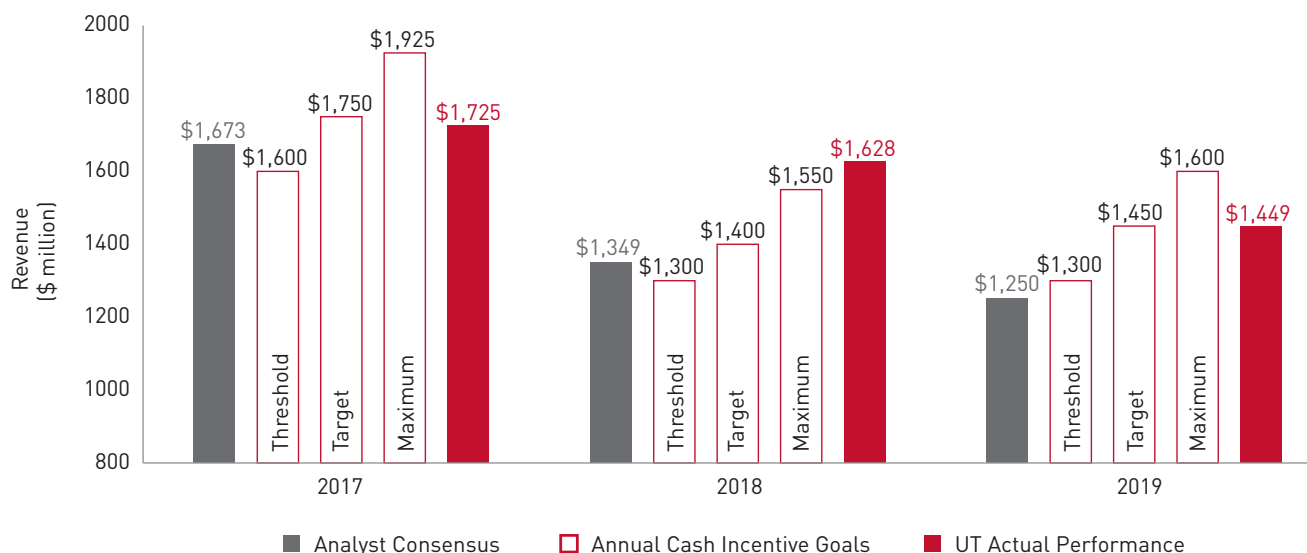
We view both of these tranches as performance-based, as both require significant stock price growth in order to enable our Named Executive Officers to realize any value from them. Both tranches have an eight-year term, which means they will need to grow the stock price more quickly than would be the case with a more typical ten-year term.

These awards are intended to compensate our Named Executive Officers over the four-year period of our current business plan, and we do not intend to make additional equity grants during this period. When viewed on an annualized basis, these awards meaningfully decrease overall compensation and decrease overall dilution, when compared with the results if we had continued our previous program for four additional years. On an annualized basis, this reduces our Chief Executive Officer’s total target direct compensation from the top quartile historically to approximately the 50th percentile of our peer group.

The four-year awards are designed to incentivize and retain our Named Executive Officers over a critical four-year period, which aligns with a four-year business plan intended to drive substantial revenue growth despite generic competition, while reducing compensation on an annualized basis in response to requests by our shareholders.

Robust Goal-Setting

We continue to set difficult goals under our annual Company-Wide Milestone Program, which governs cash bonuses for our Named Executive Officers. As one example, the chart below shows our revenue targets for the past three years, our actual revenue performance, and how this compares to the expectations of wall street analysts following our company. While we have seen a decrease in our revenues due to the generic competition described above, we continue to set goals well above external expectations, and to deliver against those goals.



OUR CORPORATE GOVERNANCE

1 Election of Directors

Our Board consists of eleven members and is divided into three classes of three or four directors 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, Professor Raymond Dwek, Mr. Christopher Patusky, and Governor Tommy Thompson are nominees for election as Class III directors to serve three-year terms until our 2023 annual meeting of shareholders or until their successors are duly elected and qualified or their office is otherwise vacated. Each nominee was previously elected by shareholders at our 2017 annual meeting. For a discussion of our plans to declassify our Board if Proposal 2 is approved, please see **Board Declassification** below.

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 three nominees.

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.

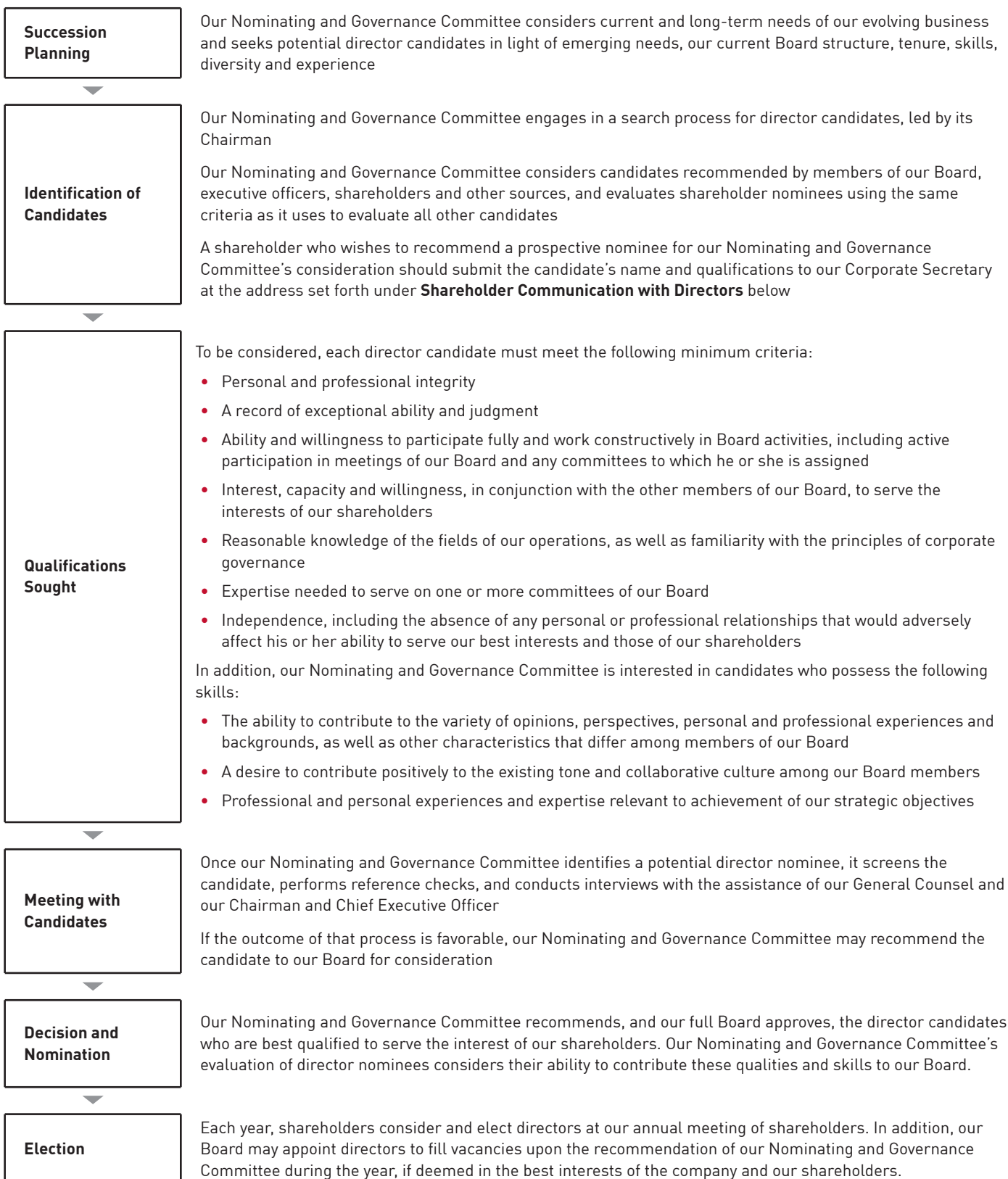
Our Board of Directors recommends that you vote FOR the election of each of the nominees.

Process for Selecting Directors

We believe that our directors should possess the highest personal and professional ethics, integrity, and values, and should 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. As reflected in our Corporate Governance Guidelines, our Board and our Nominating and Governance Committee seek to achieve a diversity of occupational and personal backgrounds on the Board, including with respect to gender, race and ethnic diversity. We assess the effectiveness of our efforts in this respect during the annual evaluation process conducted by our Nominating and Governance Committee. In addition, our Nominating and Governance Committee seeks to recommend director candidates who will enhance the quality of our Board's deliberations and decisions, take their duties seriously, and promote the values and ethics to which we subscribe. Our Board also 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 **Other Matters—Beneficial Ownership of Common Stock** table below.

How We Select Our Director Nominees



Re-Nomination Process

Our Nominating and Governance Committee appreciates the importance of critically evaluating individual directors and their contributions to our Board in connection with re-nomination decisions.

In considering whether to recommend re-nomination of a director for election at our Annual Meeting, our Nominating and Governance Committee conducts a detailed review, considering factors such as:

- The extent to which the director’s judgment, skills, qualifications, and experience (including those gained due to tenure on our Board) continue to contribute to our Board’s success
- Attendance and participation at, and preparation for, Board and committee meetings
- Independence
- Shareholder feedback, including the support received by those director nominees elected at our most recent annual meeting of shareholders
- Outside board and other affiliations, including any actual or perceived conflicts of interest
- The extent to which the director continues to contribute to our Board’s diversity

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 **Other Matters—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 are 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 our 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 our Nominating and Governance Committee or our Board with respect to his or her own resignation offer.

Policy on Overboarding

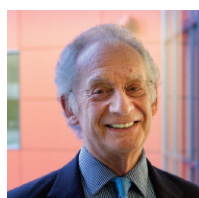
We recently updated our Corporate Governance Guidelines to reduce our overboarding limit, such that directors are not permitted to serve on more than four public company boards (including our Board). This limit is below the limit of five boards contained in the guidelines of major proxy advisory firms, and satisfies the proxy voting criteria of our largest shareholders. In fact, this action was taken in direct response to feedback received during our shareholder outreach process in 2019. All of our directors satisfy our updated overboarding policy.

Board Declassification

At our 2019 annual meeting of shareholders, our Board supported a shareholder proposal seeking declassification of our Board. This proposal was approved by approximately 98% of votes cast for/against, and as a result we are in the process of declassifying our Board so that all directors will be subject to annual elections. As noted under **Proposal 2**, the first step in this process is to amend our Amended and Restated Certificate of Incorporation to eliminate the classification of our Board. Assuming this proposal is approved, beginning with our 2021 annual meeting of shareholders, directors will be elected to one-year terms.

Board of Directors and Nominees

Nominees as Class III Directors for Election at our 2020 Annual Meeting of Shareholders



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

Age: 78

Director Since: 2002

Committees:

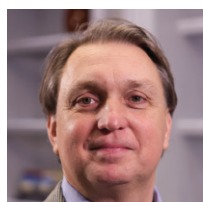
None

Background

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.

Director Qualifications

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: 56

Director Since: 2002

Vice Chairman of the Board

Lead Independent Director

Committees:

Nominating and Governance (Chairman)

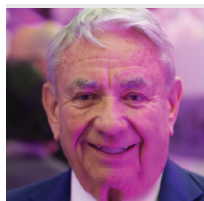
Audit

Background

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 in 2001, Mr. Patusky served from 2002 to 2007 as the Executive Director and 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.

Director Qualifications

Mr. Patusky 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: 78

Director Since: 2010

Committees:

Audit

Background

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 is currently a member of the boards of directors of the following public companies: Centene Corporation, Physicians Realty Trust, 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, Tyme Technologies, Inc., and X Shares Advisors, and as the chairman of the board of directors of AGA Medical Holdings, Inc. from 2005 to 2010. Our Board has determined that Governor Thompson meets the financial sophistication requirements of Nasdaq's listing standards.

Other Current Public Boards

- Centene Corporation
- Physicians Realty Trust
- TherapeuticsMD

Director Qualifications

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

Each Class I director was previously elected by shareholders at the 2018 annual meeting.



Katherine Klein, Ph.D.

Age: 63

Director Since: 2014

Committees:

None

Background

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.

Director Qualifications

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 larger 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. Additionally, as Vice Dean of the Wharton Social Impact Initiative, Professor Klein is highly qualified to help guide United Therapeutics' thinking about the social impact of its business operations.



Ray Kurzweil

Age: 72

Director Since: 2002

Committees:

None

Background

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.

Director Qualifications

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: 65

Director Since: 1996
Chairman of the Board
Chief Executive Officer

Committees:

None

Background

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 created several satellite communications technologies, and she is the Founder of SiriusXM. She is the co-inventor on six of our patents pertaining to tadalafil, and the inventor of our recently-awarded patent on a brain-computer interface device for patients with debilitating cognitive conditions.

Director Qualifications

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: 86

Director Since: 2002

Committees:

Compensation
 Nominating and Governance

Background

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 sub-specialty 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.

Other Current Public Boards

- Emergent BioSolutions, Inc.

Director Qualifications

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

Class II Directors Continuing in Office with Terms Ending in 2022

Each Class II director was previously elected by shareholders at the 2019 annual meeting.



Christopher Causey, M.B.A.

Age: 57

Director Since: 2003

Committees:

Compensation (Chairman)
Nominating and Governance

Background

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.

Director Qualifications

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: 56

Director Since: 2009

Committees:

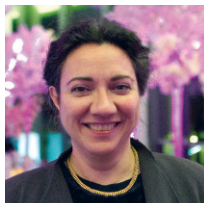
Audit (Chairman)
Nominating and Governance

Background

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.

Director Qualifications

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: 60

Director Since: 2018

Committees:

Compensation

Background

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 to 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 to 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 to 2020 appointment as a visiting professor and lecturer 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.

Director Qualifications

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: 68

Director Since: 2015

Committees:

None

Background

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, the Connecticut Governor's Workforce Council, the Business-Higher Education Forum, New Haven Promise, 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 currently 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.

Other Current Public Boards

- Ares Management, L.P.
- Mattel, Inc.

Director Qualifications

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 service as a director of Ares Management and Mattel provides valuable public company board experience.

Director Independence

Our Board has made the following independence determinations:

- **General Independence:** 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.
- **Management Director:** Martine Rothblatt is not independent due her employment as our Chief Executive Officer.
- **Audit Committee Standards:** 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**).
- **Compensation Committee Standards:** Christopher Causey, Nilda Mesa, and Louis Sullivan meet the heightened independence standards for compensation committee members under the Nasdaq listing standards.

Board Structure

Board Leadership

Our Board believes that it is important 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 our 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 specific circumstances and evolving needs at any given time.

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, well-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 our Board's leadership structure. As a result, the independent directors on our Board have designated Mr. Patusky as Lead Independent Director.

Lead Independent Director

- Our 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
 - serves as principal liaison between our independent directors and our Chairman and senior management
- Our 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>.

Committees of our Board of Directors

Our Board has three standing committees. A summary of each committee's duties and each committee's current composition can be found below. Additional detail on each committee's duties can be found in each committee's charter. Each 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.

Audit Committee

Members:

Richard Giltner (Chair)
Christopher Patusky
Tommy Thompson

Meetings in 2019: 5

Primary Responsibilities

- 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
- 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** below.

Compensation Committee

Members:

Christopher Causey (Chair)
Nilda Mesa
Louis Sullivan

Meetings in 2019: 6

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, and 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.

Primary Responsibilities

- 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 while managing risk
- Assisting our Board in discharging its responsibilities regarding compensation of our executive officers

For additional information regarding the processes and procedures used by our Compensation Committee, see the section entitled **Compensation Discussion and Analysis** below.

Nominating and Governance Committee

Members:

Christopher Patusky (Chair)
Christopher Causey
Richard Giltner
Louis Sullivan

Meetings in 2019: 5

Primary Responsibilities

In addition to the responsibilities described in the section entitled **How We Select Our Director Nominees** 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
- Overseeing our compliance program

Corporate Governance Guidelines and Committee Charters

Upon the recommendation of our Nominating and Governance Committee, our Board maintains Corporate Governance Guidelines as a framework for the governance of our company. These guidelines are reviewed annually by our Nominating and Governance Committee, which recommends any changes to be submitted to the full Board for approval. Most recently, in March 2020, our Corporate Governance Guidelines were updated to, among other things, reduce the limit on the number of public company boards our directors may serve on, from five to four (including our Board). This change was made in direct response to shareholder feedback. 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.

Board Roles and Responsibilities

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.

BOARD

- 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 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.



AUDIT COMMITTEE

- 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.

COMPENSATION COMMITTEE

- 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.

NOMINATING AND GOVERNANCE COMMITTEE

- Our Nominating and Governance Committee's responsibilities include oversight of our company's practices with respect to legal and regulatory compliance risk.



MANAGEMENT

- 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 United Therapeutics, our Board may convene a special meeting to discuss, assess, and address such risks.

In April 2020, our Compensation Committee reviewed a risk assessment conducted by management and our Compensation Committee's independent compensation consultant, 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** below for information regarding certain risk mitigating features of our compensation programs.

Shareholder Engagement

How We Engage

Investor Relations and Senior Management

We provide institutional investors with many opportunities to provide feedback to our Board and senior management. We participate in investor conferences throughout the year, and regularly meet with our shareholders.

Board Involvement

Directors regularly and actively engage with our shareholders. For several years, our Compensation Committee Chairman has actively sought to engage with our top 25 shareholders at least once, and sometimes twice, per year. Our Nominating and Governance Committee Chairman also engages with our shareholders on other governance topics.

2019 Engagement

In 2019, the Chairmen of our Compensation Committee and Nominating and Governance Committee invited our 25 largest shareholders, representing more than 70% of our outstanding shares, to engage in discussions. We held such discussions with shareholders holding approximately 30% of our outstanding shares. Our Chairmen also engaged with the major proxy advisory firms in 2019. Where appropriate, members of management also participated. Topics included executive compensation, corporate governance, ESG, and corporate strategy.

