
United Therapeutics
CORPORATION
2023
Corporate Responsibility and Public Benefit Report

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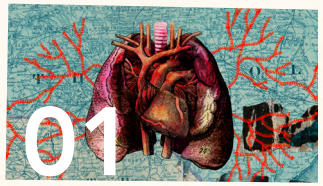
This Corporate Responsibility and Public Benefit Report primarily covers our sustainability efforts during 2022. Throughout this Report, we call out 2023 highlights



FORWARD-LOOKING STATEMENTS

This Corporate Responsibility and Public Benefit Report (this Report) 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 and opinions about our future operating results, business plans, objectives, pipeline advancements, benefits of our products, and corporate responsibility or public benefit matters, including information or aspirations regarding sustainability and the environment, employees, philanthropy, supply chain, ethics and governance, cybersecurity and data privacy, and any others that contain the words believe, seek, aim, strive, endeavor, expect, anticipate, intend, estimate, should, could, may, will, plan, or similar expressions, and any other statements contained or incorporated by reference into this Report that are not historical facts. These forward-looking statements are subject to certain risks and uncertainties, such as technological advancements, energy prices, government incentives, stakeholder engagement, and those described in our periodic reports filed with the Securities and Exchange Commission (SEC) 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; diligence, processes, and internal controls that continue to evolve; 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 the date of publication of this Report, and assume no obligation to update or revise the information contained in this Report whether as a result of new information, future events, or any other reason. Inclusion of information in this Report is not an indication that the subject or information is material to United Therapeutics' business or operating results as that term is defined for purposes of SEC reporting. Website references and hyperlinks provided throughout this Report are provided for convenience only, and the content on the referenced websites is not incorporated by reference into this Report, nor does it constitute a part of this Report.

A Message From Our CEO

C-Q-Love-Do.

This is the mnemonic device I use to remind myself of the philosophy that personally guides me, and that glimmers behind our purpose at United Therapeutics. The "C" stands for curiosity about the world and its possibilities, which is essential to the work of creating lifesaving therapies and technologies. "Q" is for "question authority," which is embodied in our "why" or "why not" response to obstacles. By "Love" I mean transcendentally – the kind of love that unites and heals and inspires every one of us to do this work daily. And "Do" means acting on our beliefs, our values, and our scientific hypotheses, crafting the brighter future we seek.

It's a touchstone that gives me hope in the face of a world that seems so divided by conflict, harmed by injustice, and threatened by climate-related events.

In this Report, my colleagues in this purposeful journey of creating a brighter future for our patients and our other stakeholders share our 2022 performance and the practical actions we are taking to turn hope into reality.

For example, under *Our Patients*, you'll read about our success and progress developing new drugs and delivery mechanisms – like, securing FDA approval of Tyvaso DPI last year. You will also learn more about our scientific research and development efforts toward providing tolerable, transplantable organs for all who need them, and in the meantime helping transplant patients like **Ms. Dorothy Esce**, whose journey you can read about starting on page 20. And, led by our heroic patient support teams, you'll read about how we're helping patients access our therapies, no matter their financial circumstances.

Under *Our People*, you will read about our progress in retaining and bringing onboard those diverse, creative, questioning, ambitious, and practical people who, together, are trying to accomplish something different.

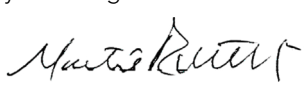
And, under *Humankind*, you'll read about what we are doing to mitigate our environmental impact – including opening the first-of-its-kind net zero cold storage current Good Manufacturing Practices (**cGMP**) warehouse in **2023**.

I'm proud of what we've accomplished over the past year. Serving more than 12,500 patients, with record-setting financial performance representing 15% year-over-year revenue growth, and industry-leading shareholder return and profitability, we are also confident in our future, guided by our strong governance over our core business activities and our social and environmental performance.

The stories we share here are not intended to be self-congratulatory without reflection. We know there is much more work to do.

For example, we spent 2022 putting the systems and procedures in place to quantify our greenhouse gas emissions while we continue to take steps we know will help mitigate our climate impacts. We are dedicated to progress, but we also know the climate-related challenges ahead loom large for all of us. We are spending more time discerning our role in this shared effort.

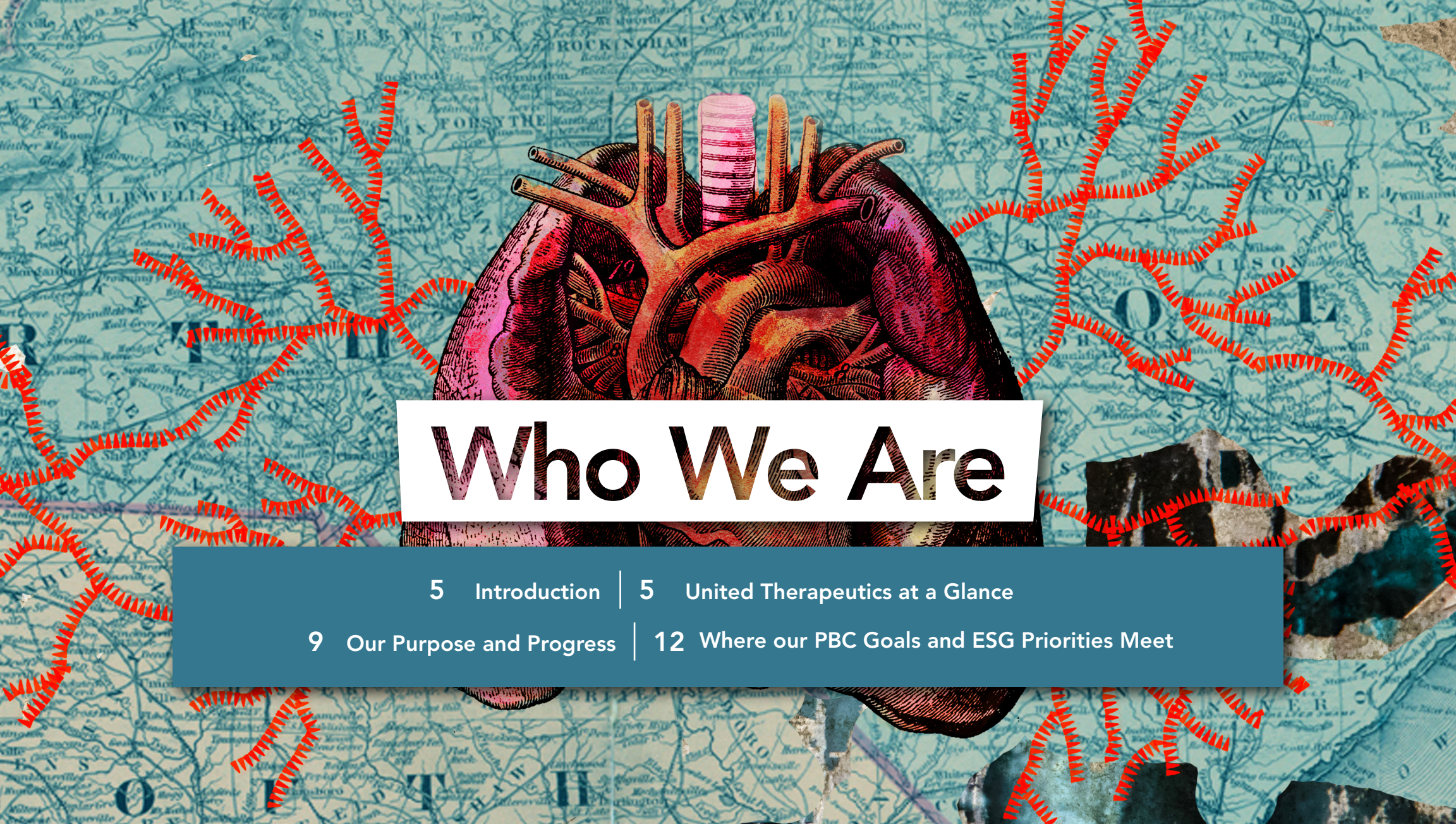
I hope this Report demonstrates our ongoing commitment. Please share your thoughts with us about our progress described herein.



Martine Rothblatt, Ph.D.
Chairperson and CEO

"I'm proud of what we've accomplished over the past year.... The stories we share here are not intended to be self-congratulatory without reflection. We know there is much more work to do."

Martine Rothblatt, Ph.D.
Chairperson and CEO



Who We Are

Introduction

We are the first-ever public biotech company organized as a public benefit corporation. **Our public benefit purpose is to provide a brighter future for patients through (a) the development of novel pharmaceutical therapies; and (b) technologies that expand the availability of transplantable organs.** In furtherance of our public benefit purpose, we look for new ways to make positive impacts on patients, the environment, and society at large. We seek to push technology forward for the benefit of patients, with the goal of developing cures for pulmonary hypertension (**PH**) and other end-stage organ diseases through our organ manufacturing program, which includes multiple technologies and initiatives to create an unlimited supply of tolerable transplantable organs. Learn more about how our PBC objectives align with our environmental, social, and governance (**ESG**) priority issues under *Where our PBC Goals and ESG Priorities Meet* on page 12.

UT's Silver Spring campus at night

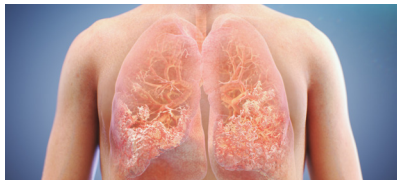
United Therapeutics at a Glance

Founded to save a daughter's life, United Therapeutics is a profitable, 27 year old, $10B+ market cap, dare-to-be-different biotechnology company. We use our enthusiasm, creativity, and persistence to innovate for the unmet medical needs of our patients and to benefit our other stakeholders. We are **bold and unconventional**. We have fun, we do good.

Our Focus

We seek to develop novel, life-extending therapies and technologies for patients in two core areas:

LUNG DISEASE



ORGAN MANUFACTURING

Our Therapies

Our portfolio is composed of six commercial products: five for PH and one for neuroblastoma, a rare pediatric cancer.

PH Therapies

Tyvaso® and **Tyvaso DPI®** are inhaled prostacyclin analogues approved for the treatment of pulmonary arterial hypertension (**PAH**) and PH associated with interstitial lung disease (**PH-ILD**) (WHO Group 3) to improve the ability to exercise. These are the first and only products approved to treat PH-ILD.

Orenitram® is an orally-administered prostacyclin analogue approved for the treatment of PAH patients to delay disease progression and improve exercise capacity.

Subcutaneous and intravenous **Remodulin®** are approved to diminish symptoms associated with exercise in patients with PAH.

Adcirca® is a PDE-5 inhibitor approved for treatment of PAH.

Neuroblastoma Therapy

Unituxin® is a monoclonal antibody approved to treat pediatric patients with high-risk neuroblastoma. Unituxin was the first antibody therapy approved to treat this type of cancer, which is the deadliest childhood cancer.

About Pulmonary Hypertension

PH is a type of high blood pressure that affects the arteries in the lungs and the right side of the heart.

PAH is one form of PH that affects the blood vessels in the lungs and is characterized by increased pressure in the pulmonary arteries, which are the blood vessels leading from the heart to the lungs. The elevated pressure in the pulmonary arteries strains the right side of the heart as it pumps blood to the lungs. This eventually leads to right heart failure and, ultimately, death. PAH is characterized by structural changes in blood vessel walls, aggregation of platelets, and alteration of smooth muscle cell function.

PH-ILD is a combination of high blood pressure in the lungs due to narrowing of the blood vessels that causes the heart to work harder, plus any one or more of a group of progressive lung disorders that cause lung tissue to stiffen, making it harder to breathe. PH-ILD is also a rare, serious, and progressive disease.

Both PAH and PH-ILD cause patients to feel fatigued and out of breath, making it difficult to walk more than short distances.

2022 Year in Review

Served more than **12,500 patients** on our therapies

Granted **FDA approval of a new drug application for Tyvaso DPI**

Recorded **$1.9 billion** in product revenue, representing **15% year over year growth** compared to 2021

Made significant progress in establishing our Scope 1 and Scope 2 greenhouse gas (GHG) inventory

Employed **985** employees working across our **10** facilities worldwide, with industry-leading retention

Advanced site net zero ambitions, building our **fifth site net zero*** facility, completed in **2023**

Achieved approximately **$2.0 million revenue per employee**, which ranks near the top of our industry peer group

Continued industry-leading Total Shareholder Return (TSR) of **29%** and profitability, with a **38%** net income margin

* site net zero = 100% of energy demand met by on-site renewable energy

Unitherians in a regenerative medicine lab

2022 Awards & Recognition Highlights

Ninth Consecutive Year as a Top Place to Work by the Washington Post

Fifth Consecutive Year as a Certified - Great Place to Work by Fortune Magazine

Second Consecutive Year among America's Most Responsible Companies by Newsweek

Where We Operate

Our co-headquarters are in Silver Spring, MD and Research Triangle Park, NC with additional facilities located principally in North America. Selected locations include:

- Blacksburg, VA
- Bromont and Magog, Quebec, Canada
- Manchester, NH
- Melbourne and Jacksonville, FL
- Research Triangle Park, NC
- Silver Spring, MD
- Washington, DC
- Duxford, Cambridgeshire, UK

Our Sustainable Footprint

Five site net zero facilities represent approximately **16%** of our square footage^*

LEED-certified portfolio represents approximately **24%** of our square footage^

Maryland

ONE
Platinum LEED-certified site net zero 135,000 square foot building known as the Unisphere

TWO
Gold LEED-certified buildings composed of 238,000 square feet of administrative, laboratory, and manufacturing space

Canada

23,000 square foot hangar using high performance HVAC, hydroelectric power, and insulated wall panel system (panels consist of insulated foam cores sandwiched between metal skins) to support R&D for future organ delivery electric vertical take-off and landing (**eVTOL**) vehicles

North Carolina

TWO
site net zero buildings: an 11,000 square foot day care center; and a 55,000 square foot FDA current good manufacturing practices (**cGMP**) logistics center (Phase 5) completed and opened in **2023**

Florida

TWO
site net zero facilities: a 25,000 square foot ex-vivo lung perfusion (**EVLP**) facility at the Mayo Clinic in Jacksonville; and a 14,000 square foot call center in Melbourne

Learn more about our longstanding goal related to sustainable building practices starting on page 49.

^ Square footage represents owned and leased facilities within our operational control

* Includes Phase 5 logistics center opened in 2023

Our Purpose and Progress

Since our launch, we have operated with a patient-driven mission, strong values, and long-term vision. In 2021, we converted our company from a traditional Delaware corporation into a Delaware public benefit corporation (**PBC**) following overwhelming approval by our shareholders. This aligns our legal form with our longstanding commitment to serve our patients and we believe, among other things, enhances our ability to create superior and sustainable value for our shareholders. We are the first publicly-traded biotechnology company organized as a PBC.

We align our PBC goals with our three core stakeholder groups – **Our Patients**, **Our People**, and **Humankind**. In recognition of the fact that our work affects and is affected by the world, we strive to align our efforts and impacts with the internationally recognized blueprint for peace and prosperity for people and the planet, illustrated by the 17 United Nations Sustainable Development Goals (**UN SDGs**). We expect to continue to update our objectives and key performance indicators as we work toward our purpose with the partners in our supply chain, our collaborators in scientific exploration, and the communities in which we work and live.

> **“It’s a powerful statement to your employees, your customers, and other stakeholders to be able to say that you are legally obligated to take your public benefit purpose and the interests of your stakeholders into account.”**

John Hess
EVP and Deputy General Counsel

Approximately 40 U.S. states and territories have passed legislation allowing for profit companies to register as PBCs – a status that legally requires them to consider the interests of the community, employees, the environment, and society at large. Being a PBC can help companies navigate confusion around voluntary ESG initiatives and disclosures. “It’s a powerful statement to your employees, your customers, and other stakeholders to be able to say that you are legally obligated to take your public benefit purpose and the interests of your stakeholders into account,” said **John Hess**, Deputy General Counsel of United Therapeutics in an interview with the *Washington Business Journal*. See more here: https://bit.ly/43TrL2m.

Our public benefit purpose is to provide a brighter future for patients through (a) the development of novel pharmaceutical therapies; and (b) technologies that expand the availability of transplantable organs.

Data as of December 31, 2022 unless noted otherwise.