Outcomes from Shareholder Engagement

Shareholder feedback was carefully considered and led to modifications in our governance practices, executive compensation program, and disclosures. Some of the actions we have taken in response to shareholder feedback over the past several years include:

- Adoption of majority voting
- Adoption of proxy access
- Board support for 2019 shareholder proposal to declassify our Board, and for this year's proposed amendment to our Certificate of Incorporation to declassify our Board (**Proposal 2**)
- Revised our Corporate Governance Guidelines to reduce the number of public company boards on which our directors may serve
- Initiated our ESG disclosure program, with the goal of issuing a Corporate Social Responsibility Report and a new ESG-focused website this year
- Enhanced disclosures regarding our executive compensation decisions
- Renegotiated our Chief Executive Officer's employment agreement to eliminate her entitlement to an annual stock option grant based on a market capitalization formula, and to eliminate an excise tax gross-up provision
- Added performance vesting criteria to equity awards in 2017 and 2018
- Implemented an entirely new equity compensation program in 2019 for our Named Executive Officers, enabling us to reduce overall compensation and dilution levels
- In 2019, reduced annualized total direct compensation for our Chief Executive Officer to approximately the 50th percentile of our peer group
- Redesigned this year's Proxy Statement to enhance shareholders' understanding of our business, our corporate governance system, and our compensation programs

Board Education

Our Board participates in a number of educational activities. Key members of management regularly provide scientific presentations to our Board to increase its understanding of the science behind our pipeline and our business activities. Experts regularly provide training sessions on key topics, particularly in complex legal, regulatory, and compliance areas. We also recently joined the National Association of Corporate Directors, and encourage our Board members to take advantage of its numerous additional educational resources and programs.

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

Our full Board held four meetings during 2019. In addition, during 2019, our Audit Committee held five meetings, our Compensation Committee held six meetings, and our Nominating and Governance Committee held five meetings. Each of our directors attended more than 75% of the total number of meetings of our Board and the committees on which he or she served during 2019, with 98% attendance on average. In accordance with applicable Nasdaq listing standards, the independent members of our Board met without management present four times during 2019.

Our Board encourages all of its members to attend our annual meeting of shareholders, although attendance is not mandatory. Eight of our directors attended our 2019 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.

Stock Ownership Guidelines

In 2011, our Board adopted Stock Ownership Guidelines applicable to our directors and our Named Executive Officers 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—Other Executive Compensation Policies and Practices—Stock Ownership Guidelines**.

Non-Employee Director Compensation

Overview

In 2019, 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
- 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. On July 31, 2019, at our request, Christopher Causey joined the board of a private company in which we own a minority equity interest. United Therapeutics pays him a stipend of \$35,000 per year for this special assignment, which was approved by our Compensation Committee without his participation. 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 2019, 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—2019 Compensation Program Design—Compensation Peer Group**). Based on this review, our Compensation Committee did not recommend any changes to the non-employee director compensation program in 2019. Our current non-employee director compensation levels were established by our Board in February 2016. The following table outlines the non-employee director compensation levels in effect for 2019:

	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% stock options
 - 100% RSUs
 - 50% stock options / 50% 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 our Board is \$400,000, plus a pro rata portion of the annual equity-based award value based on the number of months remaining in our 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% options and 50% 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% options and 50% 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.

The grant-date fair value of RSUs and stock options reported in the Non-Employee Director Compensation table each year often varies from the \$400,000 target for each director, because the methodology used to calculate the number of RSUs and/or stock options delivered is based on an average stock price over a specified one-month period prior to the date of grant, whereas the amount reported in the table represents the grant date fair value of the RSUs and stock options on the date of grant. See **2019 Non-Employee Director Compensation** below.

- **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 prorated 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% 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 the 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.

2019 Non-Employee Director Compensation

The following table lists the compensation earned in 2019 by each non-employee director:

Name	Fees Earned or Paid in Cash ⁽¹⁾	Restricted Stock Units ⁽²⁾	Stock Options ⁽²⁾	All Other Compensation	Total
Christopher Causey	\$ 100,000	\$ —	\$ 351,945	\$ 14,767 ⁽³⁾	\$ 466,712
Raymond Dwek	\$ 60,000	\$ 351,256	\$ —	\$ —	\$ 411,256
Richard Giltner	\$ 100,000	\$ 351,256	\$ —	\$ —	\$ 451,256
Katherine Klein	\$ 60,000	\$ —	\$ 351,945	\$ —	\$ 411,945
Ray Kurzweil	\$ 60,000	\$ 175,628	\$ 176,112	\$ —	\$ 411,740
Nilda Mesa	\$ 67,665	\$ 175,628	\$ 176,112	\$ —	\$ 419,405
Judy Olian	\$ 67,335	\$ 175,628	\$ 176,112	\$ —	\$ 419,075
Christopher Patusky	\$ 144,864	\$ 175,628	\$ 176,112	\$ —	\$ 496,604
Louis Sullivan	\$ 90,000	\$ 175,628	\$ 176,112	\$ —	\$ 441,740
Tommy Thompson	\$ 75,000	\$ —	\$ 351,945	\$ —	\$ 426,945

(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, 2019, each of our non-employee directors was granted stock options and/or RSUs. Each stock option had an exercise price of \$76.36 per share and a grant date fair value of \$27.91 per share, and each RSU had a grant date fair value of \$76.36 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 2019, computed in accordance with applicable accounting standards. For a discussion of the valuation assumptions for stock options, 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, 2019.

The grant-date fair value of RSUs and stock options presented in this table differs from the \$400,000 target for each director due to the methodology used to calculate the number of RSUs and/or stock options delivered, which is based on an average stock price over a specified one-month period prior to the date of grant.

(3) Consists of retroactive compensation paid to Mr. Causey in 2020 for his 2019 service, commencing July 31, 2019, on the board of directors of a private company in which we maintain a minority equity interest.

Each non-employee director held the following number of stock options, STAPs and RSUs as of December 31, 2019:

Name	Stock Options	STAP Awards	RSUs
Christopher Causey	41,060	27,000	—
Raymond Dwek	15,000	65,000	4,600
Richard Giltner	30,000	60,000	4,600
Katherine Klein	55,080	29,375	—
Ray Kurzweil	35,050	33,750	2,300
Nilda Mesa	12,870	—	2,300
Judy Olian	45,930	—	2,300
Christopher Patusky	39,670	40,000	2,300
Louis Sullivan	30,430	51,000	2,300
Tommy Thompson	49,850	53,059	—

2

Approval of Amendment to our Amended and Restated Certificate of Incorporation to Declassify our Board of Directors

We are asking our shareholders to approve an amendment to our Amended and Restated Certificate of Incorporation (**Certificate**) to phase out the classification of our Board and provide for the annual election of all directors, as described below (**Declassification Amendment**). Our Board has unanimously adopted, approved and declared advisable the Declassification Amendment and recommends that shareholders approve and adopt the Declassification Amendment.

Approval of the Declassification Amendment requires the affirmative vote of the holders of a majority of the shares of our outstanding common stock entitled to vote thereon. Abstentions and broker non-votes, if any, have the same effect as an “against” vote. Brokers do not have authority to vote on the Declassification Amendment without instructions from the beneficial owner.

Our Board of Directors recommends that you vote **FOR the amendment to our Amended and Restated Certificate of Incorporation to declassify our Board of Directors.**

Why You Should Vote for the Declassification Amendment

Our Certificate currently 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 regularly reviews our governance structure, including the continued appropriateness of our classified board structure. In connection with our 2019 annual meeting, a shareholder submitted a proposal asking our Board to take the steps necessary to declassify our Board. The proposal was advisory in nature. Our Board determined that shareholders should have an opportunity to express their views on this important topic by voting on the shareholder proposal at the 2019 annual meeting, and our Board recommended that shareholders vote “for” the proposal. 98% of the votes cast on that non-binding proposal supported it. Approval of the Declassification Amendment would now implement the necessary changes to our Certificate to declassify our Board.

Our Board believes that removing the classified board structure and moving to annual director elections would further enhance practices our Board has already adopted to promote director accountability and independent oversight, including majority voting in uncontested director elections, proxy access, a strong Lead Independent Director, and an executive compensation program that is heavily weighted toward at-risk, equity-linked, performance-based compensation. In evaluating the Declassification Amendment, our Board considered the results of the vote on the shareholder proposal at the 2019 annual meeting. Our Board also considered (as it did in 2019) that many shareholders and others believe that directors should be elected annually.

Our Board also took into account the potential benefits of classified boards, as described in our 2019 Proxy Statement. These benefits include: (1) promoting stability and continuity of leadership by ensuring that our Board always includes directors with prior experience who can help our Board maintain a long-term perspective; (2) enhancing 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; and (3) helping our Board achieve value for our shareholders in the event of an unsolicited takeover. By increasing the time necessary to elect directors who constitute a majority of the board, a classified board provides a board of directors with the time and flexibility necessary to evaluate the adequacy and fairness of any takeover proposal, negotiate on behalf of all shareholders and weigh alternative methods of maximizing value for all shareholders, without the threat of imminent removal of a majority of board members. In addition, because our Board is classified, currently directors can be removed only for cause, whereas under Delaware law directors elected to a board that is not classified can be removed with or without cause. If the Declassification Amendment is approved and implemented, it would be easier for one or more shareholders holding a large number of shares, whether an existing or long-term shareholder or one that accumulates a large position in or for a short period of time, to replace the entire Board at once.

Our Nominating and Governance Committee and our Board evaluated the Declassification Amendment in light of the considerations described above. Based on these considerations, upon the recommendation of the Nominating and Governance Committee, our Board adopted resolutions setting forth the Declassification Amendment, declared the Declassification Amendment advisable and in the best interests of United Therapeutics and our shareholders, and unanimously resolved to submit the Declassification Amendment to our shareholders for approval.

Description of Declassification Amendment

Article VII, Section (c) of the Certificate currently provides that our Board is divided into three classes of approximately equal size, composed of directors each serving terms of office of three years. The Declassification Amendment would amend Section (c) to provide for the annual election of directors and add a new Section (d) on removal of directors to Article VII.

If the Declassification Amendment is approved by our shareholders, it would provide for the annual election of directors beginning at the 2021 annual meeting of shareholders, and the declassification of our Board would be phased in over a period of three years. The Declassification Amendment would not shorten the existing terms of our directors. Accordingly, a director who has been elected to a three-year term (including directors elected at the 2020 annual meeting) may complete that term. Beginning with the 2023 annual meeting of shareholders, the declassification of our Board would be complete and all directors would be subject to annual election for one-year terms. Consistent with Delaware law, the Declassification Amendment also provides that directors elected annually may be removed either for or without cause. Directors elected for and serving out the remainder of a three-year term would continue to be removable only for cause. Removal will be governed by the default standard under the Delaware General Corporation Law, which requires approval by a majority of the shares entitled to vote thereon.

The general description of the proposed Declassification Amendment set forth above is qualified in its entirety by reference to the text of the Declassification Amendment, which is attached as **Annex A** to this Proxy Statement. Additions to the Certificate are indicated by underlining and deletions to the Certificate are indicated by strike-outs.

Related Changes to the By-laws

In connection with the Declassification Amendment, our Board approved conforming amendments to Article III, Sections 3.1 and 3.2 of our Seventh Amendment and Restated By-laws (**By-laws**), contingent upon shareholder approval and implementation of the Declassification Amendment. The By-law amendments also clarify that any director elected to fill a new Board seat resulting from an increase in the number of directors after the effective date of the Declassification Amendment would be elected for a term expiring at the next succeeding annual meeting of shareholders. Directors elected by our Board to fill vacancies would have the same remaining terms as that of their predecessors.

Additional Information

The Declassification Amendment is binding. If our shareholders approve the Declassification Amendment, it will become effective upon filing of a certificate of amendment to our Amended and Restated Certificate of Incorporation with the Delaware Secretary of State, which we anticipate doing as soon as practicable following shareholder approval of the Declassification Amendment. In addition, we intend to file a Restated Certificate of Incorporation to integrate the Declassification Amendment and other amendments that have been adopted in the past into a single document. However, even if our shareholders approve the Declassification Amendment, our Board retains discretion under Delaware law not to implement it. If our Board were to exercise such discretion, it will publicly disclose that fact, and our Board would remain classified.

If our shareholders do not approve the Declassification Amendment, our Board will remain classified, the certificate of amendment will not be filed with the Delaware Secretary of State, and the By-law amendments described above will not take effect.

EXECUTIVE COMPENSATION

3 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.

As described elsewhere in this Proxy Statement, we have evolved our compensation practices significantly in recent years, in large part in response to shareholder feedback. We were therefore very disappointed that shareholders did not approve our 2019 Say-on-Pay proposal following positive shareholder support and feedback in 2018. Based upon our shareholder outreach efforts in both the spring and fall of 2019, we believe changes made in 2019 to our compensation program address the concerns evidenced by our negative Say-on-Pay outcome in 2019.

In connection with your vote on this proposal, we urge you to read the **Letter from Our Compensation Committee Chairman**, the **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 these sections of this Proxy Statement, 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. Our Compensation Committee’s and Board’s decisions and payments reflected in this Proxy Statement, including the **Compensation Discussion and Analysis** section, with respect to 2019 performance and with respect to 2020 compensation programs were made in early 2020 before the global extent of the COVID-19 pandemic became apparent.

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 2020 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 2021 annual meeting of shareholders. **The affirmative vote of the holders of a majority of the outstanding shares of common stock present, online or by proxy, at our Annual Meeting, and entitled to vote on the matter, is required for approval of this proposal.** Abstentions have the same effect as an “against” vote. Broker non-votes, if any, have no impact on the vote.

Our Board of Directors recommends that you vote **FOR the advisory resolution to approve executive compensation.**

Letter from Our Compensation Committee Chairman

Dear Fellow United Therapeutics Shareholders:

STRONG PERFORMANCE UNDER CHALLENGING CIRCUMSTANCES

On behalf of our Compensation Committee, I am delighted to report that 2019 continued our business transformation. We entered 2019 facing generic competition for two of our five commercial products: Adcirca and Remodulin. Nevertheless, we closed 2019 with more patients than ever before being treated with our treprostiniil-based therapies. We were incredibly pleased that we achieved our revenue target of \$1.45 billion, delivered through strong execution and growth in three of our key products: Orenitram, Tyvaso, and Unituxin. Further, Remodulin revenues held strong despite facing generic competition for most of 2019. Profitability also remained strong and our balance of cash, cash equivalents, and marketable securities grew from \$1.86 billion to \$2.25 billion from December 31, 2018 to 2019. We relaunched Orenitram with an expanded label following our successful *FREEDOM-EV* study and we made substantial progress on several critical research and development programs intended to produce new therapies and delivery devices as well as expand the use of our existing products into new indications. All of these advancements have continued to build on our strong foundation and have created a platform for future growth for our shareholders. Our past, ongoing, and future success is rooted in the strength of our leadership team, which has delivered consistently strong performance over time.

I have reflected over the past year on the cyclical nature of our industry. As a director and shareholder of United Therapeutics, I have enjoyed the tremendous experience of helping to lead this company through 15 straight years of revenue growth (2002-2017) as our approved product portfolio grew to include five FDA-approved drugs for rare, life-threatening diseases. As our leadership team continues to develop a pipeline of potential remedies and groundbreaking technologies to improve the way we address and treat these and other rare, life-threatening conditions, they are also delivering operational excellence. In 2018 and 2019, we faced our first — and what we anticipate will be temporary — revenue trough. Despite having profit and revenue goals that appear “lower” than the previous year’s performance, with two products facing generic competition, our team is working harder than ever to achieve the rigorous goals we have set. Guiding and incentivizing our leadership team to successfully implement our long-term strategy — including a return to revenue growth — requires a balanced approach to compensation. Our human capital management priorities are of high urgency to the Committee at this pivotal point in our growth.

OUR COMPENSATION PROGRAM INCENTIVIZES, RETAINS, AND REWARDS WHILE REDUCING ANNUALIZED PAY VOLUME

With an objective to incentivize and retain our leadership team, as well as balance and incorporate shareholder feedback and concerns into our total compensation program, our Compensation Committee put together a unique and thoughtfully designed long-term incentive plan in 2019. We made the decision to grant our Named Executive Officers a four-year stock option grant in March 2019 to cover the four-year performance period of 2019 through 2022 to align with our four-year business plan. This single grant is intended to cover four years of equity awards and replaces the prior annual program. This grant was awarded in two equal tranches. One-half of the stock options were awarded with a 15% premium exercise price and the other half were awarded with an exercise price equal to our stock price on the date of grant. We do not intend to grant any additional equity compensation during this four-year period to our Named Executive Officers.

As with prior years, we have continued to issue equity to our Named Executive Officers exclusively in the form of stock options in order to fully align their interests with those of shareholders and incentivize superior performance. Our Named Executive Officers will realize value from these awards if our stock price increases above the exercise prices. These stock options were granted with exercise prices of \$117.76 and \$135.42 per share, and our stock price at year end 2019 was \$88.08. As a result, these stock options were all substantially underwater at year end 2019. Our stock price must experience double-digit growth for the Named Executive Officers to realize the full reported value from these stock options. That same growth provides value creation for our shareholders, directly aligning pay with performance.



We achieved our revenue target of **\$1.45 billion**, delivered through strong execution and growth in three of our key products: Orenitram, Tyvaso and Unituxin

Our balance of cash, cash equivalents and marketable securities grew from \$1.86 billion to **\$2.25 billion**

All of our advancements have continued to build a foundation and platform for future growth for our shareholders

In 2018 and 2019, we faced our first — and what we anticipate to be temporary — revenue trough

OPTIONS INCENTIVIZE SHAREHOLDER VALUE CREATION



Our 2019 program uniquely achieves the strategic objectives of our compensation philosophy and is intended to ensure the retention and motivation of our executive leadership team while returning value to our shareholders by incentivizing long-term growth, reducing dilution, and aligning realizable pay with shareholder interests.

In this letter, I also want to emphasize how our 2019 equity compensation program was designed to address shareholder concerns, while balancing shareholder interests in retaining and incentivizing our executive leadership team. We understand that awarding equity as a four-year grant, instead of separate grants each year, results in grant values reported in our **Summary Compensation Table** that are higher than our typical practice. However, the annualized value of these grants, as shown in our **Supplementary Summary Compensation Table**, has enabled us to significantly reduce the volume of pay to our Named Executive Officers when compared to the prior program. In fact, the **annualized compensation to our Chief Executive Officer fell from the top quartile in 2018 to approximately the 50th percentile of our peer group in 2019.**

Below is an illustrative example of our Chief Executive Officer's compensation over the four-year period covered by this equity program, as disclosed in the **Summary Compensation Table**, assuming she earns 100% of her annual cash bonus at target and her annual base salary remains unchanged from her current salary:

Pay Component	2019	2020	2021	2022	Average Annualized
Base Salary*	\$1,275,000	\$1,275,000	\$1,275,000	\$1,275,000	\$1,275,000
Cash Bonus*	\$1,402,500	\$1,402,500	\$1,402,500	\$1,402,500	\$1,402,500
Equity Compensation	\$40,010,000	\$—	\$—	\$—	\$10,002,500
Total Compensation	\$42,687,500	\$2,677,500	\$2,677,500	\$2,677,500	\$12,680,000

* For purposes of this illustration, we assume that 2019-2022 annual salary and cash bonus target remain unchanged over the four-year period, and that the annual bonus is earned at target each year.