Our PBC Goals and Objectives	Key Performance Indicators	2022 Progress	UN SDG Alignment (includes NEW alignments since 2022 Report)
PATIENTS **Address Unserved Needs** We aim to conduct the most insightful clinical trials with our medicines in areas of high unmet medical need.	Number of patients on our therapies R&D milestones, including clinical trial results, regulatory approvals, and progress on organ R&D projects	• **12,500+ patients** on our therapies • **One** FDA approval for Tyvaso DPI to treat PAH and PH-ILD • **One** new grant of orphan designation for treprostinil by the European Medical Agency (**EMA**) to treat idiopathic pulmonary fibrosis (**IPF**) • **$323 million** annual R&D investment • **15 ongoing clinical trials** engaging almost **900 volunteers** • **Historic, first ever xenotransplantation** of a porcine heart (our **UHeart™**) into a human • **300+ patients** benefitting from our centralized ex-vivo lung perfusion (**EVLP**) service as of April **2023**	
No Patient Left Behind We aim to ensure that all patients who are appropriate for use of our medicines can do so, regardless of their financial situation. Learn more under OUR PATIENTS starting on page 14	Patient support programs Reliable supply chain	• **23,000+** patients obtaining **260,000+ prescriptions** through one of our support programs since 2010 • **600+** pre-qualified raw material vendors and service providers • **Zero** GMP-related issues at UT-owned facilities that would prevent use or approval of our products • **Two-year inventory** of nebulized Tyvaso, Remodulin, and Orenitram	

Our PBC Goals and Objectives	Key Performance Indicators	2022 Progress	UN SDG Alignment (includes NEW alignments since 2022 Report)
PEOPLE **Be a Destination Employer** We aim for United Therapeutics to be a destination employer by creating a mission-centric, diverse, and inclusive environment where Unitherians are inspired by the challenging work ahead of us and the opportunity to grow and advance their careers. Learn more under OUR PEOPLE starting on page 35	Voluntary turnover Diversity, equity, and inclusion (**DEI**) initiatives and progress Employee engagement as measured by surveys	• Voluntary turnover: **under 9% compared to almost 15% industry average**[1] • Workforce diversity: **51% identify as women, 36% identify as racially/ethnically diverse** • **93%** of employees participating in Great Places to Work survey agreed that United Therapeutics is a great place to work	
HUMANKIND **Operate Sustainably** We aim to mitigate our environmental impact and operate in a sustainable fashion. Learn more under HUMANKIND starting on page 48	New construction site net zero where possible Environmental data trends	• Made significant progress in 2022 on a **site net zero cold storage** cGMP warehouse, completed in RTP in June 2023, the **fifth** net zero facility in our portfolio • Implemented a centralized management system aligned with recognized international standards, including ISO 14001 and ISO 18001, for our waste, water, air, and energy data; made significant progress in calculating our 2022 base year **Scope 1 and Scope 2** GHG emissions	

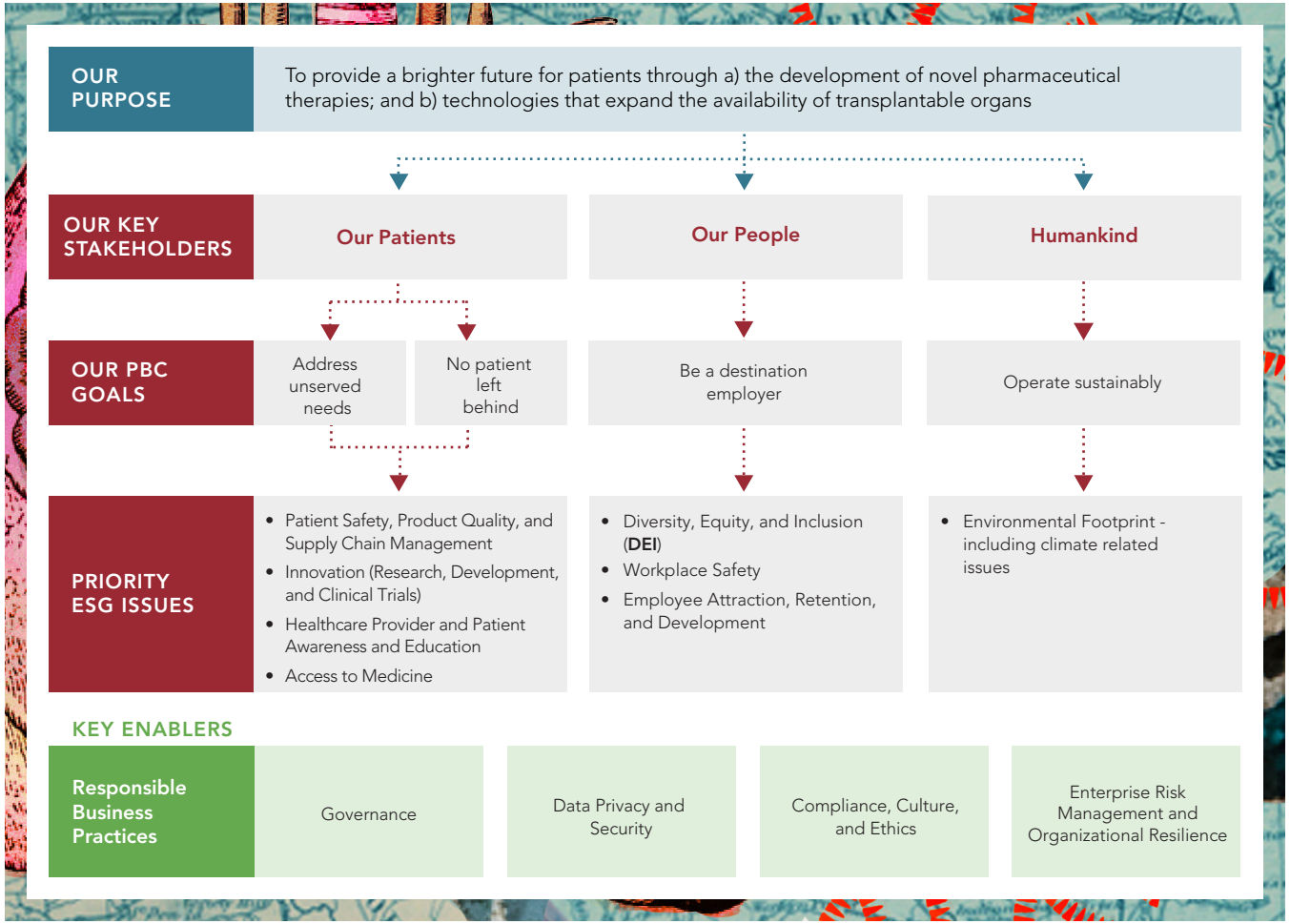
[1] Industry data from Aon/Radford Turnover study; 2022 data published May 2023 | U.S. Life Sciences: Biotech/Pharma | Date range for 2022 industry data is January 2022 – January 2023

Where our PBC Goals and ESG Priorities Meet

Our PBC purpose and objectives are inextricably entwined with our approach to ESG issues. Since our founding, we have had ongoing engagement with a wide range of internal and external stakeholders, including our employees, patients, patient organizations, healthcare partners, investors, suppliers, community groups, governmental entities and other regulators, and non-governmental organizations, which helps inform our approach to these PBC-ESG issues.

This ongoing engagement, as well as targeted engagement with several teams throughout our organization in 2020, helped us to identify several priority ESG-related topics. The illustration to the right shows how we see these aligned with and supportive of our PBC purpose.

Learn more about our approach, our alignment with leading disclosure frameworks and standards and Report boundaries, and our methods of stakeholder engagement in the section *About this Report and Stakeholder Engagement* starting on page 80 and about our governance of our PBC and ESG aspirations and performance in the *Governance* section starting on page 67.



Our Patients

Our Patients

A Message From Our Chief Medical Officer

The history of the founding of United Therapeutics in 1996 is well known to many – it's a story of parents who wanted to save their child's life.

At the time, pulmonary arterial hypertension (**PAH**) had a five-year mortality rate – a shorter life expectancy than for most cancers. There were very few medical therapies available to treat this rare disease and significant challenges with the only approved therapy at the time. There was also no known cure, outside of lung transplantation for a very small minority of patients able to obtain one.

Our work at United Therapeutics has helped change that landscape not only for pulmonary hypertension (**PH**) but for other rare diseases. Ours is a story of taking on one hard challenge after another when expert after expert told us it could not be done.

It is part of why we also are pursuing organ manufacturing – organ transplantation is the only known cure for end-stage organ failure, a sad feature of PH and many other diseases.

In this area, just as we do with our pharmaceutical therapies, we are pursuing multiple paths to bring to fruition the vision of universal availability of transplantable organs for all who need them. We are very proud of the fact that our ex-vivo lung perfusion (**EVLP**) program has already saved hundreds of lives. We are honored to have provided our **UHeart™** for the first-in-human porcine heart transplant in 2022 into **Mr. David Bennett Sr.**, who sadly passed away two months later due to a variety of complications.

We are emboldened by the promise we see in xenotransplantation* and other areas of our organ manufacturing work.

Yet, the fact remains that our medicines treat life-threatening conditions, which are extremely difficult to manage, with a tremendous impact on quality of life for patients and their loved ones.

We can never forget the patients and families whose needs are most pressing right now. That is why we strive for an unwavering commitment to product quality and patient safety. It is also why we have teams of dedicated professionals devoted to providing assistance to patients to help them secure access to the medicines they need, supporting healthcare professionals (**HCPs**) in understanding the diseases we treat, and collaborating with our specialty pharmacy partners (**SPs**), suppliers, and team members across our company to provide a sufficient supply of medicines with the goal that no patient gets left behind. Ever.

This section of our Report is focused on our core PBC purpose of providing a brighter future for our patients. I am glad to share our progress to-date and our innovative efforts to create a better tomorrow.

> **"We can never forget the patients and families whose needs are most pressing right now."**

Gil Golden, MD, Ph.D.
Chief Medical Officer

* Xenoplantation is any procedure that involves the transplantation, implantation, or infusion into a human recipient of live cells, tissues, or organs from a non-human animal source.

Address Unserved Needs

Innovation

2022 Innovation at a Glance

Data as of December 31, 2022 unless noted otherwise.

Our Targets

- Secure regulatory approvals for label extensions and new products
- Progress our clinical trials

UN Sustainable Development Goals (UN SDGs) Alignment

Progress Highlights

Regulatory Approvals:

- New product: in May 2022, obtained FDA approval of Tyvaso DPI to treat both PAH and pulmonary hypertension with interstitial lung disease (**PH-ILD**), and launched commercially in June 2022

Ongoing Research & Development:

- **$323 million annual R&D investment**
- Continued **15 clinical trials** engaging almost **900 volunteers**
- Regulatory inspections of our clinical trials resulted in **zero** required, voluntary or official actions or monetary fines
- Provided genetically modified organs that were successfully transplanted by surgeons at our partner institutions into a living and into recently deceased human donors maintained on artificial life support; our partners then published studies about these efforts in the *New England Journal of Medicine* and the *American Journal of Transplantation*
- As of April 2023, more than **300** patients had received lung transplants following use of our centralized EVLP model

Rare Disease Focus

The defining characteristics of our patients are two-fold: their conditions are extremely rare and they are life-threatening. We are committed to supporting our small patient populations throughout treatment.

TARGET U.S. PATIENT POPULATION

45,000 PAH
30,000 PH-ILD
800 NEUROBLASTOMA

Our Therapies

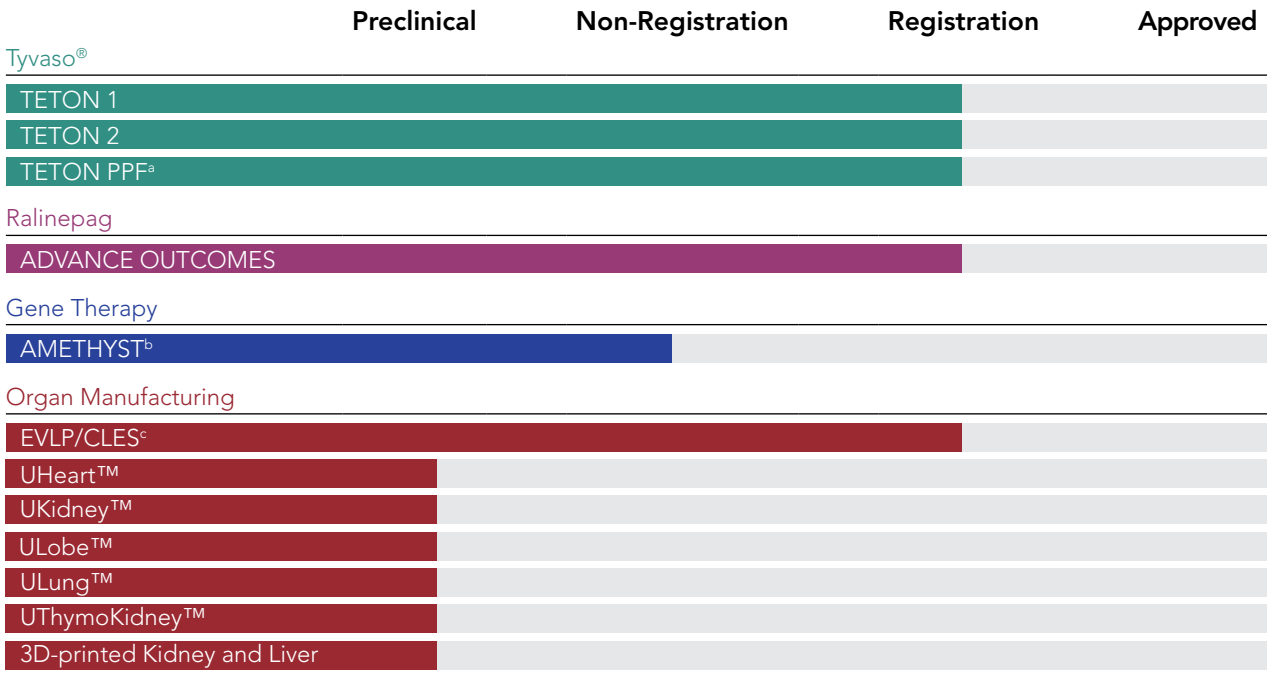
While we continue to develop and commercialize therapies for rare and life-threatening conditions, we view organ manufacturing as a complementary solution for a broad array of diseases, many of which (such as PH) have proven incurable to date through more traditional pharmaceutical and biologic therapies. To that end, we are pursuing multiple pathways to address the acute shortage of transplantable organs: regenerative medicine, 3D organ bioprinting, xenotransplantation, and EVLP.

Product Innovation and Clinical Trials

Since our founding in 1996, our mission has been to find a cure for PH and other life-threatening diseases. Toward this goal we have successfully obtained FDA approval for six commercial therapies – five for PH and one for neuroblastoma, an ultra rare pediatric cancer.

An overview of our development programs as of date of printing of this Report is below:

FOUR DEVELOPMENT PROGRAMS



Our PH products were initially approved to treat only PAH. 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 actively studying additional indications for Tyvaso. In March 2021, nebulized Tyvaso was approved to treat PH-ILD in addition to PAH. In May 2022, we also obtained FDA approval of Tyvaso DPI to treat both PAH and PH-ILD, which we launched commercially in June 2022. As of the date of publication of this Report, Tyvaso and Tyvaso DPI remain the only available therapies the FDA has approved to treat PH-ILD. Following FDA orphan drug designation in December 2020, the European Medical Agency (**EMA**) in March 2022 granted orphan designation for treprostinil to treat idiopathic pulmonary fibrosis (**IPF**), a type of ILD.

Neuroblastoma is a cancerous tumor that begins in nerve tissue of infants and very young children. Unituxin was the first antibody therapy FDA-approved to treat children with high-risk neuroblastoma.

a) The *TETON PPF* study is expected to enroll its first patient by the end of 2023

b) The *AMETHYST* study is sponsored by Northern Therapeutics, a Canadian entity in which we have a 49.7% voting stake and a 71.8% financial stake

c) CLES = centralized lung evaluation system

CLINICAL TRIALS

In 2022, we had almost 900 volunteers participating in 15 clinical trials. Over the course of 2022, regulatory inspections of our clinical trials resulted in zero required voluntary or official actions or monetary fines.

All clinical trials must be registered with www.clinicaltrials.gov within 21 days of the first patient enrollment and we are committed to conducting these trials in compliance with laws, regulations, and guidelines for the protection of human subjects, including those issued by the International Council for Harmonisation: Good Clinical Practice (**ICH-GCP**). We are subject to periodic external audits by health authority inspectors that verify that we are complying with ethical standards and applicable laws and regulations.

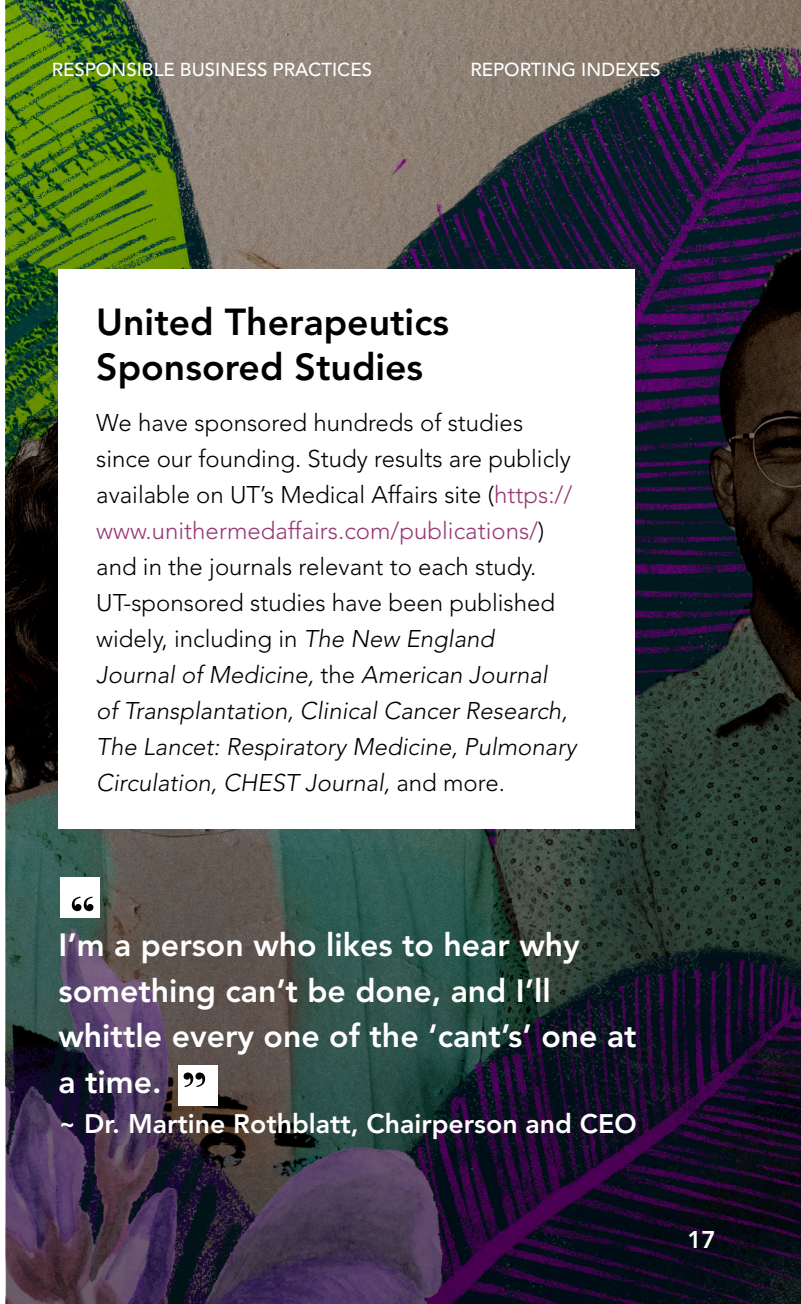
We are committed to sharing the results of our clinical trials in a timely manner. If a clinical trial is terminated early for safety reasons, we intend to promptly disclose medically important information to regulatory authorities and the public. Results of successful trials are to be posted to www.clinicaltrials.gov within 12 months after the last patient completed each study, or within 30 days of product approval by the FDA. If the trial was terminated for efficacy reasons, the results are to be disclosed within 12 months after the last patient completed each study. See more information about clinical trial safety on page 25.

ORGAN RESEARCH AND DEVELOPMENT PROJECTS

Close to one million people in the U.S. have end-stage organ disease and may need a heart, kidney, or lung transplant. The diseases our medicines address often go underdiagnosed, which means that many people start using our medicines toward the end-stage of their diseases, sometimes in hopes for a lung transplant soon. In 2006, we established what became **Lung Biotechnology PBC**, chartered 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." It was also the first PBC subsidiary of a public biotech or pharmaceutical company and played a key role in our decision to convert United Therapeutics Corporation to a PBC in 2021.

Lung Biotechnology PBC houses most of our organ manufacturing programs, which are aimed at dramatically increasing the supply of transplantable organs and fulfilling our founder's goal to achieve the unachievable.

LUNG BIOTECHNOLOGY



United Therapeutics Sponsored Studies

We have sponsored hundreds of studies since our founding. Study results are publicly available on UT's Medical Affairs site (https://www.unithermedaffairs.com/publications/) and in the journals relevant to each study. UT-sponsored studies have been published widely, including in *The New England Journal of Medicine*, the *American Journal of Transplantation*, *Clinical Cancer Research*, *The Lancet: Respiratory Medicine*, *Pulmonary Circulation*, *CHEST Journal*, and more.

"I'm a person who likes to hear why something can't be done, and I'll whittle every one of the 'cant's' one at a time."

~ Dr. Martine Rothblatt, Chairperson and CEO

Through our EVLP program, xenotransplantation, regenerative medicine, and 3D organ bioprinting, our scientists and engineers are learning the literal ins and outs of lungs and other organs. We are developing solutions designed to help address preconceptions and expand what regulators, HCPs, and patients understand and accept to enable a future where everyone who is eligible for an organ replacement can receive one.

EVLP

According to the Mayo Clinic in Florida, only about 20% of donor lungs in the U.S. are used for transplant.[2]

Since 2014, we have been developing technologies and services with the goal of increasing the number of donor lungs for transplantation through a process called ex-vivo lung perfusion (EVLP, which means "outside of the body lung perfusion"). These are human donor lungs that likely would not have been used for transplant, absent the use of EVLP technology.

Our EVLP procedures enable transplant physicians to remotely evaluate donor lungs for a host of functional indicators to determine suitability for transplantation. This work has resulted in hundreds of successfully transplanted lungs for patients with end-stage lung disease.

We have two facilities dedicated to EVLP, one in Silver Spring, Maryland, and one in a site-net zero facility constructed on the campus of the Mayo Clinic in Jacksonville, Florida. These remain the only full-service, centralized EVLP centers in the United States, each having dedicated surgical suites with specialized EVLP expertise, equipment, and advanced software and communication technologies enabling us to do remote monitoring. We also facilitate organ procurement and transportation support services to enable recovery and transportation of these fragile organs from the donor hospital to an EVLP center (if EVLP is needed) and to the recipient hospital.

Progress as of April 2023:

More than **300 patients** received lung transplants following use of our centralized EVLP model

Unitherians in an EVLP lab

Unitherians in the EVLP Command Center

[2] https://www.mayoclinic.org/medical-professionals/transplant-medicine/news/increasing-the-number-of-transplantable-lungs/mac-20473333

Xenotransplantation

Acquired by United Therapeutics in 2011, **Revivicor** received FDA approval in 2020 for use of **GalSafe™** pig as a source of human therapeutics and food for human consumption. The intentional genomic alteration in these pigs is intended to eliminate the alpha-Gal sugar on the surface of pigs' cells, which causes an allergic reaction in people with alpha-Gal syndrome, and may be a cause of immune rejection in patients receiving xenotransplants. We are also working on pigs with additional genetic modifications for our xenotransplantation initiatives.

Progress thus far:

In January 2022, a **UHeart™** — a heart from a pig with ten genetic modifications — was successfully transplanted by surgeons at the University of Maryland School of Medicine into a living patient, Mr. David Bennett, Sr. The patient survived approximately two months with the UHeart. In July 2022, data from this procedure were published in the *New England Journal of Medicine*.

Results of successful experiments with our collaborators at the University of Alabama at Birmingham and New York University (**NYU**), transplanting **UThymoKidney™** and **UKidneys™** from our genetically modified pigs into recently deceased human donors maintained on artificial life support, were published in the *American Journal of Transplantation* in January 2022, and in the *New England Journal of Medicine* in May 2022.

In June and July 2022, our collaborators at NYU tested two UHearts from our genetically-modified pigs into recently deceased human donors maintained on artificial life support. In each case, normal function was observed for our UHearts over a three-day study period, without signs of early rejection.

Regenerative Medicine – Lung Lobes

ULobe™ is a development-stage, engineered lung for transplantation, generated from a porcine lung scaffold with human allogeneic (human donor) lung cells. Pig lungs undergo a process of decellularization to remove all porcine cells and DNA leaving an acellular protein scaffold. The scaffold is then recellularized with primary human-derived lung cells. Our goal is to manufacture engineered lungs for transplant to eliminate the wait list and reduce rejection risk.

Progress thus far:

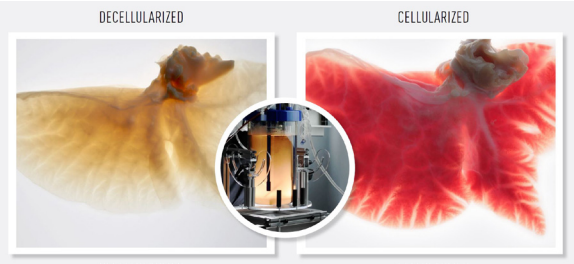
Decellularized over **500** porcine lungs annually

Recellularized over **200** scaffolds annually

Seeded over **700** million primary human cells into the lung constructs in 2022

Achieved stable EVLP lung function of engineered lungs for **3+** hours

Began initial animal transplant studies with engineered lungs



3D Organ Bioprinting

3DAP (3D printed autologous) Lung is a development-stage product made of high-resolution lung scaffolds 3D-printed with bioinks and then cellularized with a patient's own stem cells to create tolerable, transplantable, personalized organs that should not require immunosuppression to prevent rejection. In collaboration with **3D Systems Corporation**, which launched the 3D printing industry in 1986, our team co-developed a process they call **Print to Perfusion™**. Through this process, we successfully printed lung scaffolds – organ-sized objects with production accuracy at the micron scale.

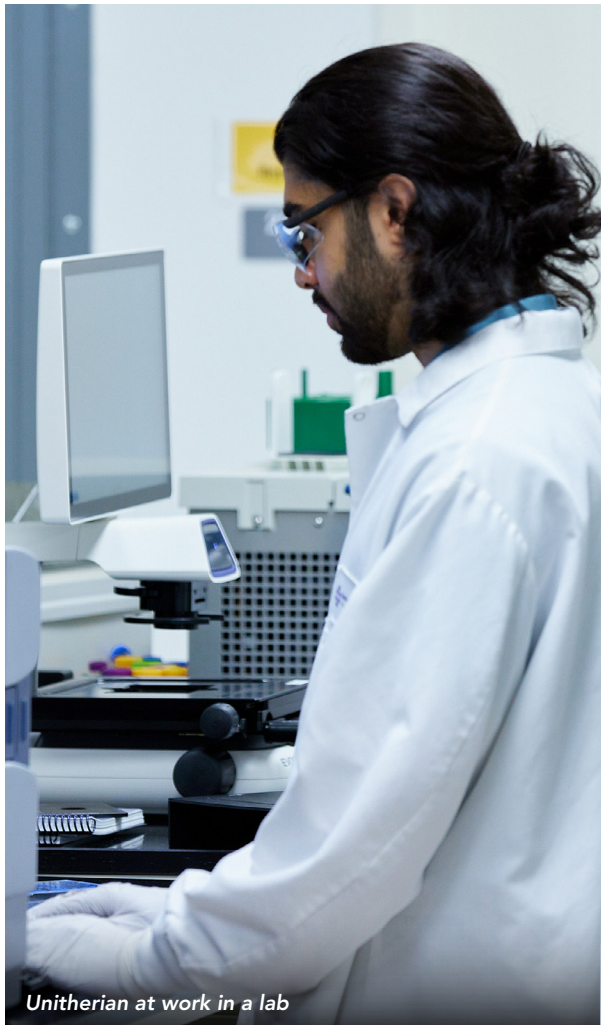
Progress thus far:

44 trillion voxels — the most detailed 3D-printed object in the world (voxels are 3D pixels)

200 million alveoli (an average adult human lung has around 240 million alveoli)[3]

2,000 km of pulmonary capillaries (about 1,240 miles, roughly the distance between Baltimore, Maryland, and Fort Worth, Texas)

[3] https://pubmed.ncbi.nlm.nih.gov/14512270/



Unitherian at work in a lab

INNOVATION IN FLIGHT: UNITHER BIOÉLECTRONIQUE

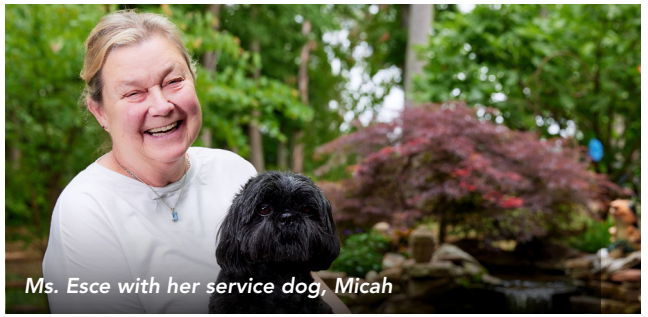
While our EVLP process can extend the transplantation viability of lungs outside the body, which under normal circumstances is only about six hours, lungs remain one of the most highly perishable organs. The safe and efficient transportation of all organs remains a challenge, and flight or ground transportation delays may close that precious window of viability in which a recipient waits for a life-saving organ to arrive.

Our wholly-owned **Unither Bioélectronique** subsidiary is leading an effort to develop electric vertical take-off and landing (**eVTOL**) autonomous airborne organ delivery systems that also mitigate the environmental impacts associated with conventional transportation options. The Bioélectronique team completed the world's first successful delivery of donor lungs between two hospitals in Toronto in September 2021.

For more information about the potential environmental benefits of Unither Bioélectronique, see the *Environmental Stewardship* section of this Report starting on page 49.

Learn about our clinical trial of our centralized lung evaluation system by contacting our team here: https://www.lungbioengineering.com/clinicaltrial-03641677/contact-us/

Patient Spotlight



Ms. Esce with her service dog, Micah

"I'll make you a deal…. If you do these lungs for me, I'll wrestle you."

This was the offer **Ms. Dorothy Esce** made to the transplant specialist when asked why she wanted to receive a lung transplant – and why they should select her as a potential organ recipient.

Ms. Esce was 70 when she sought and eventually received a lung transplant. As fortune would have it – and good fortune has a role in Ms. Esce's story – the lungs she received were recovered through our EVLP program. We had an opportunity to speak to Ms. Esce in May 2023 to learn more about her experience before and after her transplant.[4]

FROM RESIGNATION TO RESOLVE

The lung transplantation landscape today is stark. Every year, about 150,000 people in the United States die from end-stage lung disease. At one point, Ms. Esce thought she would be among that number. "I could not do the things I loved to do… to garden, to work with my service dog, to hike with my husband … mushroom picking, playing with my nine grandchildren, cooking, quilting," she explained. "I had severe anxiety due to the difficulty in taking a breath. I had depression." Complicated by COVID-19 restrictions and as a severely immuno-compromised person, she had to be careful. She could not attend her oldest grandson's high school graduation – "I had to do a drive-by; I couldn't even hug him," she said. Nor was she able to be with family to witness the joy of new grandchildren born during that time. "I had come to the conclusion that I was done," Ms. Esce said. And alongside that came self-blaming. A one-time smoker, Ms. Esce explained, "I always thought I was invincible... I developed anger within myself. I was supposed to live longer than this," she said.

But then, she had a conversation with her doctor about seeking a lung transplant. After some months, she met with a specialist to evaluate her candidacy to be on the transplant list. "Do you know, they were not going to [accept me on the list]," Ms. Esce explained. "The doctor asked, 'What makes you a client for this transplant, why do you want this?' Because he didn't believe I qualified for it."

That's when her resolve kicked in.

[4] Please note: The lung transplant process is a complex emotional and physical experience. This summary represents Ms. Esce's experiences and cannot be generalized. Patient experiences vary considerably. Please contact your healthcare provider if you have questions or concerns about your own or your loved ones' experiences through a lung transplantation process.

"I started crying and I said to him: I have nine grandchildren. I have three children. I have an amazing husband... I want to live for my family." She also protested the age restriction for lung transplant. "You don't know me," she said. "You can't judge me by a number." And that's when she also challenged him to a wrestling match – post transplantation, of course.