When evaluating the annual compensation of our Chief Executive Officer and our other Named Executive Officers, our Compensation Committee evaluated the four-year grant on an annualized basis over the four-year period, as represented in the "Average Annualized" column above in the case of our Chief Executive Officer.

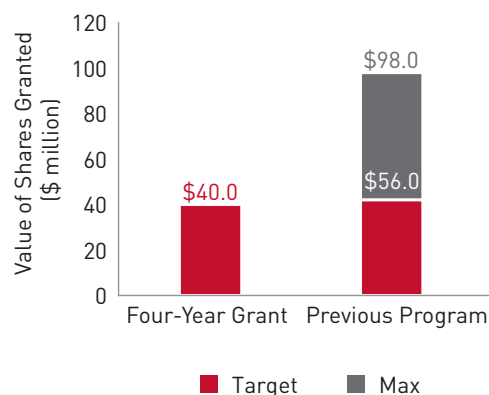
We believe that our shareholders should evaluate our 2019 compensation program taking into consideration that this equity grant is intended to cover four years of equity as we do not anticipate granting any additional equity to our Chief Executive Officer or other Named Executive Officers until 2023. Therefore, we strongly suggest our shareholders view the four-year grant on an annualized basis.

If the four-year grant is viewed on an absolute basis (treating the entire amount as compensation paid in 2019), then this grant should result in dramatically reduced compensation shown in the Summary Compensation table for the next three years (2020-2022) given that our Compensation Committee does not intend to grant further equity through 2022.

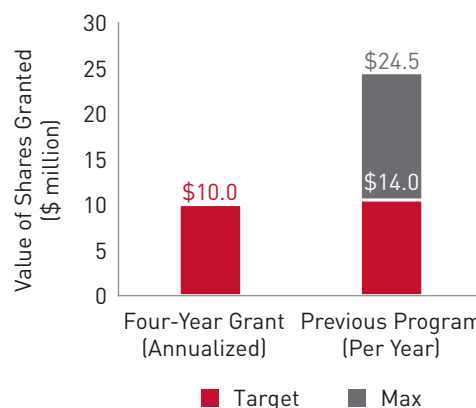
When viewed on an annualized basis, this four-year grant significantly reduces both the volume of Chief Executive Officer pay and shareholder dilution when compared to our previous program assuming it was carried forward for four more years. We believe this unique program directly addresses shareholder concerns and hope that shareholders understand our intent in asking them to view this grant across the four-year period when evaluating our compensation programs for 2019.

For the charts below, we compared the annualized and aggregate impact of the four-year grant to our Chief Executive Officer, versus carrying forward the previous program from 2018 for the period 2019-2022. In carrying forward the previous program, we assume an annual Chief Executive Officer target stock option grant valued at \$14 million at target, with 50% of this award subject to above target payout of up to 150% for stretch performance, and the other 50% subject to above target payout of up to 200% for stretch performance. For the dilution chart, we show three different potential stock price scenarios to provide an illustrative view of how our new program may significantly reduce dilution to shareholders.

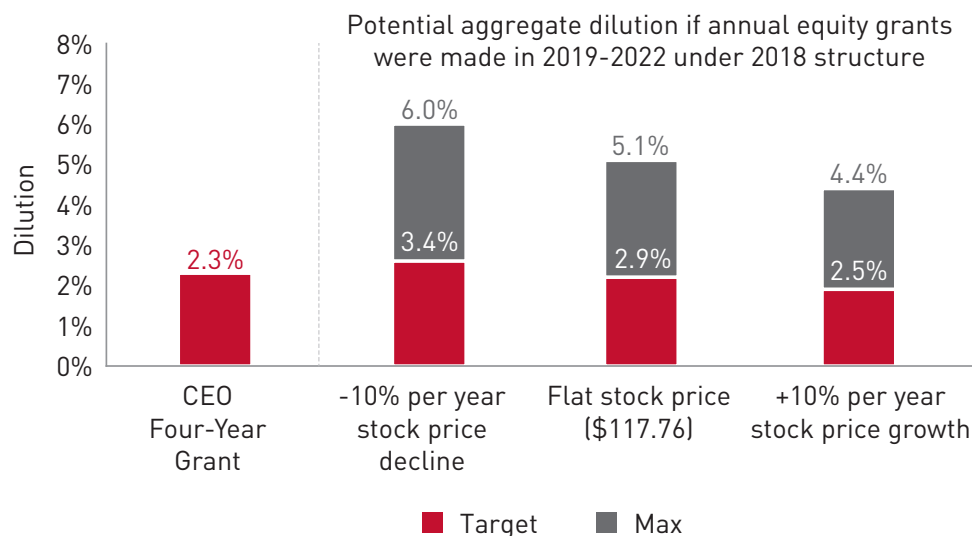
CEO Stock Option Value Granted 2019-2022 (Aggregate)



CEO Stock Option Value Granted 2019-2022 (Annualized)



CEO Long-Term Equity Grant Dilution Comparison



The chart above is illustrative only, and is intended to compare the calculated dilution of our four-year grant to the potential aggregate dilution of carrying forward the previous program from 2018 for 2019-2022. All of the above dilution calculations assume 44 million shares outstanding.

Say-On-Pay Outcome and Shareholder Outreach

We value the opinions of our shareholders. Over the past several years, we have worked with our management team to lead increased and ongoing engagement with our shareholders on compensation matters and we have significantly evolved our compensation program as a result of those discussions. Our shareholders have communicated directly to me not only their concerns, but their appreciation of many of our fundamentals and our goal of evolving the executive compensation program, over time, in order to retain, motivate and incentivize our executive team — a team which has consistently delivered market leading long-term performance. Additionally, we have enjoyed great dialogue with our shareholders on our governance best practices, and have appreciated suggestions to enhance our ESG transparency as we continue to grow. Indeed, our 2018 executive compensation program, which was 92% performance-based for our Chief Executive Officer, was designed to directly address shareholder feedback. We were therefore disappointed with our negative Say-On-Pay result last year, with holders of only 27% of shares voting in favor. We understand that certain elements of our compensation program design did not align with certain shareholders' pay-for-performance expectations and have responded with a goal of remedying this.

In 2019, we reached out to shareholders holding approximately 70% of our outstanding shares and met with shareholders holding approximately 30% of our outstanding shares. This included an outreach effort in the spring of 2019, as well as outreach in the fall following our 2019 annual meeting. We also held discussions with the two largest proxy advisory firms. These outreach efforts and discussions were led by myself and the Chairman of our Nominating and Governance Committee, Christopher Patuskay. These conversations included, where appropriate, representatives of human resources, legal, and investor relations, and sometimes included representatives of Radford, our independent compensation consultant. In reviewing feedback received to date, we believe there are five key issues that contributed to our 2019 Say-on-Pay result, as described in the table below along with how we have addressed each issue.

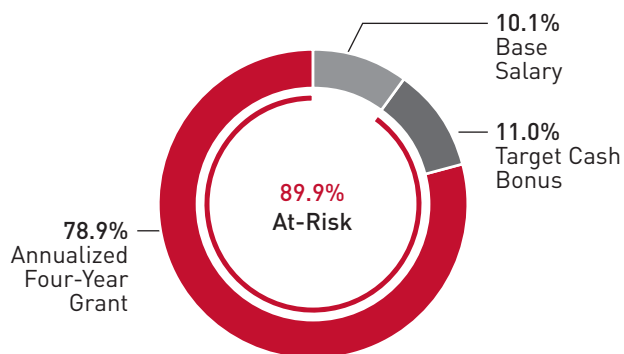
Notably, the design of our four-year equity grant for 2019-2022 was in direct response to feedback received during our ongoing shareholder engagements. This new equity program creatively balances our human capital management needs, responds to the feedback and expectations of our shareholders, and is consistent with best practices. These changes continue to align and reinforce our key strategic and talent objectives.

Shareholder Concern	Compensation Committee Action
Volume of Chief Executive Officer pay relative to peers	Chief Executive Officer total target direct compensation has decreased from the top quartile to approximately the 50th percentile of our peer group, when viewing the four-year grant on an annualized basis. Our new equity program reduces Chief Executive Officer equity compensation expense compared to our 2018 program by 29% at target and by 59% at max.
Overlapping goals between short-term and half of our long-term incentive equity program reward the same performance twice	The 2019 grant has removed the Milestones from the long-term incentive program, eliminating this concern
Over-emphasis on short-term performance with the use of a 1-year performance period in half of our 2018 long-term incentive program	The 2019-2022 equity program is based on stock appreciation over a multi-year period, eliminating this concern
Goals were lower in 2018 when compared to 2017 actual performance, and operational results for the 2018 performance year resulted in a maximum payout for both cash bonus and half of the equity award for 2018	We apply a rigorous goal-setting process that is designed to incentivize stretch performance in light of a challenging environment following introduction of generic competition. In setting these goals, our Compensation Committee reviews a number of data points including analyst expectations, market opportunity, individual product performance history, and the expected impact of generic product competition for two of our products in order to set this target for 2019. We increased our 2019 revenue and cash profit goals compared to 2018, but the goals were below 2018 actual performance in light of the anticipated impact of generic competition. These goals were substantially higher than analyst expectations and were very challenging. Nevertheless, they were only relevant to cash bonuses in 2019, significantly muting their impact compared to 2018 where these goals also drove equity payouts.
Certain shareholders have a preference for relative metrics in the long-term incentive program	Our Compensation Committee takes a balanced view to setting goals to motivate and retain our executives for the long term. We believe that stock options provide a strong relative metric because they only provide realizable value if our stock price grows (even if stock values for our peers are declining).

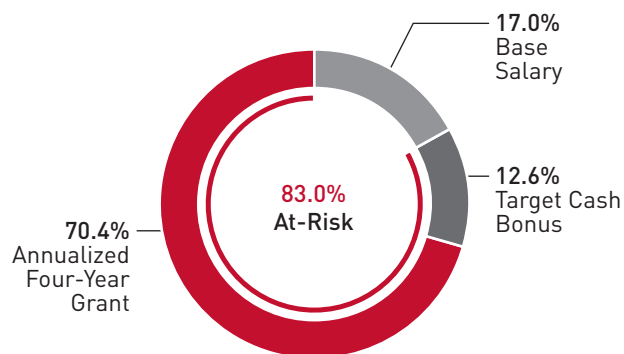
Strengthening Our Pay-For-Performance Philosophy

Since our founding, we have been strong believers in pay-for-performance. In fact, our 2018 program demonstrated this belief, with 92% of our Chief Executive Officer compensation at-risk based on performance in 2018. However, we understand that certain elements of the design of our 2018 program did not align with our shareholders’ pay-for-performance expectations. Our executive compensation program has always involved a predominant focus on at-risk pay, tied directly to company performance via our cash incentive and long-term incentive plans. This philosophy is strengthened by our 2019 equity program. Demonstrating our commitment to pay-for-performance, half of our 2019 equity program was awarded as premium-priced stock options, granted with an exercise price of \$135.42 which was 15% above our closing stock price on the date of the grant. The other half was granted in the form of stock options with an exercise price equal to our closing stock price on the date of grant. The vesting of these options is weighted toward the end of a four-year period, and with only an eight-year term. We believe this program is entirely performance-based, as it ties the realizable pay for our executives directly to shareholder interests in driving stock performance. Combined with a performance-based cash incentive program, we believe that shareholders should agree that our Chief Executive Officer’s total compensation program is strongly performance-based. Notably, the vast majority of pay for our Chief Executive Officer (89.9%) and our other Named Executive Officers (83.0%) is at-risk and heavily dependent on goal attainment and share price growth in order to deliver any realizable value, as shown in the charts below.

CEO



Other NEOs



We Appreciate Your Support

I hope this letter conveys the sincerity with which we have addressed the requests and ideas our shareholders raised regarding our executive compensation program in 2019 and in prior years. On that note, I want to personally thank those shareholders with whom we have had the opportunity to meet over the past several years, and in particular those shareholders who provided us with input and guidance around best practices for explanation and disclosure of our new equity program. As our responsiveness demonstrates, we very much value the dialogue. Our Compensation Committee has implemented a balanced, performance-driven program for 2019-2022 that we believe will benefit our company and our shareholders going forward. While there is an unfortunate, anomalous impact on the compensation values we are required to report for 2019, we hope this letter clarifies why this is so and provides an understanding of the one-time nature of that impact.

Please review the **Compensation Discussion and Analysis** beginning on the following page for further information and detail about our executive compensation program. We look forward to your continued support of United Therapeutics generally, and your support of our Say-on-Pay proposal this year.

Sincerely,

CHRISTOPHER CAUSEY
Compensation Committee Chairman

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** and elsewhere in this Proxy Statement, 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

Our 2019 **Named Executive Officers** (or **NEOs**) are:



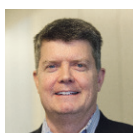
Martine Rothblatt, Ph.D., J.D., M.B.A.
65, Chairman, Chief Executive Officer and Director

Dr. Rothblatt founded United Therapeutics in 1996 and served as Chairman and Chief Executive Officer since its inception through January 2015, when she became 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 created several satellite communications technologies, and she is the Founder of SiriusXM. She is the co-inventor on six of our patents pertaining to trestatinil, and the inventor of our recently-awarded patent on a brain-computer interface device for patients with debilitating cognitive conditions.



Michael Benkowitz
48, President and Chief Operating Officer

Mr. Benkowitz joined United Therapeutics in 2011 as our Executive Vice President, Organizational Development. In this role, he was responsible for most companywide administrative functions, including human resources, information technology, corporate real estate and risk management, and was also responsible for many of our business development efforts and oversight of several of our key collaborations. He was promoted to President and Chief Operating Officer in June 2016, when he also became responsible for all of our commercial and medical affairs activities.



James C. Edgmond
52, Chief Financial Officer and Treasurer

Mr. Edgmond joined United Therapeutics in January 2013 as Treasurer and Vice President, Strategic Financial Planning. Mr. Edgmond was promoted to Chief Financial Officer and Treasurer in March 2015. Prior to joining United Therapeutics, he was Vice President, Corporate Controller and Treasurer of Clark Construction Group from 2008 through January 2013. He also served in a variety of roles at The Corporate Executive Board Company from 1998 to 2008, serving as Executive Director, Finance from 2005 to 2008. He began his career as a public accountant at KPMG Peat Marwick LLP, from 1990 through 1998, where he served in a variety of roles, including as a Senior Manager prior to his departure.



Paul A. Mahon, J.D.
56, Executive Vice President, General Counsel and Corporate Secretary

Mr. Mahon has served as General Counsel and Corporate Secretary of United Therapeutics since its inception in 1996. In 2001, Mr. Mahon joined United Therapeutics full-time as Senior Vice President, General Counsel and Corporate Secretary. In 2003, Mr. Mahon was promoted to Executive Vice President, General Counsel and Corporate Secretary. Prior to 2001, he served United Therapeutics, beginning with its formation in 1996, in his capacity as principal and managing partner of a law firm specializing in technology and media law.

2019 Performance Highlights

2019 continued the strategic transformation for United Therapeutics with several important milestones for our patients and our shareholders, including:

\$1.45 billion in revenues, which exceeded analyst consensus estimates in the face of generic competition. \$1.6 million in revenue per employee, which ranked fourth in our compensation peer group and ninth out of the 200+ companies in the Nasdaq Biotech Index

For the second year in a row, we reached **record numbers of PAH patients being treated with our treprostinil-based therapies** — once again reaching more patients than ever before

The **expansion of our Orenitram label**, with the FDA approval of our NDA supplement on October 18, 2019

We commenced or progressed key research and development programs critical to the execution of our long-term strategy to build our pipeline, including:

- Filed our NDA for Trevyent, a drug-device combination product for treatment of PAH
- Commenced two phase III clinical trials for ralinepag, a next generation prostacyclin treatment candidate for pulmonary arterial hypertension
- Commenced our phase III *BREEZE* study for Treprostinil Technosphere, a drug device combination product for treatment of PAH
- Continued development of LNG01 (formerly SM04646), a phase I drug candidate for treatment of idiopathic pulmonary fibrosis
- Prepared for the launch of the Implantable System for Remodulin for PAH, pending Medtronic satisfying certain regulatory conditions
- Continued progress on the Remunity pump system for Remodulin
- Completed enrollment of our phase III *INCREASE* study of Tyvaso in patients with pulmonary hypertension associated with interstitial lung disease

These efforts in 2019 have already led to **two key developments** in early 2020:

- FDA clearance of the 510(k) application for the pharmacy-filled version of Remunity, enabling us to launch the product in the near term
- Successful completion of the *INCREASE* study, which we believe will enable us to obtain FDA approval of a label expansion to extend our Tyvaso product to patients with a new indication, pulmonary hypertension associated with interstitial lung disease, which impacts about 30,000 patients in the U.S. alone, with no approved treatment options

We were disappointed in our stock price performance in 2019, and continue to believe this was largely due to the short-term focus by many analysts on the anticipated impact the launch of generic versions of Remodulin (which occurred in the United States in March 2019) would have on our revenues. Our overall performance in 2019 demonstrated that generic Remodulin had very little impact on our revenue, with Tyvaso, Orenitram and Unituxin all delivering an increase over 2018, and Remodulin revenues holding very strong despite nine months of generic competition. We firmly believe that the continued strength of our core commercial products, as well as our extensive pipeline of new products, will deliver a return to revenue growth and improved stock price performance in the short to medium term. We note that in our cyclical industry, 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 and 2019, as of the end of the year our stock price remained approximately 634% above the price of our common stock in our 1999 initial public offering.

Overview of our 2019 Executive Compensation Program

Compensation Program Objectives

Our executive compensation program is designed to retain and motivate our executive team, while achieving four critical objectives: pay-for-performance (with at-risk pay representing 90% of overall Chief Executive Officer pay and 83% of our other Named Executive Officers' pay); incentivize alignment with shareholder interests based on delivering operating performance and stock appreciation; balancing incentives over the short-term and long-term; and market competitiveness.