He accepted the challenge. Spoiler alert: they haven't wrestled … "yet," Ms. Esce noted.

GATHERING HER VILLAGE

Getting into a lung transplantation program is no guarantee you will receive a lung transplant. According to the United Network for Organ Sharing (**UNOS**), only 2,500 people receive a lung transplant every year. There are several barriers in the journey, but one of them is related to the process of testing for suitability for a transplant. "You're in the program, and suddenly, you have all these different tests… cardiac, GYN, bone, muscle, nerve, eye, stomach, kidney, stress, dental…. And you only have so much time to complete them to be accepted into the program," Ms. Esce said. "I'm going through all these tests with anxiety, thinking… I could very well be rejected at the end."

That's when she decided she was going to complete all the tests within a record two-to-three months. "I wanted that transplant more than you could imagine and taste," she said. "My husband and I were a team… and we were going to go for it," she said. She gathered her husband and children around her and asked for their support – for her and for her husband of 55 years. They were all in.

A FATEFUL CHOICE

She finally got word that she was on the transplant list and was given a choice. "They told me, you can either choose a lung that [may have been] exposed to drugs, that are not 100% perfect... or, you can wait and put your name on the list for a perfectly healthy lung. Because I wanted to get a lung sooner than later, I felt the first choice was my only option," Ms. Esce explained. "They said it could take up to a year or more for a suitable lung. So, I waited and waited."

It was 9:00 pm on the 17th of March – a month after being placed on the list – when she got the call: they had received a lung that might be suitable for her. This was the same day she received a fortune with her Chinese food dinner saying, "Your troubles will cease and good fortune will smile upon you."

"I looked at my husband and said, 'Did you hear that? This is St. Patrick's Day,'" Ms. Esce said. "We are so blessed."

A BREATH OF FRESH AIR

When the Esce's arrived at the hospital that evening, things moved quickly. "The doctor told me, 'These lungs have been cleaned just for you.' And the other thing I remember him saying to me was this: 'They are extremely young lungs. Take care of them.' I didn't' realize 'till about a year later, how young they were," Ms. Esce said.

Post-operative recovery was painful and the Esce family had a moment of fright when they had to reintubate. But when she finally woke up three days later, she saw her husband who asked her how she was feeling. "I can breathe, I can breathe!" she said.

"I have no oxygen [tank]. I have no mask. I am breathing on my own. It was the most amazing feeling to be able to breathe in and then breathe out. Over the [previous] year, I could not. The air went in, but it never came back out.… Hold your breath. Don't exhale – just hold it. See how long you can hold it. That's what I was feeling. You don't realize until you're drowning in your own oxygen, your own breath, how good fresh air feels."

THE JOURNEY AHEAD

The tenacity that helped Ms. Esce secure a transplant was part of what got her home in under two-weeks – another record-breaking feat. Today, Ms. Esce is as spirited as you might imagine. She's still recovering from a slip and fall she had when she joined an Easter Sunday soccer game with her grandchildren. "That was okay," she said. "Because I survived."

When asked what's next for her, she explained that she wants to go back to Nova Scotia to hike the mountains she wasn't able to hike when her husband took her on a trip before she got on the transplantation list. She also wants to go to Italy. But outside of that? "I don't have a lot on my bucket list. I am so blessed to be able to be home with my husband to spend time with my grandchildren.… I have been able to go hiking with my husband. I was able to go prom dress shopping with my granddaughter, make 10 king size quilts for the grandkids and family. These are the things I really look forward to," she said.

"I just wish a lot more people could benefit from this. My lungs were given to me from a 19-year-old boy.… He had been a drug user.… [The UT EVLP program] helped recover them," she said. She credits her faith and family with the good fortune that has, indeed, smiled upon her and prays daily for the family of the young man that made this gift of life.

Product Quality and Patient Safety

2022 Product Quality and Patient Safety at a Glance

Data as of December 31, 2022, unless noted otherwise.

Our Target

Pass all good manufacturing practice (**GMP**)*-related FDA inspection findings at UT-owned facilities

UN SDG Alignment

3 GOOD HEALTH AND WELL-BEING

Progress Highlights

- **Zero** GMP-related issues at UT-owned facilities that would prevent use or approval of our products
- **Zero** product recalls
- **100%** completion of required GMP training for all new hires and for employees who directly perform GMP activities
- More than **600 pre-qualified** raw material vendors and service providers to support clinical and commercial business operations

* We adhere to FDA GMP standards and are committed to improvement, striving to apply current Good Manufacturing Practices (cGMP) across our manufacturing operations.

Our first two compliance principles: **WE DO THE RIGHT THING** and **WE ARE PASSIONATE FOR PATIENTS**.

- We get the right products, to the right patients, for the right reasons
- We manufacture with the highest quality standards
- We promptly report adverse events and product complaints

All Unitherians are responsible for safeguarding patient's health, product quality, and helping achieve compliance with UT's policies and standards.

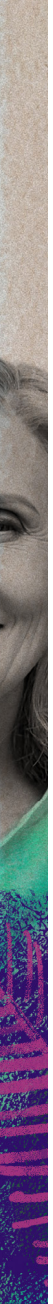
Our Commitment to Patient Safety

Protecting and improving patient health and quality of life is our core objective, tied to our compliance principles, and reinforced through our public benefit purpose.

Our commitment to doing the right thing means:

- Transparent communication channels between our internal teams and Quality Management System (**QMS**) Programs to provide a complete view of patient safety concerns
- Extensive training of our laboratory and manufacturing personnel on **GxP** requirements. GxP refers to GMP as well as Good Clinical Practices (**GCP**), Good Distribution Practices (**GDP**), Good Laboratory Practices (**GLP**), Good Tissue Practices (**GTP**), and Good Vigilance Practices (**GVP**)
- Completion of safety data reviews and management plans for proposed clinical trials at the outset of each study to enable adherence to UT standards and the ICH-GCP
- Internal and external inspections and audits of our manufacturing sites by United Therapeutics and major regulatory health authorities such as the FDA, the EMA, and the Japanese Pharmaceuticals and Medical Devices Agency to support quality system norms and regulatory compliance
- Ongoing monitoring of patient safety in the field through post-marketing surveillance and prescriber and consumer reports to help identify potential safety concerns quickly
- Training, auditing, and monitoring of third parties, such as contract service providers, clinical sites, and suppliers, to encourage a uniform and proactive approach to patient safety across our value chain
- Commitment to protect the personal data entrusted to us by patients, HCPs, and other stakeholders

Unitherian handling materials



Our Patient Safety Operations

To promote patient safety, we have established a robust safety governance structure that operates under a comprehensive and strict set of standards designed to enable proper oversight of our product safety and pharmacovigilance (**PV**) activities.

Product Safety Review Committee (PSRC)	Chaired by our head of Global Drug Safety, and comprised of leaders from PV, Quality, Compliance, R&D, Medical, and Operations, this committee oversees our patient safety strategy and direction. The Committee meets at least quarterly to endorse recommended actions proposed by the Product Safety Management Team (**PSMT**) to protect patient safety based on comprehensive reviews of data across all locations, populations, drugs, biologics, devices, and combination products.
Product Safety Management Team	Composed of medical, scientific, and quality experts, this team is responsible for evaluating and confirming safety trends or signals and recommending risk mitigation strategies to the PSRC. The team is accountable directly to our head of Global Drug Safety.
Global Patient Safety & Pharmacovigilance	Our head of Global Drug Safety provides strategic and operational direction to and oversight of the end-to-end Patient Safety Program and team with support from our Clinical Operations, Quality, Manufacturing, Medical Affairs, and Product Development teams.

Patient safety and safety risk minimization is at the core of our safety and PV practice. Our PV team regularly monitors reported AEs and product complaints to identify potential risks that could trigger risk minimization measures. We direct our patients to report suspected AEs by contacting United Therapeutics at 1-866-458-6479 or the FDA at 1-800-FDA-1088 or www.fda.gov/medwatch, and we treat information provided to us in accordance with our Privacy Statement on our website.

PRODUCT MONITORING AND ADVERSE EVENTS

We monitor the use of our therapies throughout the product lifecycle, starting from development programs through the post-approval phase to identify potential side effects and maintain a positive benefit-risk ratio. We provide mandatory training to our employees and third-party collaborators to help provide for the proper identification, rapid collection, and analysis of adverse events (**AE**) regarding the use of our therapies.

CLINICAL TRIAL SAFETY

Clinical trials evaluate the efficacy and safety of medicines and medical devices. They are essential in bringing effective new medicines and treatments to patients and their healthcare providers. Our clinical trial processes are integrated into our formal safety governance processes and procedures illustrated on the prior page. Regular safety reviews and decisions are made by a cross-functional PSMT. In addition, our R&D groups are required to submit information to regulatory health authorities for products that require regulatory review, including the results of clinical trials and other documentation related to the safety and efficacy of our products. We also conduct systematic compliance audits related to our clinical trials. For more information about our clinical trial ethics, see the *Ethics and Compliance* section starting on page 70.

ANTI-COUNTERFEITING AND PACKAGE SERIALIZATION

Counterfeit medicines pose a serious health risk. We manufacture and fill most of our own therapies, which are to be solely used under medical prescription and only purchased through a healthcare institution or SPs. This aids in maintaining control and traceability over our products.

We also have an internal process and use a digital system for the prevention, detection, and communication of counterfeit medicines that is designed to comply with the Drug Supply Chain Security Act. We accomplish this with serialization through the application of a unique identifier on packaging at various levels – from the smallest saleable unit up to the pallet level. At shipment, we exchange data with supply chain partners to help maintain a chain of custody of the drug product.

Our other labelling and packaging control measures include procedures around handling, storage, and distribution of products, and maintenance of safety data sheets for our products. Labels, printed inserts, promotions, and marketing materials are to be prepared in accordance with our own internal standards and regulatory requirements.

In 2022, there were no legal or regulatory actions related to potential counterfeits of our products.

Unitherian checking inventory

Our Quality Operations

Our quality organization is composed of several different teams with different focus areas to help us maintain our high level of quality operations:

Quality Teams	Areas of Responsibility
Quality Assurance (**QA**) teams • Program Quality • Quality Engineering • Quality Operations	• Review controls in both manufacturing processes and final products to help assure the quality standards for safety and efficacy of each lot • Review production processes to comply with best manufacturing practices and drive ongoing improvements
Quality Control (**QC**) team	• Inspect and test incoming materials, in-process materials, and finished product
GxP Compliance group	• Includes experts in GCP, GDP, GLP, GMP, GTP, and GVP • Responsible for establishing, implementing, and maintaining processes, infrastructure, tools, and resources for the QMS, and maintaining and leading the promotion, awareness, training, and remediation of regulatory quality throughout the organization • Conduct audits of external service providers and internal functions

Unitherians reviewing GxP results

OUR QUALITY MANAGEMENT SYSTEM

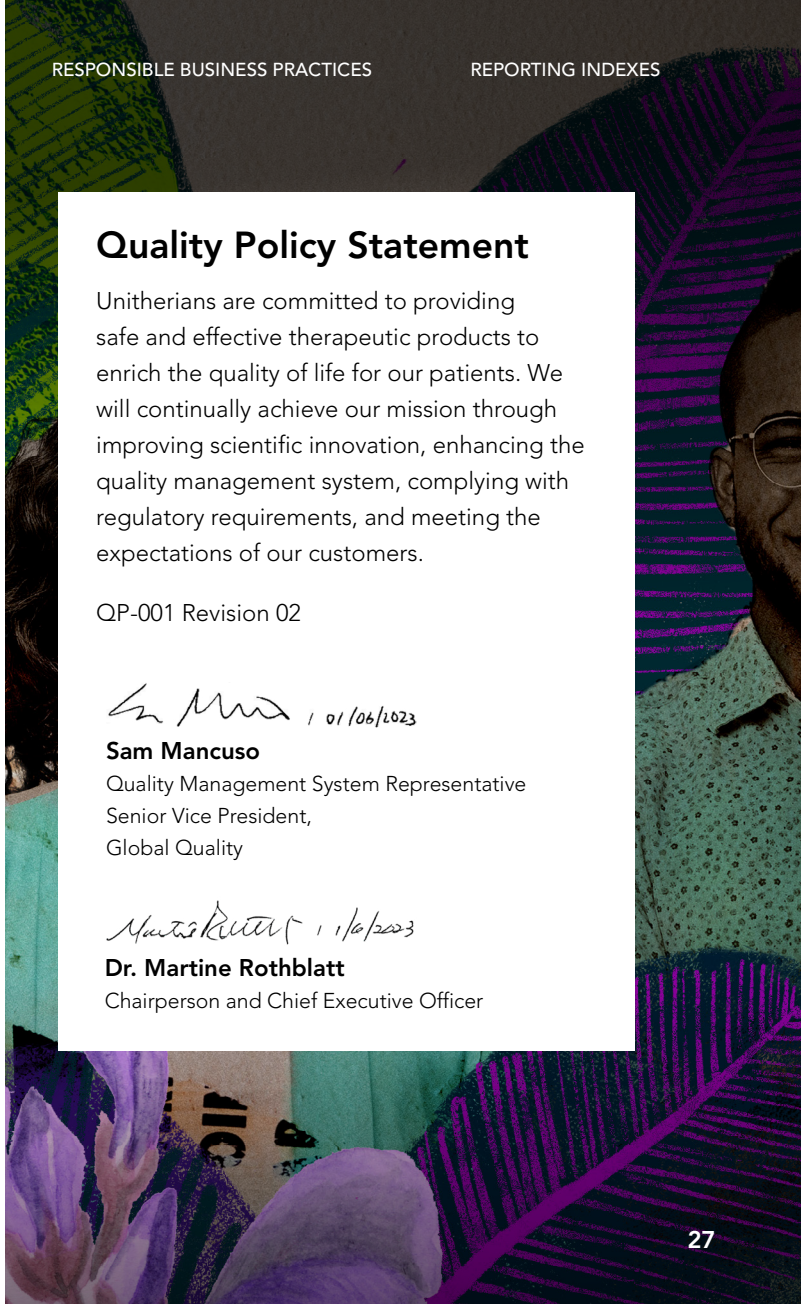
We are committed to leading industry practice through our GxP Quality and Compliance program, supported by a digital QMS. Our Global Quality Policy and supporting policies and standard operating procedures (**SOPs**) together establish guidelines designed to assure quality, safety, and efficacy in the marketing and distribution of our products.

Our Quality Policy covers all full- and part-time employees and extends to all contractors, sub-contractors, and temporary labor. Suppliers are required to comply with GMP regulations, enforced by the FDA, and have their own Quality Policy, which is reviewed during qualification and subsequent monitoring.

Our QA methods encompass all corporate operations. All departments, such as but not limited to, Medical Device Design and Development, Fill/Finish, Production, Materials, and Quality Control are responsible for adhering to GxP/Quality System Regulations (**QSRs**) and our internal procedures while performing GxP/QSR activities in a manner that enables us to incorporate and design quality into our products. Ongoing training and development is meant to provide employees with the tools to successfully fulfill their responsibilities while meeting our high quality and safety standards. We routinely evaluate our quality systems and processes at various levels of our organization to monitor key performance and quality indicators.

Our QMS provides guidance and best practices based on the current editions of applicable regulatory standards, including the following:

- FFDA Code of Federal Regulations: 21 CFR Part 820 – Quality System Regulation; 21 CFR Part 312 Subpart B Section 312.32: IND safety reporting; 21 CFR Part 310 Subpart D Section 310.305: Records and reports concerning adverse drug experiences on marketed prescription drugs for human use without approved new drug applications; 21 CFR Part 314 Subpart B Section 314.80: Post-marketing reporting of adverse drug experiences; 21 CFR Part 803 (Medical Device Reporting Regulations); 21 CFR Part 600 Subpart D Section 600.80: Post-marketing reporting of adverse experiences
- ISO 13485, Medical Devices – Quality Management Systems
- EC Directive 98/79/EC of the European Parliament and the Council on In Vitro Medical Devices
- EudraLex – Volume 4 – EU Guidelines for Good Manufacturing Practices for Medicinal Products for Human and Veterinary Use and applicable Annexes
- EU Medical Device Regulation (MDR 2017/745)
- Good Manufacturing Practices, Pharmaceutical Inspection Co-operation Scheme
- Good Pharmacovigilance Practices, EMA, and Good Pharmacovigilance Practices and Pharmacoepeidemiologic Assessment, FDA



Quality Policy Statement

Unitherians are committed to providing safe and effective therapeutic products to enrich the quality of life for our patients. We will continually achieve our mission through improving scientific innovation, enhancing the quality management system, complying with regulatory requirements, and meeting the expectations of our customers.

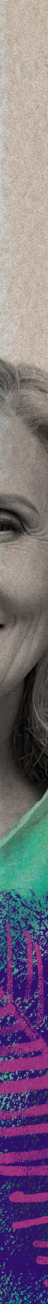
QP-001 Revision 02

01/06/2023

Sam Mancuso
Quality Management System Representative
Senior Vice President,
Global Quality

1/6/2023

Dr. Martine Rothblatt
Chairperson and Chief Executive Officer



ONSITE INSPECTIONS, AUDITS, AND TESTING

We conduct audits in accordance with the GxPs relevant to the work. Our GxP Compliance team is responsible for auditing our suppliers, service providers, distributors, and internal functions to verify that they are qualified to meet global regulations and our own standards. Our GxP team also works closely with our Environmental Health, Safety, and Sustainability (**EHSS**) team in completing product stewardship and industrial hygiene audits and testing across our facilities.

In 2022, we conducted 30 internal GxP audits and facilitated six GxP inspections by healthcare authorities, with zero cases of monetary losses related to any regulatory breach, fine, notification, or non-compliance.

CORRECTIVE AND PREVENTIVE ACTION PROGRAM

Our Corrective and Preventive Action (**CAPA**) program has established methods to complete the following:

1. Analyze processes, work instructions, quality and audit reports, quality records, service records, patient complaints, returned product, and other sources of quality data to identify existing and potential causes of nonconforming product or other quality issues
2. Investigate the causes of nonconformities or other quality issues
3. Identify actions needed to correct and prevent the recurrence of nonconformities or other quality issues
4. Verify or validate that CAPAs have the intended effect and no unintended adverse effects
5. Notify QA and QC leaders about nonconformances or quality issues to enable regular improvement

All full- and part-time employees, contractors, subcontractors, and temporary labor are required to initiate CAPA requests upon confirmation of quality issues. Designated individuals are assigned responsibility for coordinating, documenting, and monitoring the CAPA process.

EMPLOYEE TRAINING

We maintain a comprehensive set of SOPs and training programs to guide and serve as best practices for our employees with respect to GxP requirements.

We had 100% completion of required GMP training for new hires and 100% completion of annual required GMP training for all employees who directly perform GMP activities. **New** in 2022, AE training is now incorporated into required new hire orientation. For more information about our training program, see The *Unitherian Journey* section starting on page 43.

Our Supply Chain

We maintain a robust GxP Quality and Compliance program covering those aspects of our supply chain that could impact the quality and safety of our products. We use almost **600** raw material vendors and service providers we have pre-qualified to support our clinical and commercial business operations. **More than 80% of these are in the United States**, with the balance in Canada, Europe, and Asia. In 2022, 99 service and material supplier audits were completed as part of our initial qualification or periodic evaluation processes. The audits of suppliers of raw materials and services focus on quality and safety aspects of the products and services supplied.

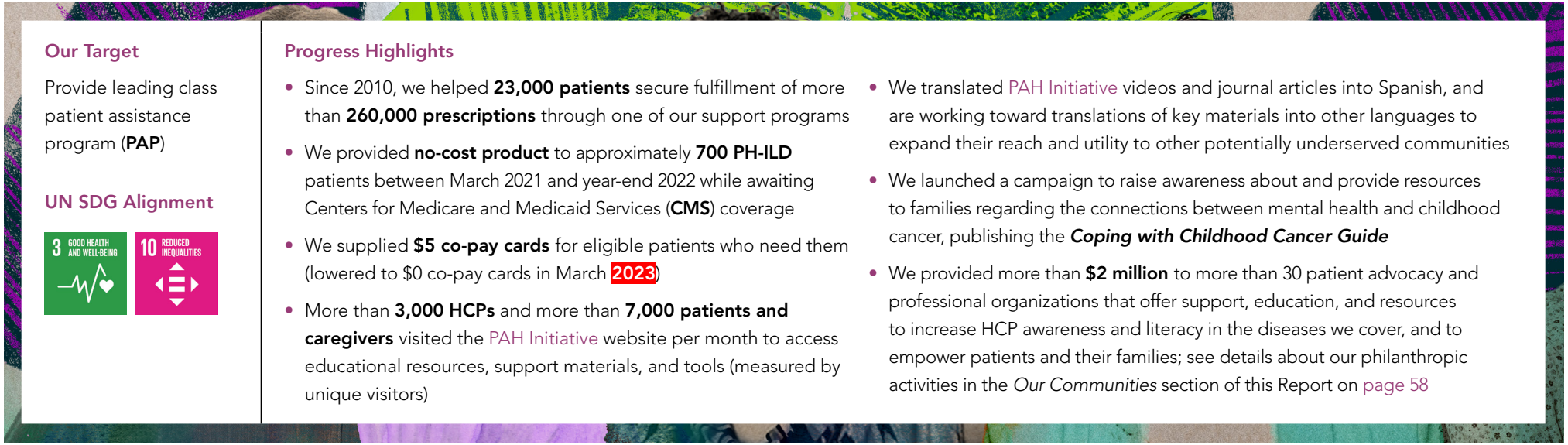
After initial assessment and qualification, we periodically re-evaluate supplier compliance with GMP norms and quality standards at a frequency defined in internal procedures. For example, we conduct remote or onsite audits of certain qualified suppliers if there is high impact level of product or services provided, if there have been issues with product or service quality, and/or if there have been changes that may result in increased potential risk (e.g., change in manufacturing location).

No Patient Left Behind

Patient Support

2022 Patient Support at a Glance

Data as of December 31, 2022 unless noted otherwise.



Our Target

Provide leading class patient assistance program (**PAP**)

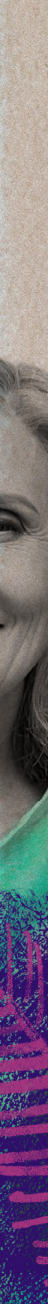
UN SDG Alignment

3 GOOD HEALTH AND WELL-BEING

10 REDUCED INEQUALITIES

Progress Highlights

- Since 2010, we helped **23,000 patients** secure fulfillment of more than **260,000 prescriptions** through one of our support programs
- We provided **no-cost product** to approximately **700 PH-ILD** patients between March 2021 and year-end 2022 while awaiting Centers for Medicare and Medicaid Services (**CMS**) coverage
- We supplied **$5 co-pay cards** for eligible patients who need them (lowered to $0 co-pay cards in March 2023)
- More than **3,000 HCPs** and more than **7,000 patients and caregivers** visited the PAH Initiative website per month to access educational resources, support materials, and tools (measured by unique visitors)
- We translated PAH Initiative videos and journal articles into Spanish, and are working toward translations of key materials into other languages to expand their reach and utility to other potentially underserved communities
- We launched a campaign to raise awareness about and provide resources to families regarding the connections between mental health and childhood cancer, publishing the ***Coping with Childhood Cancer Guide***
- We provided more than **$2 million** to more than 30 patient advocacy and professional organizations that offer support, education, and resources to increase HCP awareness and literacy in the diseases we cover, and to empower patients and their families; see details about our philanthropic activities in the *Our Communities* section of this Report on page 58



The diseases that affect our patients are rare, which means they often are misdiagnosed or underdiagnosed, and often undertreated. That is why we take a holistic approach to helping patients. We engage HCPs to educate them about these diseases and treatments to help enable them to diagnose earlier and treat in accordance with the latest standards of care. We help patients, their families, and caregivers by providing education and support to help them navigate their diagnosis and treatment journey. We provide support and financial assistance to help make sure everyone who needs our solutions will have access to them.

Patient Education and Empowerment

Patient education and empowerment are critical to providing effective management of rare and life-threatening diseases such as PAH and PH-ILD. We have long maintained a patient outreach and assistance program, and we supplemented this with the launch of the PAH Initiative in 2020 to provide a more comprehensive education and resource program for anyone affected by PAH. The PAH Initiative is integral to our holistic approach; its mission is to help patients navigate life with PAH and move forward in their journey by providing both knowledge and inspiration.

Key programs of the Initiative include **PAH Initiative Ambassadors**, patients who share their own experiences with other patients through articles and videos; national broadcasts with experts; our semi-annual magazine *PAH Today*; a phone app called **PHpal™** that provides tracking and self-assessment tools, games, and more; educational videos; wellness resources; social media pages on Facebook and Instagram; and **"Patient Voices" meetings** several times a year to get timely feedback on our programs and materials. This feedback helps us understand our patients' experiences, which, in turn, helps us make regular improvements to our therapeutics solutions.

We have also translated our materials into Spanish, and are working toward translating key materials into other languages to expand their reach and utility to other potentially underserved communities.

Many PAH therapies are specialty medications that bring with them unique complexities requiring in-depth patient education to enable safe and effective administration. For this reason, our nursing teams train a network of dedicated nurses and pharmacists in contracted SPs across the country to train patients in how to use our therapies. It is this level of interactions with patients – either through SP nursing or the pharmacy staff – that we believe allows us to educate our patients effectively.

PAH Initiative
Sponsored by United Therapeutics
Committed to Improving the Lives of Patients

Supplementing and complementing the PAH Initiative, our **ARCHWAYS Team** provides dedicated educational support for new Orenitram and Tyvaso/Tyvaso DPI patients and their caregivers to help them understand their disease journey, and to answer questions about their prescribed treatment. Virtual patient educators are available at no cost to patients as they begin their journey with PAH.

Enabling Health Care Providers

While the focus of our PAH Initiative is on the patient experience, we provide clinically useful information, training, and practical tools to help HCPs improve the lives of patients with PAH. These include:

- Information on the diagnosis and treatment of PAH
- An in-depth discussion of the pathophysiology of PAH
- Data showing the importance of risk assessment in determining prognosis
- Risk calculators to assess the risk status of patients
- Information on treatment approaches
- Resources including podcasts by experts in PAH, recent publications about PAH, training through a comprehensive educational curriculum, and more

Archways

Pediatric Cancer Education

Neuroblastoma is a very aggressive form of pediatric cancer, which is why nearly 70% of children who have it are diagnosed at an advanced stage of the disease. Our founder, like many other Unitherians, knows personally how devastating it can be to learn that your child is diagnosed with a disease of any kind. This fuels our team's passion to develop and deliver comprehensive resources to support families and caregivers affected by childhood cancer.

Our NEUROBLASTOMA*info* family-friendly website provides resources and tools to support families from diagnosis to treatment and beyond. These include videos, educational content about diagnosis and treatment options, links to advocacy groups, and award-winning resources for children who have questions about cancer. In 2021, we supplemented our ***Skivolo*** illustrated books with ***Zara Takes Off***, developed as part of the Braving NeuroBLASToma initiative, a collaboration with former National Football League defensive end **Devon Still** and his daughter **Leah**, a pediatric high-risk neuroblastoma survivor.

Coping with a child's cancer diagnosis can be overwhelming. In 2022, we launched the **Mental Health in Childhood Cancer** initiative to help families on this difficult journey. Through this initiative, we created a mental health kit in collaboration with the Mattie Miracle Cancer Foundation and **Punkinfutz**, a sensory play company. This includes a nine-page Coping with Childhood Cancer guide that uses the concepts and ideas from the Foundation's *Psychosocial Standards of Care Project for Childhood Cancer*, a set of evidence-based standards built to help healthcare teams better identify ways to support positive coping throughout the cancer journey.

Intersection with Other Diseases
The effects of PH on hearts and lungs are shared with other diseases and health issues, and PH itself is sometimes linked with other diseases. For that reason, our national broadcasts and other educational materials include information from cardiologists who can speak about heart issues that span diseases such as PH. We also partner with the **Scleroderma Foundation**, as patients with scleroderma, a chronic connective tissue disease, are at high risk of getting PH. For more information about our philanthropic activities, see the section on *Our Communities* starting on page 58.

Access to Medicine

Our purpose – to create a brighter future for our patients – often starts with our dedicated teams who work hard to provide appropriate patient access to our treatments.

In the U.S., many independent and third-party health plans pay for patient use of our commercial products. Our **Managed Markets and Reimbursement Team** works directly with insurance plans to try to obtain the best coverage for our medications.

Navigating the ins and outs of health insurance in the U.S. can be difficult. Add to that the stress and fear accompanying a new diagnosis, it is not hard to imagine why many patients and families seek additional support to secure financial coverage for their treatments. Our **Access Solutions and Support Team (ASSIST)** program helps patients navigate questions about access to our medicines. ASSIST support includes benefits investigations, explanation of prior authorization requirements, and information related to denials and appeals by insurers. ASSIST associates are skilled, active listeners, available to work with patients – along with their insurance plans, HCPs, and SPs – to help educate them on requirements of securing coverage for their prescribed UT medications.

assist
Access Solutions and Support Team

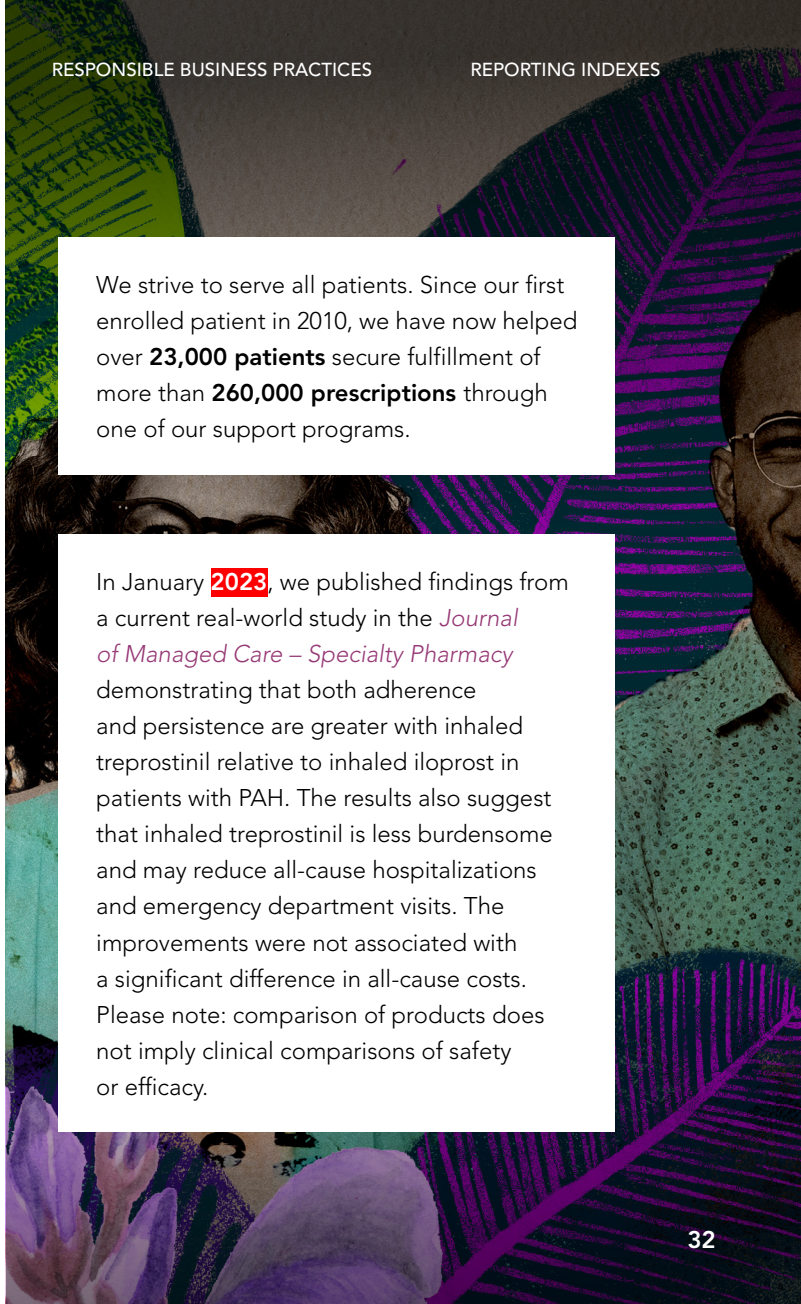
We also have a variety of options for patients who may still need financial assistance to pay for treatments beyond insurance coverage. For example, ASSIST administers the following programs:

- a temporary fill program in which we provide a one-time 30-day supply of medicine for patients who experience temporary coverage disruption
- the **Co-pay Assistance Program** that was reduced from $5 to $0 co-pay in March 2023
- no cost medicine provided to eligible patients who cannot afford their therapies

Pricing

We are mindful about the costs of our products to the healthcare system and strive to consider the benefits to patients, society, and the healthcare system in our pricing approach. **Our Health Economics and Outcomes Research Team** regularly funds and publishes collaborative studies that evaluate the value of medicines by analyzing real-world outcomes such as hospitalizations, quality of life, treatment adherence, treatment satisfaction, as well as medical and pharmacy costs.