Pay Program Elements

We accomplish these objectives through the following compensation elements, as summarized 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		✓	✓	✓

Key Compensation Decisions in 2019

In 2019, we introduced a new equity program for our Named Executive Officers. This program consists of a four-year equity award, intended to cover four years of equity awards for our Named Executive Officers for the performance years of 2019-2022. This award was granted in two tranches:

- 50% of the stock option award was granted with a 15% premium exercise price over our stock price at close on the date of grant, and vests in full (*i.e.*, “cliff” vests) on the fourth anniversary of the grant date
- 50% of the stock option grant was granted with an exercise price equal to the closing price of our common stock on the date of grant, and vests in three equal installments on the second, third and fourth anniversary of the grant date

We chose to use stock options as our equity award vehicle given that an option does not provide value to the executive unless the stock price appreciates beyond the exercise price. As a result, our Compensation Committee views the design of the 2019-2022 equity program as being entirely performance-based. We strongly believe the use of stock options ensures management alignment with shareholders, enhances retention, and emphasizes long-term performance. The use of premium-priced, performance stock options for half of the stock award further aligns our executives’ interests with those of our shareholders. Finally, this grant has an 8-year term, which further emphasizes the alignment of our long-term incentives with our shareholders.

Grant Type	Percent of Total Grant	Vesting Period	Vesting Rules	Term	Performance Feature
Premium-Priced Stock Options	50%	4 years	Vest in full on the fourth anniversary of the grant date	8 years	15% premium exercise price at grant
Market-Priced Stock Options	50%	4 years	Vest in 1/3 increments on the second, third and fourth anniversary of the grant date	8 years	Stock price appreciation needed in order to deliver realizable value

We do not anticipate awarding any other equity during 2020-2022 to our Named Executive Officers, which should have the effect of dramatically reducing reported compensation values for 2020-2022.

2019 Compensation Program Design

Roles of Management, Compensation Committee and Compensation Consultant

Role of Our Compensation Committee and Management

Our Compensation Committee is composed entirely of independent directors, as defined by Rule 6505(a)(2) of the Nasdaq listing standards. Our Compensation Committee meets as often as it determines necessary to carry out its duties and responsibilities through regularly scheduled meetings and, if necessary, special meetings. Our Compensation Committee also has the authority to take certain actions by written consent of all members. In 2019, our Compensation Committee met six times.

Our Compensation Committee reviews and oversees our compensation policies, plans and programs and reviews and determines the compensation to be paid to our Named Executive Officers, with the input and advice from its independent compensation consultant. Our Compensation Committee also considers the input of our Chief Executive Officer in making compensation decisions related to our other Named Executive Officers.

Role of 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, part of the Rewards Solutions practice at Aon, plc, as its compensation consultant during 2019 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 2019, namely consulting services for non-executive employee compensation matters and broad-based compensation survey data, and was paid fees for these services totaling approximately \$63,860. In addition, Radford affiliates (Aon plc and its related entities) performed actuarial services relating to our SERP, insurance advisory services, and retirement plan advisory services, along with risk management consulting and insurance brokerage services for United Therapeutics during 2019, for which we paid approximately \$483,743 during 2019. 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 2019 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 2019, 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 Chief Executive Officer and our other Named 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
- Preparing for and attending shareholder engagement sessions
- 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 2019, Radford representatives attended each of our Compensation Committee's six meetings.

While our Compensation Committee considered its independent consultant's recommendations in 2019, 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.

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. As we communicated last year, we changed how we define our peer group for 2019, considering revenue when selecting peers instead of market capitalization. We made this change in order to capture companies that are commercializing products and generating product revenue, and therefore have executives with responsibilities that more directly reflect the roles of our Named Executive Officers. Our changed methodology for 2019 defines our peer group as the top 25 companies other than United Therapeutics, ranked by revenue, in the Nasdaq Biotechnology Index. These peers were selected in 2018, and were used to develop market data as an input into our compensation program for 2019. 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 methodology for selecting compensation peers uses an objective metric, which our Compensation Committee believes 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. This resulted in a peer group that more closely approximates 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.

Each year, a number of peers have added or removed from the list and replaced with other companies for various reasons, including merger and acquisition activities. We have provided below for reference the profile of our compensation peer group for 2019, showing changes made from our 2018 peer group. For clarity, the 2018 peer group was selected in 2017 and used for setting 2018 compensation policies. The 2019 peer group was selected in 2018 and used for setting 2019 compensation policies.

Compensation Peer Group

2018 PEER GROUP

ACADIA	Ionis Pharmaceuticals
Alexion Pharmaceuticals	Jazz Pharmaceuticals
Alkermes	Kite Pharma
Alnylam Pharmaceuticals	Mylan N.V.
Amgen	Neurocrine
Biogen	Opko Health
BioMarin	PRA Health Sciences
Bio-Techne	Regeneron
Celgene	Seattle Genetics
Exelixis	Shire
Gilead	Tesaro
Illumina	Vertex
Incyte	

ADDITIONS FOR 2019

Acorda Therapeutics	Endo International
Akorn	Horizon Pharma
AMAG Pharmaceuticals	Myriad Genetics
Bruker	Syneos

DELETIONS FOR 2019

ACADIA	Kite Pharma
Alnylam Pharmaceuticals	Seattle Genetics
Exelixis	Tesaro
Ionis Pharmaceuticals	

2019 PEER GROUP

Acorda Therapeutics	BioMarin	Illumina	PRA Health Sciences
Akorn	Bio-Techne	Incyte	Regeneron
Alexion Pharmaceuticals	Bruker	Jazz Pharmaceuticals	Shire
Alkermes	Celgene	Mylan N.V.	Syneos
AMAG Pharmaceuticals	Endo International	Myriad Genetics	Vertex
Amgen	Gilead	Neurocrine	
Biogen	Horizon Pharma	Opko Health	

The following table shows how United Therapeutics ranks within its 2019 peer group on a variety of metrics.

	Revenue ⁽¹⁾	Operating Income ⁽¹⁾	Net Income ⁽¹⁾	ROIC ⁽¹⁾	Return on Equity ⁽¹⁾	Return on Assets ⁽¹⁾	Market Cap Per Employee ⁽²⁾
2019 Peer Group Median (\$ in millions)	\$2,162.5	\$240.8	\$112.0	2.6%	5.5%	4.4%	\$3.2
United Therapeutics (\$ in millions)	\$1,744.0	\$1,068.2	\$483.8	20.7%	28.4%	23.9%	\$5.9
United Therapeutics Percentile Rank ⁽³⁾	44th	71st	65th	99th	Highest	Highest	69th

(1) Revenue, operating income, net income, ROIC (return on invested capital), return on equity, and return on assets all reflect trailing twelve-month data as of May 2018 when the peer group was approved

(2) Market capitalization per employee as of May 2018 when the peer group was approved

(3) The percentile rank shown above reflects values at the time of approval by our Compensation Committee

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 United Therapeutics based on 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 revenue 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. By placing our company at around the 50th percentile of our peer group for revenue, we believe our peer group reflects companies of similar scope and complexity.

Impact of 2019 Advisory Resolution on Executive Compensation

At our 2019 annual meeting of shareholders, our shareholders did not approve our Say-on-Pay proposal, with only approximately 27% of the votes cast in favor of the proposal. This was a disappointing outcome following three years of shareholder support. We have, over the past five years, conducted an ongoing and active shareholder engagement program, in order to gain feedback on the design of our executive compensation programs, compensation governance, and other compensation related topics. Based on these discussions and changes in our business objectives, we have implemented numerous changes to our executive compensation program in recent years which were directly based on shareholder feedback.

During the spring of 2019, and again in the fall of 2019 following our annual meeting, we reached out to shareholders whose holdings represented approximately 70% of our then-outstanding shares and ultimately held discussions with shareholders whose holdings represented approximately 30% of our then-outstanding shares. The purpose of these meetings was to gather feedback regarding our executive compensation and general governance policies, understand their Say-on-Pay vote, and share the structure and design of our 2019 equity compensation program. We also held meetings with the two largest proxy advisory firms in the fall of 2019, discussing similar topics. We believe our new equity program responds to many of the concerns raised by shareholders and proxy advisory firms that led to our low Say-on-Pay result, as described above in the **Letter from Our Compensation Committee Chairman**. This information was also shared with our Compensation Committee as it considered other potential changes to our executive compensation program, along with information on how our 2019 equity program addresses many of the concerns we heard about from our shareholders. Our Compensation Committee Chairman and our Nominating and Governance Committee Chairman led these discussions. Where appropriate, participants also included the Compensation Committee's independent compensation consultant, and representatives of our human resources, investor relations, and legal departments. Our Compensation Committee also considered the proxy voting reports from major proxy advisory firms with respect to our compensation programs.

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

- Design our executive compensation program to align pay and performance
- 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 performance-based long-term incentive awards
- Maintain stock ownership guidelines to align executive officer and share ownership with that of our directors and our shareholders
- Prohibit hedging and pledging by executives and directors*
- Employ a compensation recovery, or clawback, policy**
- Conduct annual risk assessments of our compensation policies and practices
- Hold Compensation Committee executive sessions without management
- Engage an independent compensation consultant who reports directly to the compensation committee

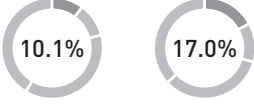
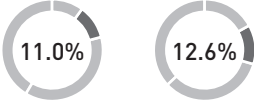
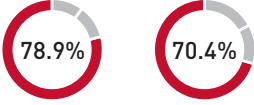
* Pursuant to our insider trading policy, directors, officers and employees are prohibited from purchasing our securities on margin, engaging in “short” sales of our common stock, or buying or selling puts, calls, futures contracts or other forms of derivative securities relating to our securities. In addition, our Board has adopted a policy prohibiting our directors and executive officers from pledging of shares of our common stock.

** 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.

✗ WHAT WE DON'T DO

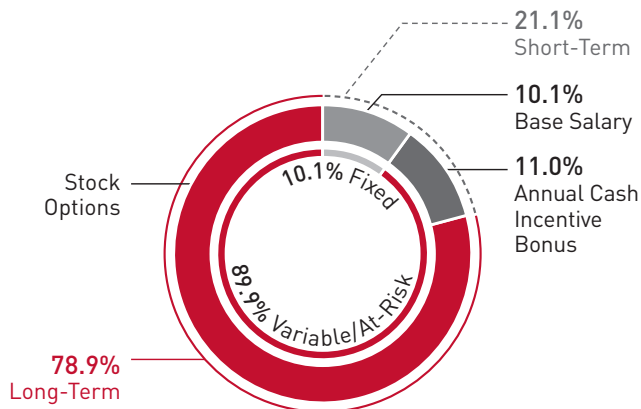
- No backdating of stock options
- No repricing of stock options without shareholder approval
- No liberal share recycling under 2015 Stock Incentive Plan
- No vesting prior to the first anniversary of grant, subject to limited exceptions
- No discounted or reloaded stock options
- No excessive perquisites
- No excise tax gross ups
- No guaranteed base salary and/or bonus payments

2019 Compensation Program Components

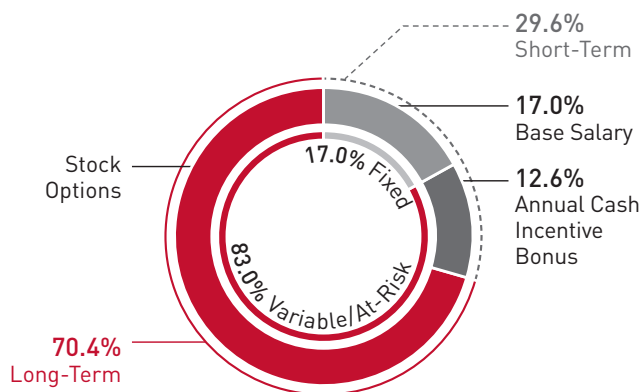
	Element / Percent of TDC	Why We Pay This Element	Key Characteristics	How We Determine Amount
Fixed	Base Salary  CEO: 10.1% Other NEOs: 17.0%	<ul style="list-style-type: none"> Provides market competitive levels of fixed pay to attract and retain our NEOs 	<ul style="list-style-type: none"> Cash Annual 	<ul style="list-style-type: none"> Market rate, internal pay equity, experience and critical skills
	Bonus  CEO: 11.0% Other NEOs: 12.6%	<ul style="list-style-type: none"> Provides competitive incentives to achieve difficult, annual company-wide performance criteria Pay-for-Performance Shareholder Alignment 	<ul style="list-style-type: none"> Cash Performance-Based Annual 	<ul style="list-style-type: none"> 50% Financial <ul style="list-style-type: none"> 25% Cash Profits 25% Revenues 50% Operational <ul style="list-style-type: none"> 25% Manufacturing 25% R&D Payout 0-150% of target
Short-Term	Stock Options  CEO: 78.9% Other NEOs: 70.4%	<ul style="list-style-type: none"> Incentivizes achievement of four-year business plan toward multiple-fold increase in revenues, driving shareholder value. Pay-for-Performance Shareholder Alignment 	<ul style="list-style-type: none"> At-Risk Performance-Based Four-Year Grant 50% premium-priced (\$135.43/share) (cliff vesting at year 4) 50% market-priced (\$117.76/share) (ratable vesting at years 2, 3 and 4) No intrinsic value unless stock price grows 	<ul style="list-style-type: none"> Market rate, internal pay equity, experience and critical skills Substantial reduction in market positioning on an annualized basis
	Long-Term			
Variable / At-Risk				

The following charts illustrate the extent to which pay for our Chief Executive Officer and our other Named Executive Officers is at risk, as payout levels are based entirely on performance. For each chart, the amounts shown represent 2019 base salary (on an **annualized** basis, following the February 2019 salary increases), 2019 target cash bonus, and the **annualized** grant-date fair value of long-term incentive awards granted in March 2019, which were granted 50% in the form of premium-priced stock options and 50% in the form of market-priced stock options.

CEO Pay Mix



Other NEO Pay Mix



2019 Compensation Decisions

Summary of 2019 Compensation

The components of our Named Executive Officers' target total direct compensation are base salary and variable compensation, including cash incentives and long-term incentive compensation in the form of stock options. The following table shows our Named Executive Officers' base salaries and the annualized grant date value of the stock options awarded for 2019 and the amount of any increase of such compensation over 2018. The basis for our Compensation Committee's decisions with respect to each of these components for 2019 is discussed in greater detail below.

Summary 2019 Target Total Direct Compensation

NEO	2019 Base Salary ⁽¹⁾	% Increase Over 2018 Base Salary	2019 Cash Incentive Bonus Target as % of Base Salary	Change in Cash Incentive Bonus Target % ⁽²⁾	2019 Long-Term Incentive Award Target ⁽³⁾	% Decrease Compared to 2018 ⁽³⁾	2019 Total Target Direct Compensation	% Decrease Compared to 2018
Martine Rothblatt	\$1,275,000	4.1%	110%	0%	\$10,002,500	(29%)	\$12,680,000	(23%)
James Edgmond	\$675,000	3.8%	75%	0%	\$3,250,813	(12%)	\$4,432,063	(8%)
Michael Benkowitz	\$885,000	4.1%	85%	0%	\$3,750,938	(11%)	\$5,388,188	(7%)
Paul Mahon	\$850,000	3.7%	65%	0%	\$3,000,750	(25%)	\$4,403,250	(18%)

(1) Reflects increases in annual base salaries effective February 25, 2019 and first reflected in pay on March 15, 2019

(2) Represents the difference in cash incentive award target as a percentage of salary, between 2018 and 2019

(3) Represents the Black-Scholes-Merton grant date value of the stock options granted on March 15, 2019. The value shown is the annualized value, that is the total value divided by four, as the grant is intended to cover four years of equity for the performance years of 2019-2022. Half of the award was granted as market-priced stock options, which vest in equal thirds on the second, third and fourth anniversary of the grant. The remaining half of the award granted on March 15, 2019 were premium-priced stock options, granted with an exercise price at 115% of our closing stock price on the date of grant, and which vest in full on the fourth anniversary of the grant date. Percentage decrease compares the annualized value of these options to the target value of stock options granted in 2018.

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 2019 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 2019, our Compensation Committee approved salary increases for our Named Executive Officers, as shown in the table below, effective February 2019. 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, and approximate the company-wide salary increases for our employees.

NEO	2019 Base Salary	% change from 2018
Martine Rothblatt	\$1,275,000	4.1%
James Edgmond	\$675,000	3.8%
Michael Benkowitz	\$885,000	4.1%
Paul Mahon	\$850,000	3.7%

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 2019, our Compensation Committee established cash incentive award targets for our Named Executive Officers as a percentage of base salary, at the levels shown in the **Summary 2019 Target Total Direct Compensation** table above. These percentages were unchanged from 2018.

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 three of our four Milestones are subject to a threshold, or minimum, level of performance before earning credit for those Milestones. In addition, each of our Named Executive Officers had the opportunity to earn up to 150% of their respective target cash incentive award for 2019, 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 2019 compared with 2018, as shown below.

NEO	2019 Cash Incentive Award Opportunity as % of base salary (at target)	% change from 2018
Martine Rothblatt	110%	No change
James Edgemond	75%	No change
Michael Benkowitz	85%	No change
Paul Mahon	65%	No change

2019 Company-Wide Milestone Program

The **Milestones** (or performance goals) under our 2019 Company-Wide Milestone Program are intended to create company-wide incentives relating to significant corporate objectives, falling into two categories (i) financial metrics, consisting of revenue and profitability targets; and (ii) operational metrics, tied to manufacturing and research and development (**R&D**) objectives. 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 goal-setting process for 2019 was rigorous, involving multiple lengthy discussions. The Milestone performance targets are difficult to meet and require significant leadership and execution excellence on the part of our Named Executive Officers. Based on these factors, our Compensation Committee established the following Company-Wide Milestones and weightings for 2019:

2019 Company-Wide Milestones	Percentage of Award Opportunity
Milestone 1—Financial Performance-Cash Profits*: Achieve the cash profit level for 2019 included in our long-range business plan (\$650 million)	25%
Milestone 2—Financial Performance-Revenue: Superior financial performance as evidenced by achieving the net revenues for 2019 included in our long-range business plan (\$1.45 billion)	25%
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	25%
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	25%

* Cash profit is defined as net income for 2019 as reported in our Annual Report on Form 10-K for the year ended December 31, 2019, 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
- Share-based compensation expense

Our Compensation Committee carefully crafted these Milestones, which represent rigorous, objective standards by which to measure company and executive officer performance. Our Compensation Committee believes that all four Milestones are strategically important to our continued success and therefore should be weighted equally in determining incentive awards. Cash profits and revenue objectives are important to maintaining industry-leading financial performance. Our 2019 goals are tied to our long-term strategic objectives, which include aggressive revenue targets over near-term, medium-term and long-term time horizons, and are designed to achieve profitability at the top quintile of our peers. Our financial performance goal involved a rigorous review of many factors, including market opportunity for each product, analyst expectations, and historical individual product performance. Our Compensation Committee also considered the expected impact of generic competition for Adcirca and Remodulin in setting individual product revenue goals. Our total revenue goal for 2019 was determined by our Compensation Committee to be challenging, and was set at a level that was above analyst consensus expectations. Our cash profit performance Milestone is set at a very high bar, incentivizing top-quintile profitability performance by the management team and ensuring thoughtful and rigorous budget and spend management. Our manufacturing Milestone is intended to ensure a continuous supply of our treprostinil-based therapies, which generate the vast majority of our revenues. Our R&D Milestone was intended to ensure that we have a robust pipeline of products capable of delivering future revenues sufficient to drive industry-leading growth.