While we increase the price of our products from time to time to reflect inflation, R&D, and infrastructure investments to support the manufacture of our products, these price increases typically average in single digit percentages per year for the products where we maintain pricing control.



We strive to serve all patients. Since our first enrolled patient in 2010, we have now helped over **23,000 patients** secure fulfillment of more than **260,000 prescriptions** through one of our support programs.

In January 2023, we published findings from a current real-world study in the *Journal of Managed Care – Specialty Pharmacy* demonstrating that both adherence and persistence are greater with inhaled treprostinil relative to inhaled iloprost in patients with PAH. The results also suggest that inhaled treprostinil is less burdensome and may reduce all-cause hospitalizations and emergency department visits. The improvements were not associated with a significant difference in all-cause costs. Please note: comparison of products does not imply clinical comparisons of safety or efficacy.

Reliable Supply

2022 Reliable Supply at a Glance

Data as of December 31, 2022, unless noted otherwise.

Our Target

Maintain two-year inventory of our PH therapies

UN SDG Alignment

Progress Highlights

- Maintained **two-year inventory** of nebulized Tyvaso, Remodulin, and Orenitram

One key element of our goal that no patient gets left behind is to maintain sufficient inventory to maintain uninterrupted supply to patients for whom our therapies are prescribed. We aim to maintain, at a minimum, a two-year inventory of nebulized Tyvaso, Remodulin, and Orenitram based on expected demand, and we engage third-party contract manufacturers to supplement our capacity for some products. Our new Phase 5 net zero cold storage cGMP logistics center in North Carolina is meant to help us maintain this commitment as expected demand for Tyvaso DPI increases. For more information about our Phase 5 logistics center, see the *Environmental Stewardship* section starting on page 49.

More than 80% of UT's almost 600 raw material vendors and service providers are in the United States. Maintaining a largely domestic supply chain is one element of our management approach that helped us weather the COVID-19 pandemic and other supply chain disruptions, thus enabling us to meet our public benefit objective of aiming to make sure no patient gets left behind.

Our People

Our People

A Message From Our Chief People Officer

In preparing to write this introduction, I reflected on the past few years, pondering human resilience and limits. The unprecedented social and economic turbulence experienced in recent times, including the global pandemic and its aftermath, has indeed brought significant changes to the expectations of the workplace.

According to the Gallup *State of the Global Workplace: 2023 Report*, employees want employers to recognize them as whole beings; they want to be treated with respect and feel a high degree of trust – trust invested in them by their employers and for their employers to act in ways that earn their trust in return. At United Therapeutics, we have always tried to focus on the whole employee experience, and the events of the past have, as for many employers, brought change to the way we serve our workforce both inside and outside of work.

Above all, we believe that our employees, whom we call "Unitherians," are the key to achieving our public benefit purpose of providing a brighter future for our patients.

We are dedicated to providing them with meaningful development and career opportunities that can help harness their creative potential, bolster their skills, and inspire them to contribute their many talents towards our purpose. The achievements we attain, our positive impact on the communities we serve, and our overall success are made possible by the tireless efforts and innovative thinking of our diverse team members. As we navigate the evolving business landscape, we have swiftly adapted to meet the needs of our Unitherians worldwide. This includes fostering diversity, equity, and inclusion, offering flexible hybrid work options, prioritizing the health and safety of our workforce, and providing comprehensive support and resources for both physical and mental well-being. We have long striven to reward our Unitherians with top-notch compensation and benefits programs that honor and nourish their passions with purpose. Moreover, we are unwavering in our commitment to maintain a safe workplace.

I am excited to celebrate our successes and raise awareness about what we are doing to meet one of our PBC goals of being a destination employer. Thank you, to all the current and future Unitherians reading this, as well as to our other stakeholders interested in our journey and progress toward creating a world-class employee experience.

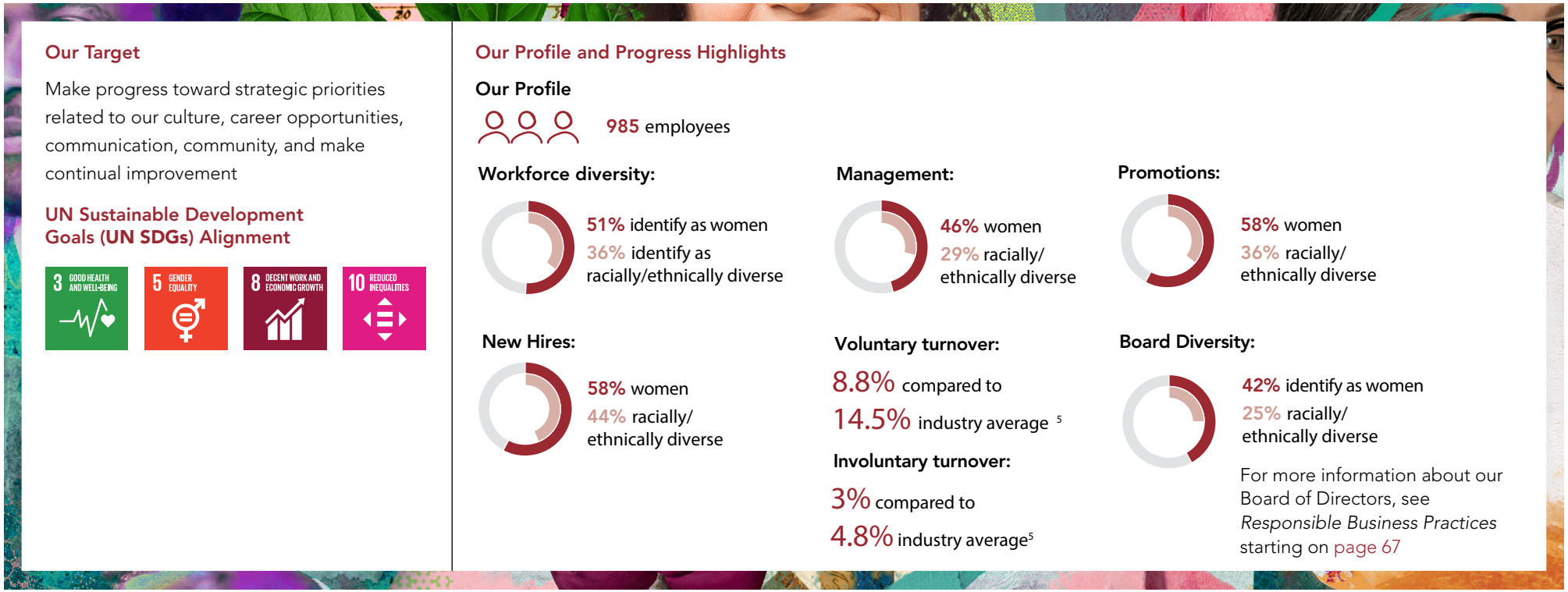
"Above all, we believe that our employees, whom we call "Unitherians," are the key to achieving our public benefit purpose of providing a brighter future for our patients."

Alyssa Friedrich
Chief People Officer

Be a Destination Employer

2022 Unitherians at a Glance

Data as of December 31, 2022 unless noted otherwise.



Our Target

Make progress toward strategic priorities related to our culture, career opportunities, communication, community, and make continual improvement

UN Sustainable Development Goals (UN SDGs) Alignment

3 GOOD HEALTH AND WELL-BEING
5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
10 REDUCED INEQUALITIES

Our Profile and Progress Highlights

Our Profile

985 employees

Workforce diversity:

51% identify as women
36% identify as racially/ethnically diverse

Management:

46% women
29% racially/ethnically diverse

Promotions:

58% women
36% racially/ethnically diverse

New Hires:

58% women
44% racially/ethnically diverse

Voluntary turnover:

8.8% compared to **14.5%** industry average [5]

Involuntary turnover:

3% compared to **4.8%** industry average[5]

Board Diversity:

42% identify as women
25% racially/ethnically diverse

For more information about our Board of Directors, see *Responsible Business Practices* starting on page 67

[5] Industry data from Aon/Radford Turnover study; 2022 data published May 2023 | U.S. Life Sciences: Biotech/Pharma | Date range for 2022 industry data is January 2022 – January 2023

Data as of December 31, 2022 unless noted otherwise.

Our Progress

- **100% completion** of assigned environment, health, safety, and sustainability (**EHSS**), good manufacturing practices (**GMP**), Code of Conduct training, and human resource curricula including assigned diversity, equity, and inclusion (**DEI**) training
- Unitherians are provided opportunities for regular formal **performance reviews**
- Average formal UT-delivered training hours per person: **18** hours, complemented by on-the-job training and coaching[6]
- We offer up to **$30,000 reimbursement** per employee for continuing education tuition assistance; in 2022, **25** employees participated in this program
- **Enhanced benefits offerings** in several areas, including providing access to medical, dental, and vision benefits to part-time employees, increasing our adoption assistance program for all employees, and increasing travel benefits under our medical plan to enable access to medically necessary procedures
- In 2023, employees launched **oUT & Proud**, an LGBTQ+ employee resource group (**ERG**) and our third ERG at UT, joining the **UT Black Affinity Organization** and the **Inspire Initiative** for women
- Operate safely with **zero** recordable injury and illness rate and **zero** fatalities
- Implemented an **integrated environmental management system** aligned with recognized international standards, including ISO 14001 and ISO 18001, to control risks, manage centralized reporting, and oversee key aspects of safety and health
- Certified for the **fifth consecutive year as a Great Place to Work by Fortune Magazine**, recognized for the **ninth consecutive year as a Top Place to Work by the Washington Post**, and recognized for the **second consecutive year as among America's Most Responsible Companies by Newsweek**


Unitherians exercising in RTP gym

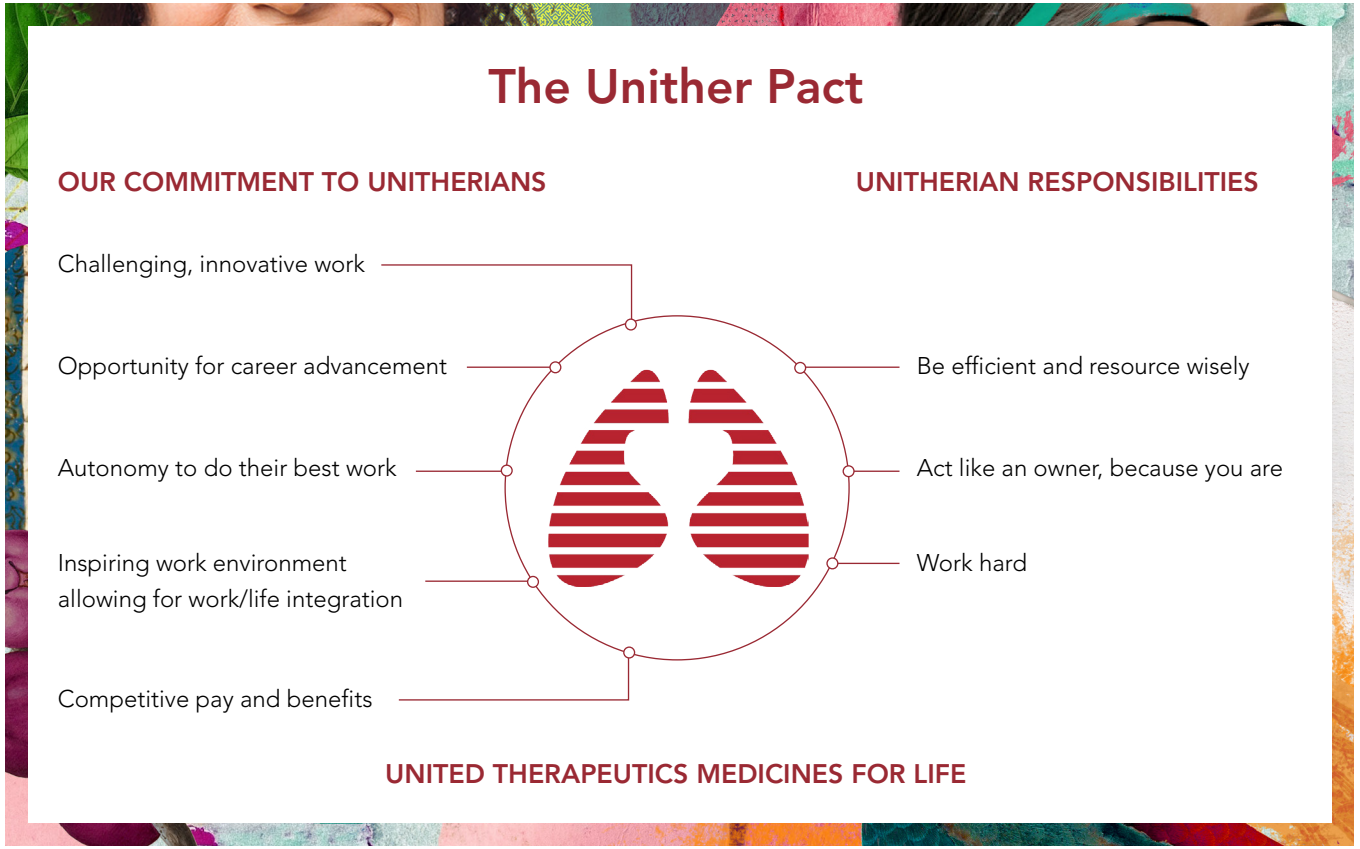
[6] Our training hours per person average does not include time spent completing required document reviews and continuing education/personal accreditation training hours that certain employees are required to maintain to fulfill their duties

Our Culture and Benefits Programs

We strive to hire exceptionally smart people who are passionately committed to our goals and who will thrive in our unique culture.

We provide our employees with the opportunity to work on innovative, revolutionary projects with significant autonomy to determine how to approach their work. More than that, we believe that where we work affects our disposition, drive, mental health, and performance. Consequently, we are committed to creating inspiring surroundings and state-of-the-art environmentally-responsible buildings – both to mitigate our own environmental footprint and to provide positive and healthy workspaces for our employees to connect. We believe that is part of why we have consistently low voluntary turnover rates – about half that of industry peers in the life sciences, biotechnology, and pharmaceutical industries – and high levels of agreement that United Therapeutics is a "Great Place to Work."

The **Unither Pact** expresses our commitment to and expectations of Unitherians. This Pact, initially established in 2016, captures our intention to cultivate an entrepreneurial, inclusive, and high-performance culture that instills in our workforce a strong sense of ownership, meaning, and commitment. We believe this approach gives us a competitive advantage in attracting and retaining our talented Unitherians.



93% of participating employees stated that United Therapeutics is a "Great Place to Work"

Our total rewards, benefits, development, and workplace safety programs are designed and curated to attract, retain, and motivate our high-performing workforce, demonstrating how much we value each Unitherian. Elements include, but are not limited to the following:

RTP campus

Financial Security

Longstanding Benefits

- All full-time domestic Unitherians have a living wage, which includes cash compensation targets of at least $75,000 annually (base salary + bonus target)
- We provide meaningful opportunities for employees to share in our success by making every full-time Unitherian a shareholder through our long-term incentive compensation programs, and offering an employee stock purchase plan (**ESPP**) through which all full-time and eligible part-time employees can purchase company stock at a discounted price
- We offer a 401(k) program with employer match

Silver Spring campus

Health and Wellness

Longstanding Benefits

We offer other market-leading benefit programs and provide access to a variety of health and wellness facilities and programs including:

- State-of-the-art fitness centers and free cafeterias at our main locations providing locally sourced, sustainable food served in predominantly compostable packaging
- We have designed environmentally responsible workplaces of beauty and safety that facilitate wellness, encourage collaboration, and foster creativity

New in 2022

- Provided access to medical, dental, and vision benefits to part-time Unitherians
- Increased our adoption assistance program value and added surrogacy benefits
- Increased travel benefits under our medical plan to enable access to medically necessary procedures
- In 2023, we added a pet wellness benefit through Wagmo

Silver Spring child care center

Work-Life Integration

Longstanding Benefits

In addition to the benefits outlined under health and wellness, we offer the following:

- Access to 24/7 employee assistance program
- Paid parental bonding leave
- Subsidized on-site child care at our main campuses
- A hybrid/flexible working model
- A breast milk travel solution through Milk Stork
- Meaningful community service opportunities throughout the year during work hours; for more information about how we engage with our local communities, see *Our Communities* section starting on page 58

New in 2022

- Increased military leave from 15 to 20 days
- Increased bereavement leave from three to five days

UT Wall of Inventors

Personal and Professional Development

Longstanding Benefits

- We continued to roll out our Career Framework, while also increasing transparency of promotion criteria
- We offer up to $30,000 reimbursement per employee for continuing education tuition assistance; in 2022, 25 employees participated in this program

New in 2022

- We shaped 2022 training plans, learning journeys, and course offerings with input from annual employee surveys, people managers, and leaders, offering tens of thousands of hours of instructor-led and web-based training to complement formal and informal mentoring and other on-the-job training (see more detail about our employee development and engagement programs under *The Unitherian Journey* starting on page 43)
- We refreshed our performance management process, which includes an evaluation against our core values

Diversity, Equity, and Inclusion

Multiple studies show that people who feel authentically included and supported in their career journeys are more likely to be engaged at work.[7] We believe that an intentional culture of inclusion unlocks innovation.