In 2019, we reduced the number of corporate Milestones from five to four, removing the previous 5th Milestone related to ethics and compliance. This was not because ethics and compliance are not a top priority at United Therapeutics; on the contrary, our Compensation Committee reconfirmed that ethical and compliant conduct is a basic condition of employment for all employees, and therefore there was no need to have a broad corporate milestone focused on this topic. Our compliance-based performance evaluation policy drives this accountability, requiring that each employee be evaluated against their compliance with all company policies and procedures, along with our Code of Conduct and Ethics — which emphasizes the importance of ethical and compliant conduct for all employees at all levels of our business.

The details of our framework for determining 2019 Milestone performance are provided below. As a general matter, 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 (cash profits and revenues) 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 2019, above-target cash incentive awards were possible (up to 150% 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)	
Cash Profit Performance	\$650 million	\$715 million
Revenue Performance	\$1.45 billion	\$1.6 billion
Multiplier for each Metric*	0%	25%

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

Financial Performance — Cash Profits

Below Threshold 0% credit	At Threshold 50% credit	Target 100% credit	Stretch 125% credit
	\$555 million	\$650 million	\$715 million

Financial Performance — Revenues

Below Threshold 0% credit	At Threshold 50% credit	Target 100% credit	Stretch 125% credit
	\$1.3 billion	\$1.45 billion	\$1.6 billion

Manufacturing

We award pro rata credit based on the number of quarters for which: (1) pre-specified inventory levels are achieved (*i.e.*, 2-year supply of Orenitram, Remodulin and Tyvaso); and we pass any GMP-related FDA inspections. A minimum of two quarters is a threshold condition for any credit under this Milestone.

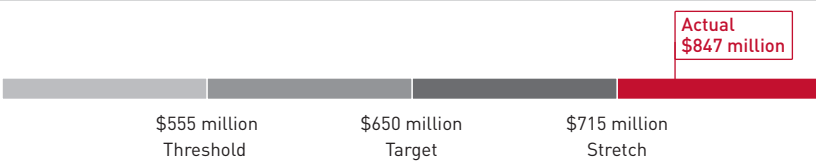
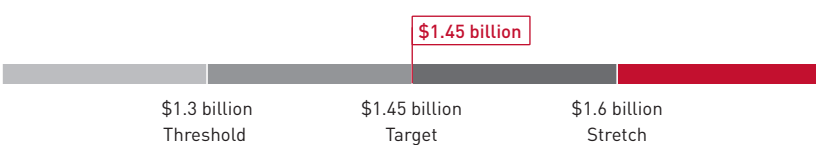
Research & Development

Performance under the research and development Milestone is 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).

Award pro rata credit	100% credit (at target)
< 100% of Goal	100%+ of Goal

2019 Milestone Performance

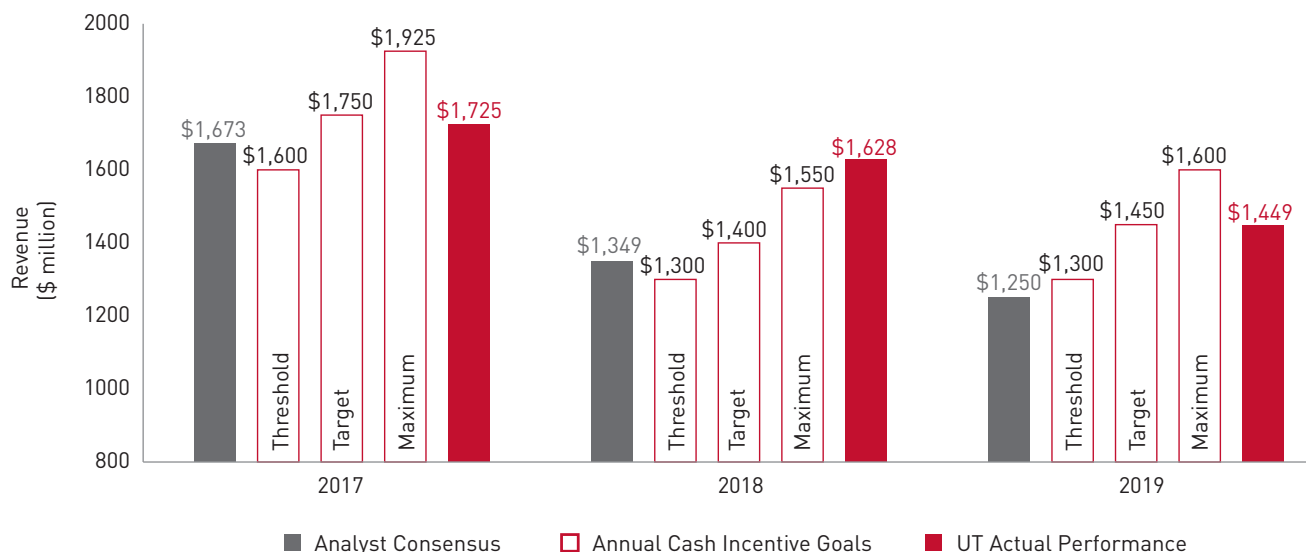
For 2019, our Compensation Committee determined that 100% of the Milestones were achieved, plus an additional 25% multiplier for above-maximum performance under our cash profit Milestone, as shown below:

Milestone	Performance	Attainment Level % (A)	Weighting (B)	% of Award Earned (A x B)
1 (Cash Profit)	 <p>2019 cash profits were \$847 million, representing 130% of the target of \$650 million. Because the result exceeded the maximum (\$715 million) a full 25% multiplier was applied.</p>	100%	25%	25%
2 (Revenue)	 <p>2019 net revenues for Remodulin, Tyvaso, Adcirca, Orenitram and Unituxin were \$1.45 billion, representing full achievement at target.</p>	100%	25%	25%
3 (Mfg)	Maintained greater than two-year inventory of all strengths of Remodulin, Tyvaso and Orenitram and passed all FDA inspections at our facilities, for the entirety of 2019.	100%	25%	25%
4 (R&D)	Achieved the full 25 R&D points (details provided below).	100%	25%	25%
Total				100%
Financial Multiplier (based on cash profit Milestone performance)				25%
Total (including multiplier)				125%

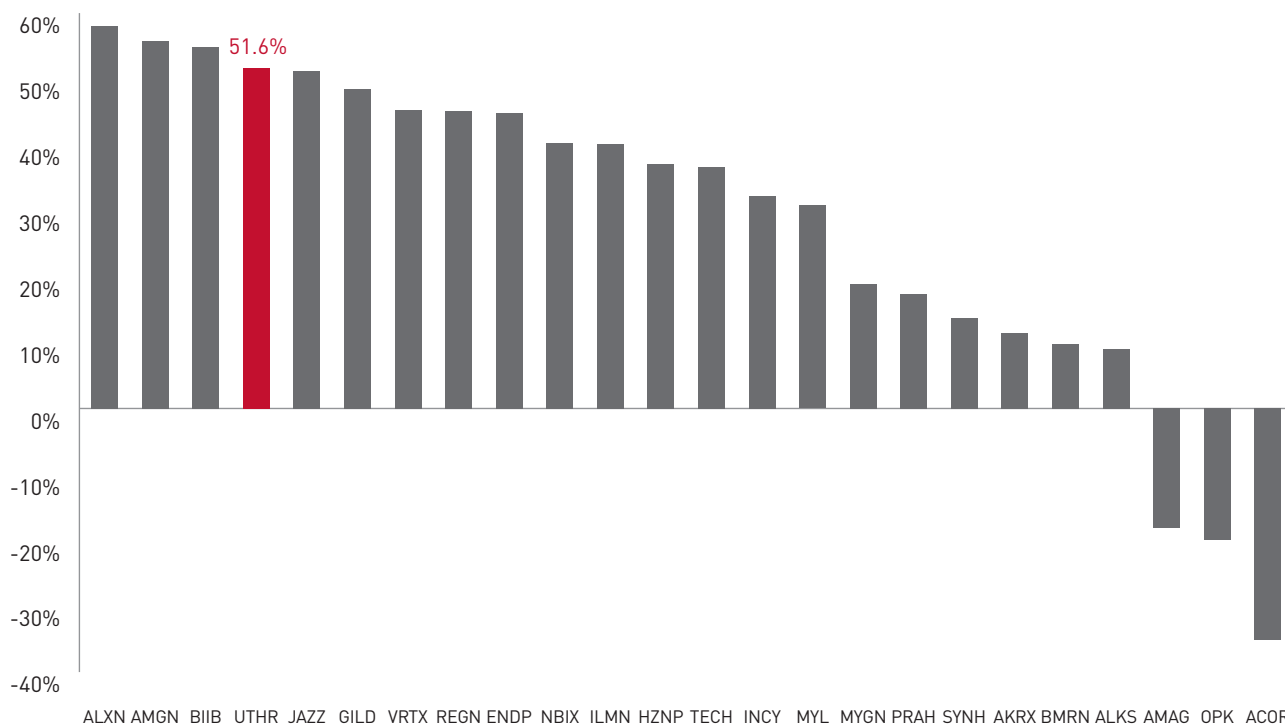
A word about our financial performance goals in light of generic competition.

- Revenue.** At the time we established our 2019 Company-Wide Milestones, we anticipated generic competition for both Adcirca and Remodulin in 2019, but still set a very aggressive revenue goal for our management team, far above analyst consensus (as shown below). This goal required growth in Tyvaso, Orenitram and Unituxin and required very strong performance from Remodulin despite generic competition for the majority of the year. Our industry is cyclical, and the impact of generic competition is a reality in our sector that must be considered when determining revenue performance expectations year over year. The entry of generic competition directly impacts revenue performance, resulting in occasional years without revenue growth over the prior year. For this reason, among others, our 2019 revenue target was lower as compared to our 2018 actual performance (although it was higher than our 2018 target). Ultimately, we were able to achieve our revenue goal by delivering strong performance with increased revenue for

Tyvaso, Orenitram and Unituxin for 2019 over 2018, and successfully delivered strong performance with Remodulin, noting very little impact to revenues even with nine months of generic competition in 2019.



- Cash Profit.** The same competitive dynamics inherently impact cash profits, and as a result we set our 2019 cash profit target below our 2018 actual cash profit (although above our 2018 target). Despite heavy investment in our R&D pipeline to drive future revenue generation, we believe it is important to maintain industry-leading profitability. When viewed as a percentage of revenue, our cash profit target consistently leads to profit margins at the top quintile of our peer group, as shown by the chart below. Because not all companies report the same non-GAAP financial measures, the chart below shows how our cash profit performance led to top-quintile performance in 2019 based on a uniform profitability metric: adjusted EBITDASO margin, or earnings before interest, taxes, depreciation, amortization, and share-based compensation expense (as further adjusted for one-time items that were excluded from the company’s reported adjusted earnings), divided by revenues:



- **Balance Sheet Strength.** Our historically strong profitability, which has been appropriately incentivized and rewarded by our Company-Wide Milestone Program, has generated strong free cash flow resulting in an extremely healthy balance sheet. At December 31, 2019, we had cash, cash equivalents and marketable securities totaling \$1.4 billion (net of our outstanding indebtedness of \$850 million). This is incredibly important, especially in light of current concerns surrounding the COVID-19 pandemic, which could have lasting impacts on a number of companies within our industry. **Indeed, on March 23, 2020, Jefferies Equity Research screened over 1,000 companies, and highlighted United Therapeutics among a list of just six companies (along with Home Depot, Honeywell and T. Rowe, for example) with a “Fortress Balance Sheet” that are best positioned to weather the storm.**

Additional detail regarding our research and development performance.

In evaluating performance under Milestone 4 (Research and Development), our 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:

- **FDA Approvals:** 12 points (full credit) awarded for achieving **two key FDA approvals**, compared to a goal of one FDA approval. Specifically, the FDA approved our label expansion for Orenitram reflecting the successful results of our *FREEDOM-EV* study and granted initial clearance for the Remunity system pump (patient filled)
- **Late-Stage R&D Programs:** Ten points (full credit) awarded for progressing **eight registration-stage programs** (compared to a goal of six programs), listed below:
 - *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
 - Registration study of ex-vivo lung perfusion technology to increase the utilization of donated lungs for transplantation
 - *PERFECT*, a phase III study of Tyvaso for WHO Group 3 pulmonary hypertension associated with chronic obstructive pulmonary disease
 - Submission of an NDA for Trevyent, a registration-stage drug-device combination product for PAH
 - *ADVANCE OUTCOMES*, a phase III event-based study of ralinepag in PAH patients
 - *ADVANCE CAPACITY*, a phase III study of the effect of ralinepag on exercise capacity in PAH patients
- **Earlier-Stage R&D Programs:** Two points (full credit) awarded for progressing **two early stage development programs** (compared to a goal of one):
 - Treprostinil Technosphere, a dry powder inhalation form of treprostinil
 - LNG01 (formerly SM04646), a Wnt pathway inhibitor for treatment of idiopathic pulmonary fibrosis
- **New Product Candidates:** One point (full credit) awarded for progressing **two new product candidates** into early stage development (compared to a goal of one):
 - RemoPro, a less painful form of Remodulin for subcutaneous delivery
 - Unexisome™, an exosome product for the treatment of bronchopulmonary dysplasia

2019 Cash Incentive Awards under the Company-Wide Milestone Program

The cash incentive awards earned by our Named Executive Officers and approved by our Compensation Committee for the 2019 performance year were as follows:

NEO	2019 Base Salary (A)	2019 Cash Incentive Award Target as % of Base Salary (B)	2019 Milestone Attainment (C)	2019 Financial Multiplier (D)	Total Cash Incentive Bonus Earned (A x B x C x D)
Martine Rothblatt	\$1,275,000	110%	100%	125%	\$1,753,125
James Edgmond	\$675,000	75%	100%	125%	\$632,813
Michael Benkowitz	\$885,000	85%	100%	125%	\$940,313
Paul Mahon	\$850,000	65%	100%	125%	\$690,625

Long-Term Incentive Compensation

2019-2022 Long-Term Incentive Compensation

Our long-term incentive compensation program is structured to support our pay-for-performance and shareholder alignment objectives. As discussed above, we implemented a new long-term incentive compensation program in 2019, uniquely designed to motivate and retain our executive leadership team, while carefully and thoughtfully integrating shareholder feedback and alignment. This program significantly reduces overall equity expense and dilution to shareholders on an annualized basis, when compared to our 2017 and 2018 programs, while actively engaging and retaining our leadership team over the next critical four year period. We awarded a four-year grant of stock options to our Named Executive Officers, intended to cover four years of equity awards for the performance years 2019 through 2022. This grant consisted of stock options under the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan (the **2015 SIP**).

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. The four-year 2019-2022 awards were granted in two forms of stock options, as follows:

- Premium-Priced Stock Options.** 50% of each Named Executive Officer's equity award covering grants for 2019-2022 was granted in March 2019 in the form of stock options with an exercise price equal to 115% of our closing stock price on the date of the grant. Therefore, our stock price will have to grow by more than 15% above the grant date before our Named Executive Officers can realize any value from the award. As a result, the first 15% return goes to our shareholders before we reward our executives. These performance stock options will vest in full (*i.e.*, "cliff" vest) on the fourth anniversary of the grant date for retention.

**2019-2022 Premium-Priced Stock Option Award
(Granted on March 15, 2019) (50% of Overall Award)**

NEO	# of Premium-Priced Stock Options Granted	Exercise Price
Martine Rothblatt	500,000	\$135.42
James Edgemond	162,500	\$135.42
Michael Benkowitz	187,500	\$135.42
Paul Mahon	150,000	\$135.42

- Market-Priced Stock Options.** 50% of each Named Executive Officer's equity award covering grants for the period of 2019-2022 was granted in March 2019 in the form of stock options with an exercise price equal to our closing stock price on the date of grant. These awards will vest in equal thirds on the second, third and fourth anniversary of the date of the grant, which also aids in retention.

**2019-2022 Market-Priced Stock Option Award
(Granted on March 15, 2019) (50% of Overall Award)**

NEO	# of Time-Based Stock Options Granted	Exercise Price
Martine Rothblatt	500,000	\$117.76
James Edgemond	162,500	\$117.76
Michael Benkowitz	187,500	\$117.76
Paul Mahon	150,000	\$117.76

Our Compensation Committee views the entirety of the 2019-2022 four-year grant as a performance-based equity award, given our stock price must grow in order for the grant to deliver any realizable value. Both types of stock options expire eight years from the date of grant, subject to earlier expiration upon termination of employment with us. Additionally, both Dr. Rothblatt and Mr. Mahon have waived their contractual provision providing for stock option vesting acceleration if they resign while continuing as a senior advisor, with respect to the four-year grants.

Why did we grant four-year stock options up-front?

We recognize that so-called "front-loaded" equity grants are not standard practice, and this decision was made after careful deliberation by our Compensation Committee with due consideration for the need to drive long-term revenue growth following the 2018-2019 revenue "trough" caused by the commencement of generic competition. To this end, we have a four-year business plan that is focused on delivering new products to the market which we believe will return our company to significant revenue growth. We believe with great science, strong execution and operating performance, this business plan should drive shareholder return over the four-year period. Our Compensation Committee felt that the simplest way to motivate and reward the attainment of these goals, and to stay focused on strategy and execution, was to grant an equity award aligned with the four-year strategy, rather than in annual increments. This also provides the opportunity to align pay and performance over that period and provides a retention incentive aimed at locking in the leadership team. We chose to award the grant in the form of stock options to reward the executives for future appreciation from executing the strategy and not the underlying

value of our past success. As noted above under the **Letter from our Compensation Committee Chairman**, the design of our 2019-2022 equity grant was based on feedback from our shareholders and the proxy advisory firms including addressing the following:

- 50% of the award was awarded as a stock option with a 15% premium exercise price. That means the first 15% of stock price appreciation goes to our shareholders before we reward our executives
- The award will not have any intrinsic value unless we have stock price growth over a multi-year period. This long-term focus addresses concerns raised by certain shareholders regarding the necessity of reducing short-term financial goals in light of generic competition
- The award eliminates the one-year performance period in our prior program, which was the source of concern for some of our shareholders
- The award eliminates the duplicated metrics between our short-term and long-term incentive programs, addressing a shareholder concern
- The vesting of the award is weighted toward the end of the four-year period with the majority of the vesting occurring in years three and four for the market-priced portion and the premium-priced award cliff-vests on the fourth anniversary
- The award has an eight-year term, meaning our share price must grow more quickly than the more typical ten-year term of a stock option
- The total volume of pay, when measured on an annualized basis, is significantly reduced as compared with the continuation of the program utilized in 2017 and 2018, which also addresses a concern raised by shareholders
- Total shareholder dilution over the four-year period is also reduced, as compared with the 2017 and 2018 program

Additional questions and answers regarding the four-year grant

Q	A
<p>Why a four-year period, instead of a shorter period (e.g., three years)?</p>	<p>We have a very aggressive four-year business plan that will require execution on the part of our management team. The four-year period covered by these awards aligns with critical business objectives that must be met in order to achieve this plan and drive shareholder returns. This includes launching new products (e.g. Remunity, ISR, Treprostinil Technosphere), tackling new indications (e.g. PH-ILD and PH-COPD), and overcoming the generic challenges to Remodulin. This four-year grant incentivizes the delivery of these key objectives over this critical four-year period.</p>
<p>Will you issue additional equity awards during the four-year period?</p>	<p>Our Compensation Committee does not intend to award any additional equity-based awards to our Named Executive Officers during the four-year period 2019-2022.</p>
<p>How did you decide on a 15% performance premium 50% of the award?</p>	<p>Our Compensation Committee reviewed this element of the program carefully, reviewing recent trading history of our common stock, and taking account of the general rule of thumb that a 10% premium is often deemed sufficient by proxy advisory firms and shareholders to constitute a “performance-based” award. Our Compensation Committee ultimately decided to apply an even more rigorous 15% premium after reviewing the broader performance of our peer group seeking to ensure our performance goals remained in the top quartile of our peers.</p>
<p>Why didn’t you add in a relative metric, like relative total shareholder return (TSR) as a performance condition?</p>	<p>Our Compensation Committee does not believe relative TSR would appropriately balance our incentives at this time. In fact, our Compensation Committee regarded our four-year grants as even more robust than a relative TSR metric, given that our stock price has to increase (even in a market downturn) in order for the awards to deliver value to the executives. We also examined the practices of our peer group, and only 28% use a relative TSR metric for their CEOs. We also believe that there are macro geopolitical and sector-specific dynamics that can result in valuation disconnects — both positively and negatively — that place undue pressure on developing a perfect peer group for comparisons. We believe in setting goals, holding executives accountable, and aligning their long-term rewards to performance they can control. In our view relative TSR has too many external and extraneous factors that are not aligned with our strategy and would not be motivational.</p>
<p>Why 100% stock options? Why not a mix of options, RSUs and/or PSUs?</p>	<p>Our Compensation Committee feels strongly that stock options are the best lever for incentivizing our executives at this time. They have inherent performance criteria in that our executive team has to grow our stock price in order to realize any value, and in the case of premium-priced options they must grow the stock price an additional 15%. We prefer to reward executives for creating future value, not providing the embedded value that exists when you grant time-vested RSUs. We considered performance RSUs instead of options, but this would require setting metrics that we believe are already captured in our annual incentive plan. Our intention with this grant was to avoid redundant metrics between the annual and long-term plan, consistent with the requests and feedback of our shareholders.</p>

Vesting of 2017 Long-Term Incentive Awards

In 2017, we awarded two tranches of performance-based stock options to our Named Executive Officers with a performance condition tied to achieving average cash profit margin of at least 50% over 2017-2019. One tranche was granted in respect of our 2016 compensation program (the **2016 Cash Profit Performance Options**), and the other tranche was granted in respect of our 2017 compensation program (the **2017 Cash Profit Performance Options**). Both tranches were granted on March 15, 2017, with a cliff-vesting feature on the third anniversary of the date of grant, to the extent earned, and both tranches will expire on the tenth anniversary of the date of grant. Vesting of both tranches was subject to a threshold performance criterion of 45% average cash profit margin, at which one-half of the target number of shares would have vested. Below this threshold, zero shares would have vested and between 45% and 50% average cash profit margin, the number of shares earned would have been determined by linear interpolation. In the case of the 2017 Cash Profit Performance Options, up to 200% of the target number of shares could be earned if the average cash profit margin equaled or exceeded 55%, with the number of shares earned between target and maximum determined by linear interpolation. The 2016 Cash Profit Performance Options did not include an opportunity for above-target payouts for stretch performance.

As a result of achieving an average cash profit margin of 61% during the 2017-2019 period, all of these options vested at maximum levels as of March 15, 2019, as shown in the table below.

NEO	Tranche	Threshold	Target	Max	Options Earned/Vested
Martine Rothblatt	2016 Cash Profit Performance Options	50,000	100,000	100,000	100,000
	2017 Cash Profit Performance Options	61,031	122,061	244,122	244,122
James Edgemon	2016 Cash Profit Performance Options	9,375	18,750	18,750	18,750
	2017 Cash Profit Performance Options	13,078	26,156	52,312	52,312
Michael Benkowitz	2016 Cash Profit Performance Options	13,125	26,250	26,250	26,250
	2017 Cash Profit Performance Options	17,438	34,875	69,750	69,750
Paul Mahon	2016 Cash Profit Performance Options	15,625	31,250	31,250	31,250
	2017 Cash Profit Performance Options	17,438	34,875	69,750	69,750

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. As such, as a general matter awards to our employees and 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). 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. Our Compensation Committee may also approve awards at other times, in connection with significant personnel events, such as new hire, promotion, new directorship, achievement of a significant corporate objective, or appointment to a Board committee.

Beginning in 2021, our Compensation Committee will also be permitted the flexibility to grant awards on the 15th day of any month (or the preceding trading day if markets are not open on the 15th).

All long-term incentive awards granted to our Named Executive Officers and other employees have an exercise price equal to at least 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 at least the closing price of our common stock on the Nasdaq on the preceding trading day.

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.*, \$19,000 in 2019 or \$25,000 for eligible participants who are age 50 or older). We make matching contributions equal to 40% of eligible employee contributions with such matching contributions vesting 33 1/3% 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% 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, are provided under the **Pension Benefits in 2019** 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 our other constituents 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 **Our Corporate Governance—Board Roles and Responsibilities—Stock Ownership Guidelines**, in 2011, our Board adopted Stock Ownership Guidelines 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. Our Stock Ownership Guidelines set targets for each Named Executive Officer according to the lesser of a multiple of base salary or fixed number of shares of common stock as follows:

Title of NEO	Ownership Target
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** 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, 2019.

Submitted by the Compensation Committee:

CHRISTOPHER CAUSEY (Chair)

NILDA MESA

LOUIS SULLIVAN

Compensation Tables

Summary Compensation Table

The following table shows compensation information for 2017, 2018 and 2019 for our Named Executive Officers, calculated in accordance with SEC regulations. We refer your attention to the Supplementary Summary Compensation Table that immediately follows for an understanding of (a) 2017 compensation in a way that eliminates the effect of a onetime 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, and (b) 2019 compensation in a way that shows the value of the 2019 four-year equity grants to our Named Executive Officers on an annualized basis.

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	2019	1,218,038 ⁽⁶⁾	40,010,000	1,753,125	2,643,874	10,000	45,635,037
	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
James Edgmond Chief Financial Officer and Treasurer	2019	645,192	13,003,250	632,813	1,668,041	19,600	15,968,896
	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
Michael Benkowitz President and Chief Operating Officer	2019	845,577	15,003,750	940,313	2,829,195	17,171	19,636,006
	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
Paul Mahon Executive Vice President and General Counsel	2019	812,692	12,003,000	690,625	3,038,484	22,000	16,566,801
	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

- (1) Increases in base salaries for each of our Named Executive Officers became effective on March 1, 2017, 2018 and February 25, 2019
- (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 2019 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, 2019. The stock options were awarded under our 2015 SIP. 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 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 Edgmond	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 2019 reflect cash earned in respect of 2019 performance but paid in March 2020. For information on the amounts earned for 2019, 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 in 2019** 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. The change in the amounts reported for 2019 compared to 2018 was primarily driven by the decrease in the discount rate and the lump sum interest rate. We note that there were no changes in the terms of our SERP in 2019 versus 2018.

- (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, travel expenses for family members to our functions (collectively, the perquisites), and “matching contributions” under our 401(k) Plan equal to 40% 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 average exchange rate for each respective year. In 2017, 2018, and 2019, our Canadian subsidiary paid the equivalent of US\$92,407, US\$92,614, and US\$90,436 of Dr. Rothblatt’s total base salary, respectively.

Supplementary Summary Compensation Table

The following table provides an “annualized” view of our compensation programs for 2017 and 2019, as follows:

Elimination of 2017 Grant Overlap. 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. As a result of shareholder feedback and to enhance the performance aspect of these awards, we modified our equity award policy in 2017 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 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 prospective options granted for the 2017 compensation year. The equity awards granted in 2017 related to 2016 equity opportunities have been eliminated.

Annualizing the 2019 four-year Equity Grant. In 2019, we made another major change in our equity compensation program, issuing four-year equity grants to our Named Executive Officers covering equity compensation for the years 2019-2022. As described elsewhere in this Proxy Statement, we believe it is important to view the value of these grants on an annualized basis, by dividing the aggregate grant date fair value by four (representing the number of years of equity compensation covered by the grant). The following table presents the annualized view of our equity program for 2019.

Name and Principal Position	Year	Salary ⁽¹⁾ (\$)	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	2019	1,218,038 ⁽⁶⁾	10,002,500	1,753,125	2,643,874	10,000	15,627,537
	2018	1,208,447 ⁽⁶⁾	12,796,803	2,021,250	—	9,800	16,036,300
	2017	1,163,707 ⁽⁶⁾	13,922,278	1,598,163	1,239,653	9,600	17,933,401
James Edgmond Chief Financial Officer and Treasurer	2019	645,192	3,250,813	632,813	1,668,041	19,600	6,216,459
	2018	645,833	3,382,085	731,250	467,161	16,400	5,242,729
	2017	620,833	2,983,354	577,148	854,747	17,000	5,053,082
Michael Benkowitz President and Chief Operating Officer	2019	845,577	3,750,938	940,313	2,829,195	17,171	8,383,194
	2018	833,333	3,839,015	1,083,750	835,680	17,480	6,609,258
	2017	733,333	3,977,842	738,750	1,043,171	24,433	6,517,529
Paul Mahon Executive Vice President and General Counsel	2019	812,692	3,000,750	690,625	3,038,484	22,000	7,564,551
	2018	820,000	3,656,242	799,500	—	21,800	5,297,542
	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, 2018 and February 25, 2019.

- (2) Amounts shown reflect 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 2019 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, 2019. 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 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 2019 reflect cash earned in respect of 2019 performance but paid in March 2020. For information on the amounts earned for 2019, 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 in 2019** 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. The change in the amounts reported for 2019 compared to 2018 was primarily driven by the decrease in the discount rate and the lump sum interest rate. We note that there were no changes in the terms of our SERP in 2019 versus 2018.
- (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, travel expenses for family members to our functions (collectively, the perquisites), and "matching contributions" under our 401(k) Plan equal to 40% 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 2017, 2018, and 2019, our Canadian subsidiary paid the equivalent of US\$92,407, US\$92,614, and US\$90,436 of Dr. Rothblatt's total base salary, respectively.

Grants of Plan-Based Awards in 2019

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards			All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Stock Option Awards (\$/Sh)	Grant Date Fair Value of Stock Option Awards ⁽⁴⁾ (\$)
		Threshold ⁽³⁾ (\$)	Target ⁽³⁾ (\$)	Maximum ⁽³⁾ (\$)			
Martine Rothblatt	3/15/2019 ⁽¹⁾				500,000	135.42	19,060,000
	3/15/2019 ⁽²⁾				500,000	117.76	20,950,000
	N/A ⁽³⁾	N/A	1,402,500	2,103,750			
James Edgemon	3/15/2019 ⁽¹⁾				162,500	135.42	6,194,500
	3/15/2019 ⁽²⁾				162,500	117.76	6,808,750
	N/A ⁽³⁾	N/A	506,250	759,375			
Michael Benkowitz	3/15/2019 ⁽¹⁾				187,500	135.42	7,147,500
	3/15/2019 ⁽²⁾				187,500	117.76	7,856,250
	N/A ⁽³⁾	N/A	752,250	1,128,375			
Paul Mahon	3/15/2019 ⁽¹⁾				150,000	135.42	5,718,000
	3/15/2019 ⁽²⁾				150,000	117.76	6,285,000
	N/A ⁽³⁾	N/A	552,500	828,750			

- (1) This award of stock options represents 50% of the Named Executive Officer's four-year equity grant of stock options covering the 2019-2022 period. These options were granted with an exercise price equal to 115% of the fair market value of our common stock on the date of grant. These stock options cliff vest on the fourth anniversary of the date of grant and expire on the eighth anniversary of the date of grant. See the **Compensation Discussion and Analysis** above for more details on the 2019-2022 equity program for our Named Executive Officers.
- (2) This award of stock options represents 50% of the Named Executive Officer's four-year equity grant of stock options covering the 2019-2022 period. These options were granted with an exercise price equal to the fair market value of our common stock on the date of grant. These stock options vest in equal installments on the second, third and fourth anniversaries of the date of grant and expire on the eighth anniversary of the date of grant. See the **Compensation Discussion and Analysis** above for more details on the 2019-2022 equity program for our Named Executive Officers.
- (3) Actual cash incentive awards earned under the program in 2019 are reported in the **Summary Compensation Table** under the column entitled "Non-Equity Incentive Plan Compensation." While there are threshold performance criteria and payout levels for 75% of the cash incentive program (based on the Milestones related to cash profits, revenues and manufacturing), there is no threshold performance level for the entirety of the program because the R&D Milestone does not contain threshold / minimum performance criteria.
- (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, computed in accordance with applicable accounting standards.

Narratives to Summary Compensation Table and Grants of Plan-Based Awards in 2019 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 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 us flexibility 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 2019 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. 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 2019, and beginning February 25, 2019, was set at \$1,275,000. 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. Edgemond, Mr. Benkowitz and Mr. Mahon

We have entered into employment agreements with each of Messrs. Edgemond, 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 Edgemond 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 2019, with raises becoming effective February 25, 2019. The following table outlines these details for each executive:

Name	Month/Year of Agreement	Minimum Base Salary under Agreement	Base Salary as of February 25, 2019
James Edgemond	March 2015	\$400,000	\$675,000
Michael Benkowitz	June 2016	\$650,000	\$885,000
Paul Mahon	June 2001	\$300,000	\$850,000

Under these agreements, each executive is eligible to participate in our broad-based employee benefit plans. In accordance with our executive automobile policy, Messrs. Edgemond, 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. Edgemond and Mr. Benkowitz). Each agreement includes an obligation of confidentiality for three years after termination of the executive's employment.

Messrs. Edgemond 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. 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 2017, 2018 and 2019, our Named Executive Officers were granted stock options under our 2015 SIP.

These long-term incentive awards were granted annually in 2017, 2018 and 2019 concurrently with the cash incentive awards.

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 as described in last year's Proxy Statement), in each case subject to the Named Executive Officer's continued employment. Each stock option granted in 2017 and 2018 has a ten-year term. Stock options granted under the 2015 SIP in 2019 cover four years of equity compensation (2019 through 2022), and have been designed such that: (i) overall equity compensation expense on an annualized basis, and overall dilution, are both expected to be lower than if we had continued with the previous equity compensation program for four additional years; (ii) the Named Executive Officer will be incented to achieve our business objectives over the four-year period; and (iii) vesting is heavily weighted toward the end of the four-year period, in order to aid in retention over that timeframe. 50% of the 2019 option grant was granted with an exercise price equal to the closing price of our common stock on the date of grant, and vests in equal installments on March 15, 2021, 2022 and 2023. The other 50% is has an exercise price equal to 115% of the closing price of our common stock on the date of grant, and cliff vests (100%) on March 15, 2023. All of the 2019 stock options have an expiration date of the eighth anniversary of the date of grant. 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 2019 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, 2019.

Name and Grant Date	Award Type	Number of Securities Underlying Unexercised Options or STAP Awards		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option or STAP Award Exercise Price (\$)	Option or STAP Award Expiration Date
		(#) Exercisable	(#) Unexercisable			
Martine Rothblatt						
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⁾	220,500	73,500	—	120.26	03/15/2026
03/15/2017	Stock Option ⁽⁴⁾	160,000	80,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	100,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁷⁾	100,192	50,096	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	244,122	—	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁶⁾	—	—	285,103	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁷⁾	71,275	142,552	—	111.00	03/15/2028
03/15/2019	Stock Option ⁽⁹⁾	—	500,000	—	135.42	03/15/2027
03/15/2019	Stock Option ⁽¹⁰⁾	—	500,000	—	117.76	03/15/2027
James Edgemond						
01/14/2013	STAP Award ⁽⁸⁾	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⁾	25,000	—	—	163.30	03/13/2025
03/13/2015	STAP Award ⁽³⁾	15,160	—	—	163.30	03/13/2025
03/15/2016	Stock Option ⁽³⁾	36,750	12,250	—	120.26	03/15/2026
03/15/2017	Stock Option ⁽⁴⁾	30,000	15,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	18,750	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁷⁾	21,470	10,735	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	52,312	—	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁶⁾	—	—	75,349	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁷⁾	18,837	37,675	—	111.00	03/15/2028
03/15/2019	Stock Option ⁽⁹⁾	—	162,500	—	135.42	03/15/2027
03/15/2019	Stock Option ⁽¹⁰⁾	—	162,500	—	117.76	03/15/2027

Name and Grant Date	Award Type	Number of Securities Underlying Unexercised Options or STAP Awards		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option or STAP Award Exercise Price (\$)	Option or STAP Award Expiration Date
		(#) Exercisable	(#) Unexercisable			
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 ⁽¹¹⁾	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⁾	37,200	—	—	163.30	03/13/2025
03/15/2016	Stock Option ⁽³⁾	29,400	9,800	—	120.26	03/15/2026
06/24/2016	Stock Option ⁽³⁾	39,375	13,125	—	102.11	06/24/2026
03/15/2017	Stock Option ⁽⁴⁾	42,000	21,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	26,250	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁷⁾	28,626	14,314	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	69,750	—	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁶⁾	—	—	85,531	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁷⁾	21,382	42,766	—	111.00	03/15/2028
03/15/2019	Stock Option ⁽⁹⁾	—	187,500	—	135.42	03/15/2027
03/15/2019	Stock Option ⁽¹⁰⁾	—	187,500	—	117.76	03/15/2027
Paul Mahon						
03/14/2014	STAP Award ⁽³⁾	113,500	—	—	94.96	03/14/2024
03/13/2015	STAP Award ⁽³⁾	116,250	—	—	163.30	03/13/2025
03/15/2016	Stock Option ⁽³⁾	91,875	30,625	—	120.26	03/15/2026
03/15/2017	Stock Option ⁽⁴⁾	50,000	25,000	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	31,250	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁷⁾	28,626	14,314	—	146.03	03/15/2027
03/15/2017	Stock Option ⁽⁵⁾	—	69,750	—	146.03	03/15/2027
03/15/2018	Stock Option ⁽⁶⁾	—	—	81,458	111.00	03/15/2028
03/15/2018	Stock Option ⁽⁷⁾	20,364	40,730	—	111.00	03/15/2028
03/15/2019	Stock Option ⁽⁹⁾	—	150,000	—	135.42	03/15/2027
03/15/2019	Stock Option ⁽¹⁰⁾	—	150,000	—	117.76	03/15/2027

(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 were subject to a three-year (2017-2019) performance threshold tied to average cash profit margin. These stock options were fully earned as of December 31, 2019 and vested at March 15, 2020.