We celebrate both our diverse Board of Directors and our diverse workforce, and firmly believe that being a great place to work means being a diverse, equitable, and inclusive place to work. We are committed to the development and advancement of women and other underrepresented groups within our organization as part of our overall DEI strategy while providing equal employment opportunities. We intend for our leadership team to reflect our workforce, and our Board continues to provide leadership in this area.

Launched in 2021 to bring to life our DEI Framework, 2022 was a year of deep engagement on our DEI journey. We use the acronym LEAP for our framework – much like the physical act of leaping, our DEI journey has a purpose and a destination, and once we committed to act, we won't turn back. Examples of how we LEAPed in 2022 begin on the next page.

[7] See https://www.greatplacetowork.com/resources/blog/how-an-inclusive-workforce-powers-a-companys-ability-to-thrive.

Team Psychological Safety

Coined by Harvard Business School professor and author Amy Edmondson, Ph.D., the term "team psychological safety" is a shared belief held by members of a team that it is okay to take risks, to express their ideas and concerns, to speak up with questions, and to admit mistakes without fear of negative consequences. We seek to foster both personal and team psychological safety for all Unitherians, our contractors, and our partners. See more on our workplace safety activities starting on page 45, and https://hbr.org/2023/02/what-is-psychological-safety for more information about Dr. Edmondson's work.

Unitherians collaborating

United Therapeutics does not tolerate discrimination in any form. Our policies prohibit discrimination based on race, color, religion, national origin, ancestry, sexual orientation, gender identity or expression, marital status, pregnancy status, sex, age, mental or physical disability, medical condition, veteran status, or any other legally protected basis. This applies to all employment practices, from recruiting, hiring, compensation, and promotions, to daily business activities. See the *UT Code of Conduct* and *Ethics and Compliance* starting on page 70 for more information about our commitment to inclusion and non-discrimination.

Our DEI Framework	Sample Initiatives	
Lead by setting clear tone from top about the importance of DEI	To build upon what our CEO Dr. Martine Rothblatt wrote in her opening message to our 2022 Corporate Responsibility and Public Benefit Corporation Report, employees hear what you say AND watch what you do. Employees gauge authenticity of stated commitments by the actions of their leaders. • Our Board members and executive officers were deeply engaged with DEI topics as part of our DEI governance, with executive officers communicating several times annually to their teams and all staff directly about our ambitions and progress against our stated commitments • With leadership support, we launched leadership development training that included coursework on Intercultural Competence and Microaggressions in the Workplace • Employees are encouraged to engage with existing ERGs and form new ERGs where there is employee interest to do so. In 2022, we championed our two existing ERGs, each of which are aligned with our corporate vision, mission, goals, policies, and activities, and in 2023 we welcomed a third: ◦ **UT** Black Affinity Organization is for all Unitherians who self-identify as Black, African American, West Indian, or of African descent and allies; the mission of this ERG is to be a strategic partner with United Therapeutics to promote a culture of diversity and inclusion through outreach and regular learning and advance the understanding and inclusion of employees with common backgrounds, interests, and goals ◦ The **UT Inspire Initiative** is for all who self-identify as women and allies. It is intended to provide networking, support, and learning opportunities for women across our organization to grow as individuals and leaders ◦ In 2023: **UT oUT & Proud** is open to all Unitherians – those who identify as LGBTQ+ and allies – and seeks to foster a UT culture of inclusion by encouraging all current and would-be LGBTQ+ Unitherians to be their whole and authentic selves at work	
Evaluate where we are, what we have in place, and what we need in the future	True equity of opportunity and authentic inclusion requires intentional strategies based on data. We completed our second internal DEI survey to assess our growth, identify areas of opportunity, and measure our progress year-over-year, the highlights of which include: • **30%** increased participation rate • More than **82%** agreed or strongly agreed that there are career opportunities at United Therapeutics and people can bring their whole selves to work regardless of background	• More than **87%** agreed or strongly agreed with statements related to inclusion in their departments • **77%** agreed or strongly agreed that they feel comfortable voicing their opinions, even when they differ from the group
Act by implementing programs to foster DEI	For DEI to thrive, it absolutely begins and ends with each of us. • Each Unitherian spent on average about four hours on required annual equal employment opportunity (**EEO**) and DEI training, covering coursework including "Contributing to an Inclusive Culture" and "4 Ways for Allies to Respond to Bias"	• UT increased awareness about its promotion criteria and process through manager education and employee communications with positive results, evidenced, we believe, in our survey results noted above • We expanded several benefit areas as noted in our section on benefits on page 39

Our DEI Framework	Sample Initiatives
Progress forward with sustainable improvements in DEI	While we are proud of our workforce diversity statistics, we believe that this work is ongoing. To that end, we will intend to continue advancing the initiatives described above, and are excited to share some of what is ahead in 2023: • We established a partnership with a premier Historically Black College and University (**HBCU**)-linked organization to enhance our recruiting efforts: we are engaging with the **Thurgood Marshall College Fund**, which provides support to the Black college community, to recruit interns for our 2023 internship program • We are launching our Emerging Leader Program • We are creating and launching a formal mentorship program

We also continued to collaborate with other organizations that engage women and racially and ethnically diverse people in our patient-centered work. For example, in 2022, we established a UT-led steering committee, "**Women in PH**" to strengthen the support network of women clinicians with unique initiatives aimed at building a more inclusive and diverse PH community. For more information about our DEI-related community initiatives, please see *Our Communities* starting on page 58.

Collaborating with our Partners for Inclusion

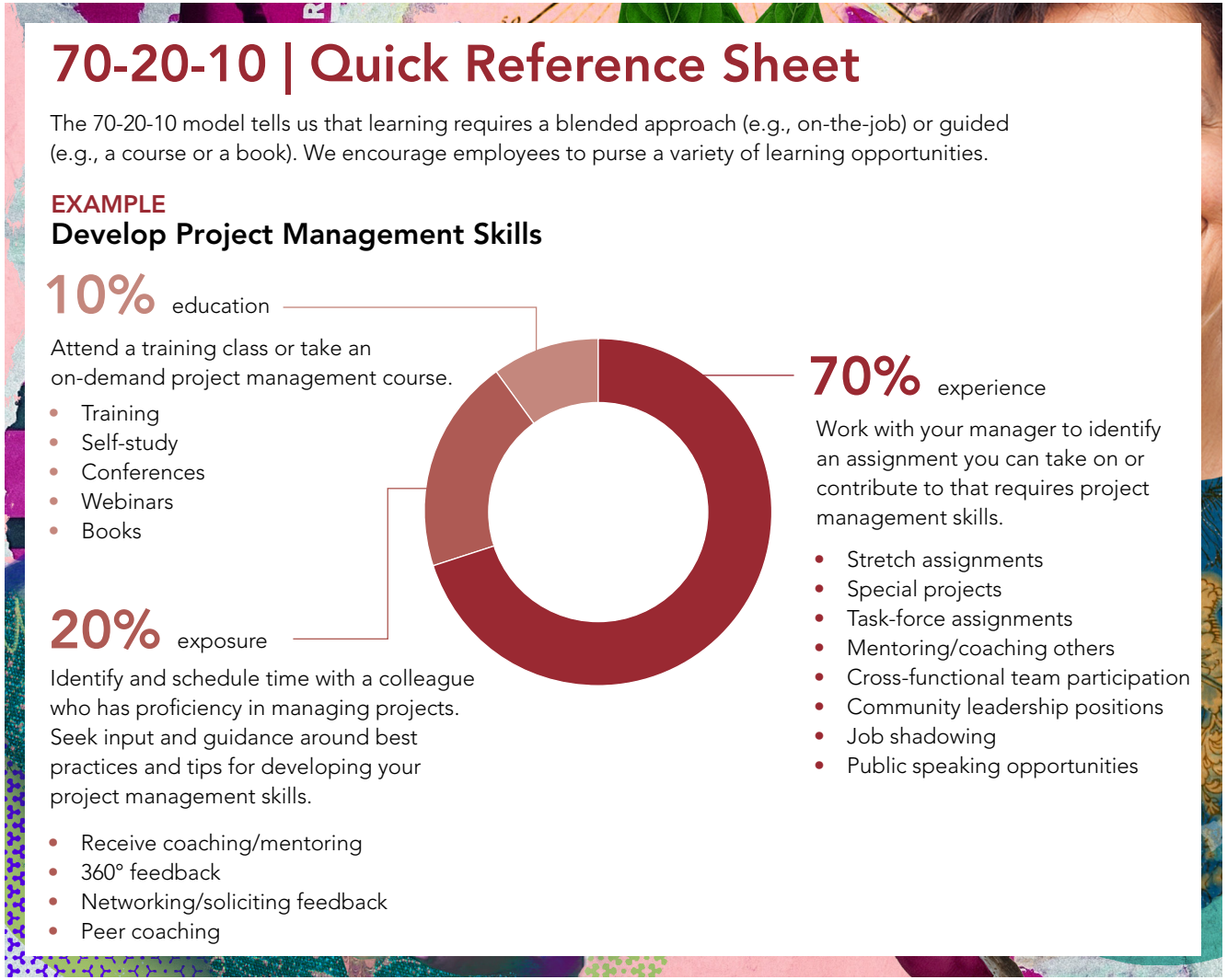
UT's **Project Lightyear** – opened as Phase 5 in June 2023 – hosted and funded a Build Up High School intern during the summer of 2022. The highly competitive, national program facilitated by our contract partner **DPR Construction** provides intensive full-time internships to under-resourced students interested in a career in construction management. Nearly 100 students have taken part in the internship since 2017. In addition to providing career and education support, the Build Up program is intended to help create a more diverse talent pipeline for the construction industry. About half of the Build Up interns are young women, 96% identify as racially or ethnically diverse, and 69% plan to be the first in their families to pursue secondary education. For more information about Project Lightyear / Phase 5, see *Environmental Stewardship* starting on page 49.

The Unitherian Journey

We believe that employee engagement – a person's sense of commitment to their job, their colleagues, and our company – starts when that person expresses interest in becoming a Unitherian.

Our culture is unique, so we make a point to be transparent about our purpose, our ways of working, and how we are growing when speaking with all prospective job candidates. In all candidate interactions, we strive for open and honest two-way communication and often involve multiple Unitherians in the interview process, which underscores how important each person is to our success. In 2022, we continued to deliver behavioral interview training for managers. Additionally, we posted all positions to at least two diversity-focused recruitment sites to help make sure we find the next generation of Unitherians wherever they may be. See more details about our DEI efforts in the previous section.

When a new Unitherian joins the team, we seek to prepare them for long-term success. We believe learning should be continuous, employee-driven, manager-supported, customized to the individual based on strengths and development needs, and blended using different modalities. We align with a 70/20/10 model which holds that individuals gain 70% of their knowledge from on-the-job experiences, 20% from interactions with others such as through mentoring, and 10% from formal educational events.



We shaped our 2022 training plans, learning journeys, and course offerings with input collected from people leaders, trends we are experiencing, and areas we have identified that require focus. We also customized courses to address specific team needs, covering topics such as team dynamics, communication, influencing without authority, and inclusion.

In 2022, we provided segmented and cohort training for leaders, including training for newly-hired or newly-promoted managers; leadership and coaching development for more seasoned leaders; and change management content. We also made *Jhana the Virtual Mentor* available to people managers in 2022; Jhana is an online tool providing self-service articles and tools to help with professional and leadership development. In 2023, we launched a required leadership series for all people managers.

We evaluate our program effectiveness by surveying participants and evaluating training assets and content considering best practices to evaluate whether our programming is relevant, meets the needs of our employees, and contributes toward overall Unitherian engagement.

Unitherians collaborating

Spotlight on Training and Professional Development

- Unitherians completed on average 18 hours[8] of formal instructor-led and web-based training in 2022, complementing and supplementing job shadowing, mentoring, and other on-the-job training
- We had **100%** completion of assigned EHSS, GMP, and Code of Conduct training
- We had **100%** completion of assigned DEI training
- We offer up to **$30,000** per employee, (up to $10,000 per calendar year for up to three years), for tuition assistance; in 2022, 25 employees participated in this program

[8] Our training hours per person average does not include time spent completing required document reviews and continuing education/personal accreditation training hours provided by third parties that certain employees are required to maintain to fulfill their duties

Safe and Healthy Workplaces

We exist to create a brighter future for our patients, and we believe that our occupational safety and health performance is important to achieving our purpose. We seek to be a global leader in protecting our people, partners, contractors, and communities in a safe and environmentally sustainable manner. Our EHSS team oversees this work in collaboration with internal and external stakeholders. We also seek to foster team psychological safety[9], empowering Unitherians to promote a strong safety culture and build community trust.

OUR WORKPLACE SAFETY PROGRAM

We work hard to make United Therapeutics a safe place to work. We are committed to cultivating a safety culture so everyone – our full- and part-time employees, contractors, and visitors – can return home safely every day. We have implemented a safety management system that uses monitoring, auditing, and target setting to continue to improve our occupational health and workplace safety. We continued supporting and growing the safety committees established in 2021 to facilitate safety conversations across departments and across locations to underscore our intent – that everyone at United Therapeutics has a responsibility to create and maintain a safe and healthy workplace by reducing risk and preventing injuries.

Training

Regular safety training is provided to all employees, with in-depth role-based training for laboratory, warehouse, and manufacturing employees. Laboratory employees also receive all regulatory-related training immediately upon hiring, whenever their job responsibilities change, and on an annual basis. Periodic safety meetings with teams help to further emphasize our safety culture.

[9] Coined by Harvard Business School professor and author Amy Edmondson, team psychological safety is a shared belief held by members of a team that it is okay to take risks, to express their ideas and concerns, to speak up with questions, and to admit mistakes without fear of negative consequences

[10] We had zero Occupational Safety and Health Administration (**OSHA**) recordable incidents and two work-related incidents for our U.S. operations in 2022, with an overall incidence rate of 0.2 per 100 full-time workers – significantly below the average OSHA incidence rate of 1.5 recordable cases per 100 full-time workers for the pharmaceutical preparation manufacturing industry

Spotlight on Safety and Health

We seek to develop products that improve the quality of life of our patients while prioritizing the safety and well-being of our employees. In 2022:

- Unitherians completed **>1,000** hours of EHSS-related training provided to employees overall, not including training required by personnel to retain professional certifications
- We had **zero** total recordable incident rate and 0.2 overall incidents rate – significantly below the industry average[10]
- We implemented an integrated environmental management system aligned with recognized international standards, including ISO 14001 and ISO 18001, to help control risks, manage centralized reporting, and oversee key aspects of safety and health

For more information about our environmental policy, see the *Operate Sustainably* section of this Report starting on page 49.

Auditing

Internal and external auditors routinely audit our health and safety compliance under a quarterly schedule developed to meet compliance requirements and our regular improvement focus. Contractors are required to maintain their own safety operating procedures. We regularly assess health-related risks to employees, contractors, and visitors and seek to proactively manage those risks across our operations.

For more details about our environmental compliance and sustainability performance, see the *Environmental Stewardship* section starting on page 49, and for information about our emergency preparedness, see the *Enterprise Risk Management and Organizational Resilience* starting on page 76.

The Alchemy of Safety

Hitesh Batra, Associate VP, Chemical R&D and Production shared his perspective about the regular safety meetings his team has with EHSS team members, and how that has helped foster the psychological safety we consider necessary to call out concerns and create a stronger safety culture at United Therapeutics. "A safety culture is not just a concept," Hitesh explained. "It is a mindset, part of everyone's job. As chemists, we ask ourselves, 'Are we being careful about selecting our reaction conditions, are we selecting the safest reagents for purpose?' Because these decisions not only affect the safety of the workplace, but also the safety of the end-product, and ultimately patient safety."