(6) These stock options are subject to a three-year (2018-2020) 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.

(7) These stock options were 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.

(8) One-time STAP award granted upon Mr. Edgemon's commencement of employment, which vested in full on February 28, 2015

(9) These stock options cliff vest (100%) on the fourth anniversary of the date of grant

(10) These stock options vest in one-third increments on the second, third and fourth anniversaries of the date of grant

(11) These STAP awards cliff vested (100%) on the fifth anniversary of the date of grant

Option Exercises and Stock Vested in 2019

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, 2019. We did not have any stock awards that vested in 2019.

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	148,137 ⁽²⁾	9,183,928	—	—
James Edgemon	—	—	—	—
Michael Benkowitz	—	—	—	—
Paul Mahon	—	—	36,000	1,597,080

(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.

(2) All options exercised by Dr. Rothblatt during 2019 had been held for nearly 10 years, and were nearing their expiration date of December 31, 2019.

Pension Benefits in 2019

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	23.5	17,504,210
James Edgemon	SERP	7.0	7.0	4,029,624
Michael Benkowitz	SERP	8.8	8.7	6,010,639
Paul Mahon	SERP	15.0	18.6	12,624,851

(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, 2019.

(2) Reflects the number of years since each Named Executive Officer commenced employment with us, through December 31, 2019.

(3) The present values of accumulated benefits are based on assumptions used in the financial disclosures for the year ended December 31, 2019 including a discount rate of 2.63% and a lump sum interest rate of 3.00%. The present value represents the lump sum value of the accrued benefit which is based on service and earnings as of December 31, 2019, and assumes payment at age 60, the normal retirement date under the SERP. No preretirement death, disability, or termination is assumed. For a discussion of valuation assumptions, see **Note 12—Employee Benefit Plans** to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019.

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 United Therapeutics or one of its affiliates until age 60 to receive a benefit except in the event of death, disability or a change in control. 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 two other members of senior management participate in the SERP. Each of our Named Executive Officers is 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% 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 (i) the participant's Final Average Compensation, reduced by the participant's estimated future social security benefit (determined as provided under the SERP), multiplied by (ii) 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. We entered into the Rabbi Trust Document with Wilmington Trust Company, which serves 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, 2019 (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.

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	\$ 11,910,000	\$ 1,275,000	\$ 1,275,000	\$ 11,910,000	\$ —
Stock option vesting acceleration ⁽²⁾	\$ —	\$ —	\$ —	\$ —	\$ —
Supplemental Executive Retirement Plan	\$ 17,504,210 ⁽³⁾	\$ 17,504,210	\$ 11,961,450	\$ 17,504,210	\$ 17,504,210
Health and other benefits ⁽⁴⁾	\$ 179,604	\$ —	\$ —	\$ 179,604	\$ —
Total	\$ 29,593,814	\$ 18,779,210	\$ 13,236,450	\$ 29,593,814	\$ 17,504,210
James Edgmond					
Salary and cash incentive	\$ 133,151	\$ —	\$ —	\$ 2,812,500	\$ —
STAP award and stock option vesting acceleration ⁽²⁾	\$ —	\$ —	\$ —	\$ —	\$ —
Supplemental Executive Retirement Plan	\$ —	\$ 4,018,025	\$ 2,695,246	\$ 4,008,100	\$ 4,008,100
Health and other benefits ⁽⁵⁾	\$ —	\$ —	\$ —	\$ 72,231	\$ —
Total	\$ 133,151	\$ 4,018,025	\$ 2,695,246	\$ 6,892,831	\$ 4,008,100
Michael Benkowitz					
Salary and cash incentive	\$ 429,164	\$ —	\$ —	\$ 3,937,500	\$ —
STAP award and stock option vesting acceleration ⁽²⁾	\$ —	\$ —	\$ —	\$ —	\$ —
Supplemental Executive Retirement Plan	\$ —	\$ 4,087,054	\$ 2,468,563	\$ 5,573,218	\$ 5,573,218
Health and other benefits ⁽⁵⁾	\$ —	\$ —	\$ —	\$ 72,231	\$ —
Total	\$ 429,164	\$ 4,087,054	\$ 2,468,563	\$ 9,582,949	\$ 5,573,218
Paul Mahon					
Salary and cash incentive	\$ 3,299,000	\$ —	\$ —	\$ 3,299,000	\$ —
STAP award and stock option vesting acceleration ⁽²⁾	\$ —	\$ —	\$ —	\$ —	\$ —
Supplemental Executive Retirement Plan	\$ —	\$ 10,396,832	\$ 6,820,017	\$ 12,410,989	\$ 12,410,989
Total	\$ 3,299,000	\$ 10,396,832	\$ 6,820,017	\$ 15,709,989	\$ 12,410,989

(1) Benefits upon termination while continuing as a senior advisor are applicable only to employment agreements with Dr. Rothblatt and Mr. Mahon

Executive Compensation

- (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, 2019, \$88.08. Per the terms of awards containing performance vesting criteria, acceleration will result in the vesting of the “target” number of shares. Both Dr. Rothblatt and Mr. Mahon have waived their contractual provision providing for stock option vesting acceleration if they resign while continuing as a senior advisor for these grants.
- (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

Provision	Terms Applicable to Chairman and CEO	Terms Applicable to Mr. Mahon
Payments Upon Involuntary Termination without Cause, or Resignation for Good Reason, or Resignation while Continuing as Senior Advisor	<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**
Payments Upon Disability	<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
Payments Upon Death	<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
Payments Upon Change in Control without Termination	<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)
Payments Upon Termination Following Change in Control	<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 Supplemental Executive Retirement Plan 	<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

** Provision has been waived with respect to the 2019-2022 four-year stock options granted to Dr. Rothblatt and Mr. Mahon

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

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

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 2019 compensation of our principal executive officer to that of our median compensated employee.

During 2019, our principal executive officer was our Chief Executive Officer, Dr. Martine Rothblatt. For purposes of this pay ratio disclosure, Dr. Rothblatt's 2019 annual total compensation was \$45,651,970, and the 2019 total annual compensation for our median employee, identified as discussed below, was \$196,979, resulting in a pay ratio of approximately 232:1. Dr. Rothblatt's total compensation 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 noted above under **Supplementary Summary Compensation Table**, Dr. Rothblatt's 2019 total compensation as reported in the **Summary Compensation Table** and as used in determining the pay ratio disclosed above includes the full value of equity awards granted to Dr. Rothblatt in 2019, although these equity awards were intended to cover four years of equity compensation for the period 2019-2022. In order to provide a more complete depiction of our pay ratio for 2019, a supplemental pay ratio was calculated using Dr. Rothblatt's annualized pro forma 2019 compensation, as disclosed in the **Supplementary Summary Compensation Table**, which includes one-fourth of the value of her four-year equity award, plus the value of employer paid non-discriminatory health and welfare benefits, totaling \$15,644,470. The ratio of this measure to the compensation of the median employee, including the value of employer paid non-discriminatory health and welfare benefits as described above, was approximately 79:1.

As permitted under Item 402(u) of Regulation S K, we chose to utilize the same median employee for 2019 as we did for 2018, 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, 2019, we had a total of 902 employees, which represents only a 9.6% increase in our employee population. This number excludes 20 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), and (B) 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% 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 United States. Irrespective of the *de minimis* exemption, on this same date we had 768 U.S. 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.

4

Approval of The Amendment and Restatement of The United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan

We are asking our shareholders to approve an amendment and restatement (the **2020 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 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 at our 2018 annual meeting of shareholders, and another amendment and restatement of the Plan (the **2019 Restatement**) at our 2019 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 our success and progress. 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 2020 Restatement makes only the following changes to the 2019 Restatement of the Plan:

- Increases the maximum number of shares of our common stock that may be issued under the Plan by 500,000 shares
- Changes the fungible share ratio to 1.35:1
- Removes certain references to Section 162(m) of the Code that are no longer relevant
- Extends the expiration date of the Plan to April 29, 2030

Approval of the 2020 Restatement requires the affirmative vote of the holders of a majority of the outstanding shares present, online or by proxy, at our Annual Meeting and entitled to vote on this proposal.

Our Board of Directors recommends that you vote **FOR the approval of the amendment and restatement of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan.**

Why You Should Vote For the 2020 Restatement of the Plan

Our Board of Directors recommends that our shareholders approve the 2020 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 exceptional performance. At the current burn rate for equity awards, we expect that the existing limit of 9,500,000 shares available for issuance under the 2019 Restatement of the Plan will be insufficient to fund the annual issuance of awards to our employees in March 2021. The four-year stock option awards to our Named-Executive Officers described above under **Compensation Discussion and Analysis** are designed to decrease dilution over the four-year period covered by the awards, and our Compensation Committee does not currently intend to grant any additional equity to our Named Executive Officers during the four-year period 2019-2022. However, we continue to grant equity to our other employees and to our non-employee directors, most of which is determined based on value. As a result, as our stock price has decreased, the share pool has been diminishing at a higher rate than previously anticipated in our 2019 Proxy Statement. If the 2020 Restatement is not approved, we may 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:

- the Plan allows for awards to be granted with performance-based vesting conditions;
- 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 17, 2020:

Total shares underlying all outstanding stock options	8,093,889
Weighted average exercise price of outstanding stock options	\$123.35
Weighted average remaining contractual life of outstanding stock options	6.1 years
Total shares of common stock outstanding	43,997,068
Total shares underlying all outstanding and unvested performance shares	0
Total shares underlying all outstanding and unvested restricted stock (excluding performance shares)	460,618
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⁾	1,919,844

(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 9—Share Based Compensation** to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019. 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 2020 Restatement is approved. The fungible share ratio of 1.35:1 will apply to full-value awards granted under the 2020 Restatement.

The potential dilution from the additional 500,000 shares to be made available for issuance under the Plan is approximately 1.1% (calculated as the additional shares requested divided by shares outstanding as of March 17, 2020). 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 1.35 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 0.8% as of March 17, 2020 (calculated as the additional shares requested divided first by 1.35 and then by the total shares outstanding as of March 17, 2020).

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 ⁽¹⁾	Full-Value Shares Granted ⁽¹⁾	Total Granted = Options+ Full-Value Shares	Weighted Average Number of Common Shares Outstanding	Burn Rate
Fiscal 2019	2,081,047	225,218	2,306,265	43,818,811	5.3%
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%
Three-Year Average	1,678,888	148,465	1,827,354	43,772,204	4.2%

(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 of 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 17, 2020, approximately 7.6 million shares, or approximately 93.8% of the total shares subject to outstanding awards, were subject to stock options with exercise prices greater than \$80.56. If the Plan is approved, our overhang calculated on this basis would increase to approximately 20%, 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 500,000 additional shares to be made available under the Plan, the 2020 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 B** 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 of our officers 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 of our officers or employees, and/or to one or more agents.

Participants

Any person who is a current or prospective officer or employee of United Therapeutics 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 us 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 our employees. Approximately 915 officers and employees and ten 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 10,000,000 shares; provided that (i) any shares granted under options or stock appreciation rights will be counted against this limit on a one-for-one basis, (ii) any shares granted prior to March 17, 2020, 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, and (iii) any shares granted on or after March 17, 2020, as awards other than options or stock appreciation rights shall be counted against this limit as 1.35 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 us, 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 us 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. Any shares that were subject to options or stock appreciation rights and that again become available for awards under the Plan will be added as one (1) share for every one (1) share subject to such options or stock appreciation rights. Any shares that were subject to awards other than options or stock appreciation rights that again become available for awards under the Plan shall (i) prior to March 17, 2020 be added as 2.14 shares for every one (1) share subject to such awards, and (ii) from and after March 17, 2020, be added as 1.35 shares for every one (1) share subject to such awards.

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 10,000,000. 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 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 non-employee 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.

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. 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 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 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 our shareholders:

(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 us, 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 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 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 approved by our shareholders at the 2019 annual meeting of shareholders. The 2020 Restatement was adopted by our Board on April 29, 2020 and will become effective upon approval by our shareholders at the 2020 annual meeting. The Plan will remain available for the grant of awards until April 29, 2030.

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 us 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, we 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 (**RSUs**) 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 we 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, we generally will be entitled to a deduction with respect to restricted stock and RSUs 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, we 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, we 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 Tax Cuts and Jobs 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 our officers 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 us and our 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 17, 2020, the closing price of a share of our common stock on the Nasdaq was \$80.56.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table presents information as of December 31, 2019, 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) ⁽³⁾	Weighted average exercise price of outstanding options (b) ⁽⁴⁾	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) ⁽⁵⁾
Equity compensation plan approved by security holders ⁽¹⁾	8,395,984	\$123.34	5,082,406
Equity compensation plans not approved by security holders ⁽²⁾	3,421	—	91,679
Total	8,399,405	\$123.34	5,174,085

- (1) All outstanding stock options were issued under our two equity incentive plans approved by security holders—the Prior Plan and the Plan. The majority of outstanding RSUs were issued under the Plan. In addition, our employees have outstanding rights to purchase our common stock at a discount as part of our Employee Stock Purchase Plan (ESPP). No further awards will be issued under the Prior Plan. Information regarding these plans is contained in **Note 9—Share-Based Compensation** to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019.
- (2) We have one equity incentive plan, the United Therapeutics Corporation 2019 Inducement Stock Incentive Plan (the **2019 Inducement Plan**), that has not been approved by our shareholders, as permitted by the Nasdaq Stock Market rules. The 2019 Inducement Plan was approved by our Board of Directors in February 2019 and provides for the issuance of up to 99,000 shares in the aggregate of our common stock under awards granted to newly-hired employees. Currently, we grant only restricted stock units to newly-hired employees under the 2019 Inducement Plan. Information regarding this plan is contained in **Note 9—Share-Based Compensation** to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019.
- (3) Column (a) includes 8,088,680 shares of our common stock issuable upon the exercise of outstanding stock options issued under the Prior Plan and the Plan; 307,304 shares issuable upon the vesting of outstanding RSUs issued under the 2015 Plan; and 3,421 shares issuable upon the vesting of outstanding RSUs issued under the 2019 Inducement Plan. The Plan and 2019 Inducement Plan use a share counting formula for determining the number of shares available for issuance under the plans. In accordance with this formula, each option issued under the Plan counts as one share, while each RSU issued under the Plan and the 2019 Inducement Plan counted as 2.14 shares since that was the existing fungible share ratio effective as of December 31, 2019. If the 2020 Restatement is approved, the Plan will shift to a fungible share ratio of 1.35:1 effective as of March 17, 2020. The number under column (a) represents the actual number of shares issuable under our outstanding awards without giving effect to the share counting formula.
- (4) Column (b) represents the weighted average exercise price of the outstanding stock options only. The outstanding RSUs are not included in this calculation because they do not have an exercise price.
- (5) Column (c) includes 91,679, 2,386,955, and 2,695,451 of shares available for future issuance under the 2019 Inducement Plan, the Plan and the ESPP, respectively. Under the ESPP, employees may purchase shares based upon a 6-month offering period at an amount equal to the lesser of (1) 85 percent of the closing market price of our common stock on the first day of the offering period, or (2) 85 percent of the closing market price of our common stock on the last day of the offering period. Refer to **Note 9—Share-Based Compensation—Employee Stock Purchase Plan** in our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019 for more information. The number under column (c) assumes that all 310,725 outstanding RSUs included in column (a) vest. Each RSU is only counted as one share in column (a) since only one share is issuable upon vesting. However, if any RSU included in column (a) does not vest, the number of shares available for future issuance will increase by 2.14 because of the share counting formula described in note (3) above. If the 2020 Restatement is approved, the Plan will shift to a fungible share ratio of 1.35:1 effective as of March 17, 2020.

AUDIT MATTERS

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Ratification of The Appointment of Ernst & Young LLP as United Therapeutics Corporation's Independent Registered Public Accounting Firm for 2020

The Audit Committee of our Board has appointed Ernst & Young LLP (**EY**) as our independent registered public accounting firm for the year 2020. Services provided to us and our subsidiaries by EY in 2019 are described under the section entitled Principal Accountant Fees and Services below.

We ask that our shareholders vote to ratify the appointment of EY 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 EY's appointment to our shareholders as a matter of good corporate practice. In the event our shareholders do not ratify the appointment of EY, such appointment will be reconsidered by our Audit Committee and our Board. Following such reconsideration, our Audit Committee may still appoint EY if it determines doing so to be in the best interests of the company and our shareholders. Even if the appointment of EY 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.

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 this proposal. Abstentions have the same effect as an "against" vote. Brokers will have the discretion to vote on this item in the absence of your instructions.

Representatives of EY 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 you vote **FOR the ratification of the appointment of EY as our independent registered public accounting firm for 2020.**

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) under 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 regarding financial reporting. 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. EY functioned as our independent auditors for 2019 and has served as our auditor since 2003. EY 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, 2019, audited consolidated financial statements, we have:

- reviewed and discussed United Therapeutics' 2019 audited consolidated financial statements with our management and EY, 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 EY's related assessments and auditing procedures
- discussed with EY the overall scope of and plans for our audits and reviews. Our Audit Committee has met with EY, with and without management present, to discuss our financial reporting processes and internal accounting controls. We have reviewed all important audit findings prepared by EY
- discussed with EY matters that are required to be discussed by applicable Public Company Accounting Oversight Board (**PCAOB**) requirements. EY 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 EY their independence, including any relationships that may have an impact on their objectivity and independence, and satisfied ourselves as to EY's independence. We also reviewed and pre-approved the scope and fees for all audit and other services performed by EY for us.

- met and reviewed with members of senior management and EY 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 2019 be included in our Annual Report on Form 10-K for the year ended December 31, 2019, 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 EY in each of the last two years in each of the following categories were:

	2019	2018
Audit fees	\$2,076,749	\$2,418,456
Audit-related fees	—	—
Tax fees:		
Fees for tax compliance services	423,672	248,725
Fees for tax consulting services (including tax advice and tax planning)	104,422	66,458
Total tax fees	528,094	315,183
All other fees	6,965	7,200
	\$2,611,808	\$2,740,839

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 EY is compatible with maintaining EY's independence. Since EY's appointment as our independent registered public accounting firm, our Audit Committee has pre-approved all of the services performed by EY.

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 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. With respect to permissible services, the Audit Committee has delegated authority to the Audit Committee Chair to pre-approve Audit and non-audit services below a certain threshold. 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.

OTHER MATTERS

Certain Relationships and Related Party Transactions

Review and Approval of Related Party Transactions

We have adopted a written policy for the review of transactions, arrangements and relationships between our company and our directors, director nominees, executive officers, greater than 5% shareholders, and their immediate family members where the amount involved exceeds \$100,000. The policy requires our Audit Committee to review certain transactions subject to the policy and determine 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% of the other company's or non-profit organization's total annual revenues or receipts
- 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 \$20,192 during 2019 under this agreement. Our director Raymond Dwek is Director of the Glycobiology Institute and Professor Emeritus of Glycobiology at the University of Oxford.

From time to time, we employ family members of certain executive officers. During 2019, Dr. Rothblatt's daughter, Jenesis Rothblatt, was employed as Project Leader, Corporate Telepresence & Robotics, and received total compensation valued at approximately \$130,000.

Beneficial Ownership of Common Stock

The following table sets forth certain information as of April 10, 2020 (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% of the outstanding shares of our common stock; (ii) each director and director nominee; (iii) each of our Named Executive Officers (which, for 2019, 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.

Name	Number of Shares of Common Stock Beneficially Owned ⁽¹⁾	Percentage of Outstanding Shares ⁽²⁾	Vested STAP Awards ⁽³⁾
Beneficial Owners			
BlackRock, Inc. ⁽⁴⁾ 55 East 52nd Street New York, NY 10055	4,641,085	10.5%	—
The Vanguard Group ⁽⁵⁾ 100 Vanguard Boulevard Malvern, PA 19355	4,052,047	9.2%	—
Renaissance Technologies LLC ⁽⁶⁾ 800 Third Avenue New York, NY 10022	3,544,433	8.1%	—
FMR LLC ⁽⁷⁾ 245 Summer Street Boston, Massachusetts 02210	2,383,549	5.4%	—
Executive Officers, Directors and Nominees			
Martine Rothblatt ⁽⁸⁾	3,994,320	8.4%	—
Paul Mahon ⁽⁹⁾	418,300	*	229,750
Michael Benkowitz ⁽¹⁰⁾	325,278	*	223,800
James Edgemond ⁽¹¹⁾	236,014	*	47,571
Tommy Thompson ⁽¹²⁾	54,890	*	53,059
Judy Olian ⁽¹³⁾	47,620	*	—
Katherine Klein ⁽¹⁴⁾	42,470	*	29,375
Christopher Patusky ⁽¹⁵⁾	34,660	*	35,000
Ray Kurzweil ⁽¹⁶⁾	33,980	*	33,750
Louis Sullivan ⁽¹⁷⁾	31,240	*	30,000
Christopher Causey ⁽¹⁸⁾	29,425	*	27,000
Richard Giltner ⁽¹⁹⁾	28,750	*	60,000
Raymond Dwek ⁽²⁰⁾	15,000	*	65,000
Nilda Mesa ⁽²¹⁾	9,220	*	—
All directors and executive officers as a group (14 persons) ⁽²²⁾	5,301,167	10.9%	834,305

* 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, 2020. 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 44,002,068 shares of our common stock outstanding on April 10, 2020, 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, 2020, 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).

Other Matters

- (3) Represents the number of outstanding, vested STAP awards on April 10, 2020. None of the individuals in the table above have STAP awards scheduled to vest within 60 days after April 10, 2020. 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 February 4, 2020 reporting beneficial ownership as of December 31, 2019. According to the Schedule 13G/A, BlackRock, Inc. has sole voting power over 4,441,611 shares and sole investment power over 4,464,085 shares.
- (5) Beneficial ownership information obtained from a Schedule 13G/A filed by The Vanguard Group on February 12, 2020, reporting beneficial ownership as of December 31, 2019. According to the Schedule 13G/A, The Vanguard Group has sole voting power over 22,587 shares, shared voting power over 11,538 shares, sole investment power over 4,023,966 shares, and shared investment power over 28,081 shares.
- (6) Beneficial ownership information obtained from a Schedule 13G/A filed by the Renaissance Technologies LLC and Renaissance Technologies Holdings Corporation (together, Renaissance) on February 13, 2020, reporting beneficial ownership as of December 31, 2019. According to the Schedule 13G/A, Renaissance has sole voting power over 3,323,603 shares, sole investment power over 3,522,207 shares, and shared investment power over 22,226 shares.
- (7) Beneficial ownership information obtained from a Schedule 13G/A filed by FMR LLC (**FMR**) and Abigail Johnson on February 7, 2020, reporting beneficial ownership as of December 31, 2019. According to the Schedule 13G/A, FMR has sole voting power over 137,499 shares and sole investment power over 2,383,549 shares, while Ms. Johnson has sole investment power over 2,383,549 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.
- (8) Includes currently exercisable options held by Dr. Rothblatt to purchase 1,591,283 shares, and options held by trusts beneficially owned by Dr. Rothblatt and her spouse to purchase 1,723,869 shares. Also includes 663,879 shares held indirectly by trust, 166 shares held by Dr. Rothblatt's spouse and 14,983 shares held by charitable organizations, and over which Dr. Rothblatt has investment and voting power.
- (9) Includes currently exercisable options to purchase 382,169 shares.
- (10) Includes currently exercisable options to purchase 323,280 shares.
- (11) Includes currently exercisable options to purchase 234,941 shares.
- (12) Includes currently exercisable options to purchase 28,740 shares.
- (13) Includes currently exercisable options to purchase 39,620 shares.
- (14) Includes currently exercisable options to purchase 42,470 shares.
- (15) Includes currently exercisable options to purchase 33,360 shares. Also includes 1,300 shares held in a family trust with Mr. Patusky as trustee.
- (16) Includes currently exercisable options to purchase 28,740 shares.
- (17) Includes currently exercisable options to purchase 24,120 shares.
- (18) Includes currently exercisable options to purchase 28,450 shares. Also includes 975 shares held jointly by Mr. Causey and his children.
- (19) Includes currently exercisable options to purchase 25,000 shares.
- (20) Includes currently exercisable options to purchase 15,000 shares.
- (21) Includes currently exercisable options to purchase 6,560 shares.
- (22) Includes currently exercisable options to purchase 4,527,602 shares.

Delinquent Section 16(a) Reports

Section 16(a) of the Exchange Act requires our directors, executive officers and 10% shareholders to file reports of ownership of our equity securities with the SEC. 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, 2019, all reporting persons filed the required reports on a timely basis under Section 16(a), with the exception of one late filing for a non-employee member of our Board of Directors reporting the vesting of restricted stock units, which resulted from administrative error.

Shareholder Proposals and Director Nominations

Proposals for Inclusion in the Proxy Statement for the 2021 Annual Meeting

Shareholder proposals intended for inclusion in our Proxy Statement and form of proxy for our 2021 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 4, 2021, unless the date of the 2021 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. The submission of a shareholder proposal does not guarantee that it will be included in our Proxy Statement and form of proxy.

Director Nominees for Inclusion in the Proxy Statement for the 2021 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 our outstanding voting stock 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 5, 2020 and no later than the close of business on January 4, 2021 unless the date of the 2021 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 2021 annual meeting or the close of business on the tenth (10th) day following the day on which public announcement of the date of the 2021 annual meeting is first made.

Other Proposals or Nominees for Presentation at the 2021 Annual Meeting

In order for a shareholder to properly bring other business before the 2021 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 delivered to or mailed and received by 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 2021 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 delivered no later than the close of business on the later of the ninetieth (90th) day prior to the 2021 annual meeting or the tenth (10th) day following the date on which public announcement of the date of the 2021 annual meeting of shareholders is first made. Accordingly, for the 2021 annual meeting, notice of a proposal or nomination, as applicable, must be received by our Corporate Secretary no later than March 28, 2021 and no earlier than February 26, 2021. 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 2019 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 2019 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 2019 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 2019 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, 2019, 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, 2019, 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>.

INFORMATION ABOUT THE MEETING, VOTING AND PROXIES

Attending the Annual Meeting

This year's Annual Meeting will be held solely online as a virtual live audio webcast on Friday, June 26, 2020, beginning at 10:15 a.m. Eastern Time, and will be accessible through the Internet at www.virtualshareholdermeeting.com/UTHR2020. Our Board reached this decision after careful consideration and in light of the ongoing developments related to the COVID-19 pandemic. A virtual format will enable shareholders to participate from any location and at no cost, while safeguarding the health of our shareholders, management, and Board. Information regarding how shareholders can attend the meeting, vote their shares, and submit questions are described below.

Admission. The Annual Meeting is limited to shareholders of United Therapeutics as of April 30, 2020 (the **Record Date**) or holders of a valid proxy for the annual meeting. In order to be admitted to the Annual Meeting online, you must enter the 16-digit control number provided in the Notice of Internet Availability, proxy card or voting instruction form. To avoid any delay due to technical issues, we encourage shareholders to log in to the website and access the webcast 15 minutes before the virtual annual meeting's start time. To attend the meeting online, vote your shares electronically, submit questions, or examine our shareholder list, go to www.virtualshareholdermeeting.com/UTHR2020. Our list of shareholders as of the Record Date will also be available for inspection for the ten days prior to the Annual Meeting. To inspect the list, please email our Investor Relations department at IR@unither.com.

Future Meetings. Future annual meetings may be held virtually or in person in various locations, including without limitation locations where United Therapeutics has operations.

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 of proxies to be voted at our 2020 annual meeting of shareholders and any adjournment or postponement thereof. Proxy materials or a Notice of Internet Availability of Proxy Materials were first sent to shareholders on or about May 4, 2020.

Record Date and Outstanding Shares

On the Record Date, there were approximately 44,012,324 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 online 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.

Internet Availability of Proxy Materials

As permitted by the rules of the Securities and Exchange Commission, 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 4, 2020, 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 our 2019 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 online at our virtual Annual Meeting or represented by proxy. Whether or not you plan to attend our Annual Meeting online, you are encouraged to vote your shares. The representation online at the virtual Annual Meeting 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, voting online before the meeting at www.proxyvote.com at a date after the date of your previous proxy, or by attending the Annual Meeting and voting during the meeting at www.virtualshareholdermeeting.com/UTHR2020. See the section entitled **Attending the Annual Meeting** for information regarding how to attend the Annual Meeting online.

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 three director nominees named on the proxy card; (ii) **FOR** the amendment to our amended and restated certificate of incorporation to declassify our Board of Directors; (iii) **FOR** the advisory resolution to approve executive compensation; (iv) **FOR** the amendment and restatement of the United Therapeutics Corporation Amended and Restated 2015 Stock Incentive Plan; and (v) **FOR** the ratification of the appointment of EY as our independent registered public accounting firm for 2020.

ANNEX A - PROPOSED AMENDMENTS TO AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

ARTICLE VII

~~(c) The Board of Directors shall be divided into three classes, designated Class I, Class II and Class III, as nearly equal in number as the then total number of directors constituting the whole Board permits. If the number of directors is changed, any increase or decrease shall be apportioned by the Board of Directors among the three classes so that the number in each class shall be as nearly equal as possible. The term of office of each class shall expire at the third annual meeting of stockholders for election of directors following the election of such class, except that the initial term of office of the Class I directors shall expire at the annual meeting of stockholders in 2000, the initial term of office of the Class II directors shall expire at the annual meeting of stockholders in 2001 and the initial term of office of the Class III directors shall expire at the annual meeting of stockholders in 2002. At each annual meeting of the stockholders of the Corporation, the successors of the class of directors whose term expires at such meeting shall be elected to hold office for a term expiring as of the third succeeding annual meeting. Commencing with the annual meeting of stockholders of the Corporation held in 2021, but subject to any provision for the election of directors by one or more series of Preferred Stock, the directors shall be elected by the stockholders entitled to vote thereon for terms expiring at the next succeeding annual meeting of stockholders; provided, however, that any director elected or appointed prior to the 2021 annual meeting of stockholders shall complete the term of office to which such director has been elected or appointed. The term of office for each director serving in the class elected at the annual meeting of stockholders in 2018 shall expire at the annual meeting of stockholders in 2021; the term of office for each director serving in the class elected at the annual meeting of stockholders in 2019 shall expire at the annual meeting of stockholders in 2022; and the term of office for each director serving in the class elected at the annual meeting of stockholders in 2020 shall expire at the annual meeting of stockholders in 2023. The division of the Board of Directors into classes shall terminate at the 2023 annual meeting of stockholders. A director shall hold office until his or her successor shall be elected and shall qualify, subject, however, to prior death, resignation, retirement, disqualification or removal from office.~~

~~(d) Any directors serving in a class of directors elected for a term expiring at the third annual meeting of stockholders following the election of such class may be removed only for cause, and all other directors may be removed either for or without cause. Subject to any provisions for the election of directors by one or more series of Preferred Stock, the removal of any director, whether for or without cause, requires the affirmative vote of the holders of not less than a majority of the voting power of the outstanding shares of stock of the Corporation entitled to vote thereon.~~

ANNEX B - UNITED THERAPEUTICS CORPORATION AMENDED AND RESTATED 2015 STOCK INCENTIVE PLAN

[effective June 26, 2020]

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, 2020 (the “Effective Date”), the Amended and Restated United Therapeutics Corporation 2015 Stock Incentive Plan, which was approved by stockholders on June 26, 2019, 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 issued 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.
- (ab) "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.
- (ac) "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.
- (ad) "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, 2019 as of the Effective Date. All Awards granted under this Plan in excess of the aggregate limitation approved by shareholders at the 2019 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 2019 annual meeting of shareholders shall be void. The Plan shall remain available for the grant of Awards until April 29, 2030. 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 10,000,000; provided that (i) any Shares granted under Options or Stock Appreciation Rights shall be counted against this limit on a one-for-one basis, and (ii) any Shares granted prior to March 17, 2020, 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 and (iii) any Shares granted on or after March 17, 2020, as Awards other than Options or Stock Appreciation Rights shall be counted against this limit as 1.35 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 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 shall not count as Shares issued under this Plan. Any Shares that were subject to Options or Stock Appreciation Rights and that again become available for Awards under the Plan pursuant to this Section shall be added as one (1) Share for every one (1) Share subject to such Options or Stock Appreciation Rights. Any Shares that were subject to Awards other than Options or Stock Appreciation Rights that again become available for Awards under the Plan pursuant to this Section shall (i) prior to March 17, 2020 be added as 2.14 Shares for every one (1) Share subject to such Awards and (ii) from and after March 17, 2020, be added as 1.35 Shares for every one (1) Share subject to such Awards.
- (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, 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 10,000,000, 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 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 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 prorated 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.
- (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) 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.
- (f) 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 Restricted Stock and Restricted Stock Unit awards.
- (g) 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.
- (h) 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.
- (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 adjusted 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.
- (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. 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. 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, 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.

ANNEX C - NON-GAAP FINANCIAL INFORMATION

This Proxy Statement contains the following financial measures that do not comply with United States generally accepted accounting principles (**GAAP**):

- **Non-GAAP Diluted EPS** (see the **2019 Performance in Review** section above): Non-GAAP earnings is defined as net loss, adjusted for: (1) share-based compensation expense (including expenses relating to stock options, restricted stock units, share tracking awards and our employee stock purchase plan); (2) impairments charges; (3) license-related fees; (4) net unrealized and realized gains on equity securities; and (5) tax benefit on non-GAAP earnings adjustments. Non-GAAP earnings is divided by diluted weighted average shares outstanding to derive non-GAAP diluted earnings per share (**EPS**). A reconciliation of net loss to non-GAAP earnings is presented below (millions, except per share data):

<i>(In millions, except per share data)</i>	Year Ended December 31, 2019
Net loss, as reported	\$ (104.5)
Adjusted for the following:	
Share-based compensation expense	45.4
Impairment charges	17.2
License-related fees	825.0
Net unrealized and realized gains on equity securities	[21.4]
Tax benefit	(192.5)
Non-GAAP earnings	<u>\$ 569.2</u>
Non-GAAP earnings per share	
Basic	\$ 13.00
Diluted	\$ 12.94
Weighted average number of common shares outstanding:	
Basic	43.8
Diluted	44.0

- **Adjusted EBITDASO** (see the **2019 Compensation Decisions** section above): Adjusted EBITDASO is defined as net loss, adjusted for: (1) depreciation and amortization expense; (2) share-based compensation expense (including expenses relating to stock options, restricted stock units, share tracking awards and our employee stock purchase plan); (3) impairment charges; (4) license-related fees; (5) interest expense, net; (6) net unrealized and realized gains on equity securities; and (7) income tax benefit. Adjusted EBITDASO is divided by total revenues to derive adjusted EBITDASO margin. A reconciliation of net loss to adjusted EBITDASO is presented below (in millions, except percentages):

<i>(In millions)</i>	Year Ended December 31, 2019
Net loss, as reported	\$ (104.5)
Adjusted for the following:	
Depreciation & amortization expense	45.9
Share-based compensation expense	45.4
Impairment charges	17.2
License-related fees	825.0
Interest expense, net	—
Net unrealized and realized gains on equity securities	(21.4)
Income tax benefit	(60.5)
Adjusted EBITDASO (Non-GAAP)	<u>\$ 747.1</u>
Total revenues	\$ 1,448.8
Net loss margin	-7.2%
Adjusted EBITDASO margin	51.6%

Annex C - Non-GAAP Financial Information

We use these non-GAAP financial measures to assist us in: (1) planning, including the preparation of our annual operating budget; (2) allocating resources in an effort to enhance the financial performance of our business; (3) evaluating the effectiveness of our operational strategies; and (4) assessing our capacity to fund capital expenditures and expand our business. We believe these non-GAAP financial measures improve investors' understanding of our financial results by excluding certain income and expenses that we do not consider when evaluating and comparing the performance of our core operations and making operating decisions. However, there are limitations in the use of these non-GAAP financial measures in that they exclude certain operating expenses that are recurring in nature. In addition, our calculation of these non-GAAP financial measures may differ from the methodologies used by other companies. The presentation of these non-GAAP financial measure should not be considered in isolation or as a substitute for our financial results prepared in accordance with GAAP.



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