Recently, Hitesh's team collaborated with the EHSS team to further improve employee exposure to active pharmaceutical ingredients and other chemicals. The EHSS team analyzed testing data to spot trends. Since Hitesh's team felt the information was presented in a psychologically safe environment, they were able to receive this feedback the way intended – as an opportunity to improve. "We analyzed these findings and modified our cleaning procedures, put in additional controls like containment procedures and more … all of which helped us improve to well below thresholds of the interim acceptable surface limit."

The work of the EHSS team complements and supplements what the chemical R&D team does regularly. "We do our own research and evaluate the latest scientific research available done by others to help us understand the safety profile of the chemicals and processes we use," Hitesh said. "We seek to make improvements that result in safer work environments, safer product for our patients, and lower impacts on the environment."

> **"A safety culture is not just a concept. It is a mindset, part of everyone's job."**

Hitesh Batra
Associate VP, Chemical R&D and Production

Humankind

A Message From Our General Counsel

"In nature, nothing exists alone."

This observation from **Rachel Carson**, the American marine scientist, author, and former Silver Spring, Maryland resident, recognized that everything is interconnected.

Even before recent studies showed us increasingly clear connections between air pollution and extreme weather conditions exacerbated by climate change and the expansion of certain infectious disease threats,[11] at United Therapeutics we have long understood that there are very real links between climate, economies, and human health. We also could see that some underserved communities are chronically and disproportionately exposed to environmental hazards because of systemic inequalities driven by racism, all of which is worsened because of climate change.[12]

This is why we have intentionally integrated sustainability concepts into all our new construction since 2003, when we installed a 92 kW solar array at our Silver Spring, Maryland co-headquarters. Installing this solar array launched our drive to try to construct sustainable facilities – both to mitigate our impact on the environment as well as to expand understanding of what is possible in innovative sustainable construction.

Our environmental stewardship priority is not limited to our property development and construction activities. We believe that our presence in communities means that we have the obligation to operate responsibly, and we wouldn't want it any other way. United Therapeutics is committed to being a global leader in protecting our people, partners, contractors, and communities in a safe and environmentally sustainable manner. As a biotechnology company with most of our commercial therapies addressing pulmonary conditions, we have a special connection to breathing. So, we strive to support clean, healthy air. We have established risk management procedures and inventory requirements intended to enable us to manage potential disruptions from climate change to bring our life-saving medicines to our patients. And we seek to be good neighbors, investing resources in the communities in which we live and work.

Still, we know we can and must do more.

While we have been doing the work of climate mitigation – for example, taking step to reduce our emissions and impacts on climate change – we are newer to the work of quantifying emissions. We have completed the initial stages of our effort to capture our Scope 1 and Scope 2 greenhouse gas inventories. We are also exploring the best path forward to minimize our own emissions beyond what we have accomplished to date with our innovative sustainable building programs and other initiatives. This Report describes some of our efforts. As we continue to design, build, and improve our methods and results, we look forward to sharing more details in future reports.

> **"We know that our presence in communities means that we have the obligation to operate responsibly, and we wouldn't want it any other way."**

Paul Mahon
General Counsel

[11] Mora, C., McKenzie, T., Gaw, I.M. et al. Over half of known human pathogenic diseases can be aggravated by climate change. Nat. Clim. Chang. (2022). https://doi.org/10.1038/s41558-022-01426-1

[12] According to the *Synthesis Report of the IPCC Sixth Assessment Report*, published in 2023, "With every increment of global warming, losses and damages will increase (very high confidence), become increasingly difficult to avoid, and be strongly concentrated among the poorest vulnerable populations (high confidence)"

Operate Sustainably

Environmental Stewardship

2022 Environmental Stewardship at a Glance

Data as of December 31, 2022 unless noted otherwise.

Our Target

- Seek site net zero for all owned new construction where possible

UN Sustainable Development Goals (UN SDGs) Alignment

Progress Highlights

- Continued to operate and maintain four site net zero facilities, adding a fifth (see below) that together represent about **16%** of our total square footage^*
- Made substantial progress on a newly constructed site net zero current good manufacturing practices **(cGMP)** cold storage warehouse on our North Carolina campus, completed in June 2023
- Maintained **one LEED Platinum** and **two LEED Gold** certified buildings, representing almost **24%** of our total square footage^
- Implemented a **centralized management system** for our waste, water, air, and energy data aligned with recognized international standards, including ISO 14001 and ISO 18001, and made significant progress in calculating our Scope 1 and Scope 2 greenhouse gas (**GHG**) emissions
- Convened an internal **cross functional ESG Cabinet** – with representatives from Corporate Real Estate (**CRE**), EHSS, HR, Finance and Accounting, Manufacturing, Quality, Legal Innovation, and others as needed – to steward our overall corporate responsibility and environmental sustainability efforts, including our climate-related initiatives (for more information, see *ESG and PBC Governance* starting on page 67)

^ Square footage represents owned and leased facilities within operational control

* Includes Phase 5 logistics center opened in 2023

Our Environmental Policy

At United Therapeutics we recognize that the health of people and the planet are interconnected. For us, operating in a socially responsible and sustainable manner is integral to our mission of developing life-saving therapies. Our dedication to sustainability, health, and safety extends beyond our operations. We are committed to developing the highest-quality therapies that improve the quality of life of our patients while prioritizing the well-being of our people and communities. Through innovative collaboration and our shared commitment to our people and environment, we believe can create a healthier, more sustainable world for generations to come.

Our Approach to Climate

Our work to operate sustainably started early in our history and has been a formal part of our goals and objectives since 2021, when we became a PBC. Our 2022 Corporate Responsibility and Public Benefit Report tells the history of our sustainable facility journey. This Report highlights specific solutions that illustrate the scope of that effort. For example, with the inclusion of our Phase 5 net zero warehouse, we have installed renewable energy capacity of almost 7,000 kW.

An important step in our sustainability work is building our GHG emissions inventory. We believe this will help us better understand our impacts on the environment and provide helpful information to our stakeholders.

To that end, in 2022 we implemented a centralized environmental data management software solution and launched a data collection effort to capture our energy data across owned and leased facilities within our operational control, and to calculate our related Scope 1 and Scope 2 GHG emissions. We are in the process of validating the data, closing certain data gaps, and creating an assurance-ready set of data collection and management procedures with the assistance of an audit firm. We are also mindful of the pending climate reporting requirements from the U.S. Securities and Exchange Commission, which will further inform our future reporting.

We have met several key milestones toward our GHG emissions disclosure, including the following:

- We established our inventory management approach to align with the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (Corporate Standard, WRI/WBCSD 2004) – the GHG Protocol
- We established a cross-functional team to lead this data collection effort, including our EHSS and CRE teams, with support from our operational and finance teams
- We prioritized a systematic data collection approach, focusing on establishing links between source systems, such as our building management systems and utility providers, and our central data management solution; taking this approach helps us to mitigate potential errors from manual data entry

As we continue our ESG journey, we also expect to continue evaluating our climate impacts, including with regard to Scope 3 emissions categories.

While we prioritize efforts to reduce our GHG emissions from operations first, we have used marketplace tools like RECs to help us achieve targets like 100% renewable energy, for example. The credibility of such tools has come under marketplace scrutiny, so we are evaluating our approach related to use of these kinds of tools in our sustainability strategy. See the next page for more discussion of these questions.

EV charging stations on RTP campus

CARBON OFFSETS AND RENEWABLE ENERGY CREDITS

As part of our commitment to mitigate our climate impacts, we have from time-to-time purchased carbon offsets to mitigate our GHG emissions. In 2022, we retired offsets for 1,293 metric tons of CO_2 emissions associated with Scope 1 emissions between October 1, 2021 and September 30, 2022. These offsets included forest conservation in Colombia and Uruguay. We purchased these offsets based on criteria that include additionality (mitigation or removal would not otherwise have occurred), and ESG co-benefits (local social and environmental benefit beyond emissions reduction). All purchased offsets were verified through the Voluntary Carbon Standard/Verra, which has been accepted by independent third parties, including the Carbon Offsetting and Reduction Scheme for International Aviation of the International Civil Aviation Organization, the Task Force on Scaling Voluntary Carbon Markets, and California's Cap and Trade program.

Organizations have used offsets to reduce their GHG emissions for many years. However, the carbon offset market has come under scrutiny related to questions about additionality, permanence of the carbon-related benefit, and other factors. We have discontinued new purchase of carbon offsets as part of our facility energy use abatement strategy; our last purchased offsets were in 2022 covering 2021 consumption. We will continue to evaluate our approach to using carbon offsets as part of our overall commitment to mitigate our carbon emissions impacts.

We have also purchased RECs as part of our commitment to source renewable electricity. In 2023, we made a strategic decision to pause making new purchases of certain RECs because these tools have come under similar scrutiny and criticism as offsets. Our current RECs contracts extend into 2025. We expect to continue evaluating our approach to using RECs as part of our overall renewable energy strategy.

CLIMATE RISK MANAGEMENT

We are focused on understanding and quantifying our climate-related risks and opportunities and fulfilling our commitment to align with the Task Force on Climate Related Financial Disclosures (**TCFD**). We intend to enhance our efforts as we evolve our ESG program.

See the *Enterprise Risk Management and Organizational Resilience* section starting on page 77 for more information about our organizational approach to risk management and resilience planning.

4MW solar array surrounded by pollinator field on RTP campus

Sustainable Facilities

As noted in our 2022 Corporate Responsibility and Public Benefit Report, we have long established our commitment to addressing the environmental footprint of our built environment. We have been proud to be a leader in green building practices not just in our industry, but across industries.

SETTING THE BAR FOR GREEN BUILDING DESIGN

Our previous corporate responsibility reports tell the story of our green building journey, but it is sometimes difficult to understand the impact design decisions can have on sustainability outcomes. Here we list nine of the many solutions our CRE team has deployed, focusing on those that are among the substantive solutions to reverse global warming identified by subject matter experts as leading practices in addressing climate change today.[13] We are proud that we are using – and innovating on – some of the most sustainable solutions conceived of by and for humanity today.

Andy Campbell, PE, LEED AP
Sr. Corporate Real Estate Manager

How do you get an engineer to do something amazing? You tell them it's "impossible." That's part of what inspired **Andy Campbell**, Senior Corporate Real Estate Manager in his work as project lead of our Phase 5 site net zero logistics center described in the sidebar on the right – code named Project Lightyear during development. "Getting to work on a project that creates additional cGMP inventory storage capacity for the pharmaceutical therapies our patients need while building this first-of-its kind green building that also helps the entire industry move forward is an engineer's dream," Andy said. "But at UT, my colleagues and I get to tackle the impossible regularly. It's incredibly energizing and humbling because, at the heart of everything we do are the patients we serve."

[13] See https://drawdown.org/ for more information.

NEW IN 2023: PHASE 5 – A SITE NET ZERO LOGISTICS CENTER

In June 2023, our Chairperson and CEO Dr. Martine Rothblatt welcomed local politicians and business leaders to a "cord cutting" ceremony to showcase our new site net zero distribution center dubbed "Phase Five." The 55,000 square foot facility is the second site net zero building on our RTP campus, and the fifth site overall. Its warehouse is designed to meet cGMP for pharmaceutical products and will be used to store and distribute our newest drug-device combination product, Tyvaso DPI, which was launched in 2022. To store pharmaceutical products, a cGMP facility must meet exacting standards for 24/7 temperature control, making a net zero design an especially challenging goal. The site is expected to use about 30% less energy than a conventional facility of this type and will run on 100% renewable energy. This is the world's first-ever net zero cGMP logistics center.

Phase 5 cord cutting ceremony

Solution	How We Applied It
Solar farms	In 2014, we constructed a four-megawatt array on 132 acres of land adjacent to our manufacturing facility in RTP. In 2019, we held the third-largest corporate-owned Public Utilities Regulatory Policies Act solar facility in North Carolina.[14] We help increase the amount of renewable energy on the grid by supplying our utility with the solar energy generated at our facility.
Rooftop solar	The Unisphere, our flagship building in Silver Spring, Maryland, is clad with almost 3,000 photovoltaic panels on its roof and southern exposed side, generating more than 1,000 MWh of energy annually, enough to power over 100 homes. Our solar installations are connected to local utilities, enabling them to feed unused electricity into the grid to support regional demand and offsetting the electricity we must purchase at night or when the sun is not shining as brightly.
Geothermal	We use geoexchange technologies in three of our facilities, including the Unisphere and the Phase Five facility opened in 2023. Where geothermal taps into the earth's intrinsic heat through wells drilled almost a mile underground, geoexchange is sometimes likened to shallow geothermal that uses the earth's heat more like a battery than a heat source. The Unisphere is heated and cooled in part by more than 52 closed-loop, dual-circulated geoexchange wells drilled 500 feet below the building to provide energy storage. Phase Five's net zero capability is supported in part by 40 similar geoexchange wells.
Insulation	In the Unisphere, we use insulation, combined with triple-paned glass, low-e (meaning low-emissivity) film, exterior shading devices, and more, to reduce negative environmental impacts while saving on operating costs. Low-e film is a thin plastic layer applied to the inside of a window and designed to block 99% of UV rays that ordinarily would pass through glass, while improving comfort and privacy.

[14] Heeter, Jenny, Cook, Jeffrey J., Sauer, Jennifer, "Existing and Potential Corporate Off-Site Renewable Procurement in the Southeast," National Renewable Energy Laboratory. February 2019. Accessed online: https://www.nrel.gov/docs/fy19osti/72003.pdf

Enabling the Sustainability Ambitions of Others

Geoexchange systems use the earth like a battery, removing and storing excess summer heat and using it for warmth in winter. Our site net zero LEED Platinum Unisphere building provides an example of how our CRE team paved the way for the ambitions of others. Key to the building's designed functionality were 52 closed loop geoexchange wells drilled 500 feet below the building footprint. However, Maryland law barred this under an out-of-date well construction code that treated geoexchange wells the same as drinking water wells. Our team was able to work collaboratively with other stakeholders to get the code changed, thus paving the way for the use of similar technology in the development of LEED Platinum buildings elsewhere in Maryland, which we believe helps us contribute even more overall to state and local GHG emission reduction plans.

Solution	How We Applied It
LED lighting	We use LED lighting across our portfolio. The Unisphere, specifically, is designed to use daylight as its primary source of light, typically providing enough lighting for 70-80% of occupants' lighting needs.
Building automation	Equipped with sensors, the building automation systems in our five site net zero facilities scan and rebalance use of building systems and energy for greatest efficiency. Daylight and occupancy sensors, used in many of our other locations in addition to our site net zero facilities, are designed to adjust electric lighting levels based on occupancy or available daylight in the space – thus reducing the need for electricity whenever possible.
Smart glass	The Unisphere uses electrochromic glass, which enables windows to tint based on location of the sun, cloud coverage, glare off adjacent structures, and the preferences of the Unitherians working in the building. This "smart glass" has greatly improved heating and cooling efficiency compared to conventional glass.
Green and cool roofs	We installed just over one acre of green roof space in our urban location in Silver Spring. This helps reduce heat island effects and mitigates stormwater runoff – supplementing the Unisphere's stormwater catch basin designed to collect 15,000 cubic feet of rainwater to prevent overwhelming the county sewer in times of heavy rain.[15]
Grid flexibility / Microgrids	To bolster its resiliency, our Phase Five facility was built to operate even in the event of catastrophic utility system failures – and without the use of fossil fuel-based backup systems. We accomplished this through the installation of Tesla Megapacks composed of lithium iron phosphate batteries. Lithium iron phosphate batteries are designed to handle high temperatures with minimal degradation and are preferred for thermal and chemical stability – key safety and resilience features. The Tesla Megapacks are connected and controlled through a Schneider Electric microgrid control system.

This is a short list of the technologies and solutions we have deployed in our efforts to achieve our site net zero goals. As we continue forward, we expect to incorporate what we learn about these and other solutions into our decisions.

Phase 5 cold room control panels

[15] Collected water is slowly released at a controlled rate

Ecosystem Impact Management

We believe that the health of the ecosystems in which we live and work is important to achieve our public benefit purpose. Our environmental policies and management systems are aligned with the recognized international standard, ISO 14001, and include procedures for assessing compliance with applicable environmental laws and regulations and reporting incidents of non-compliance to applicable governmental authorities.

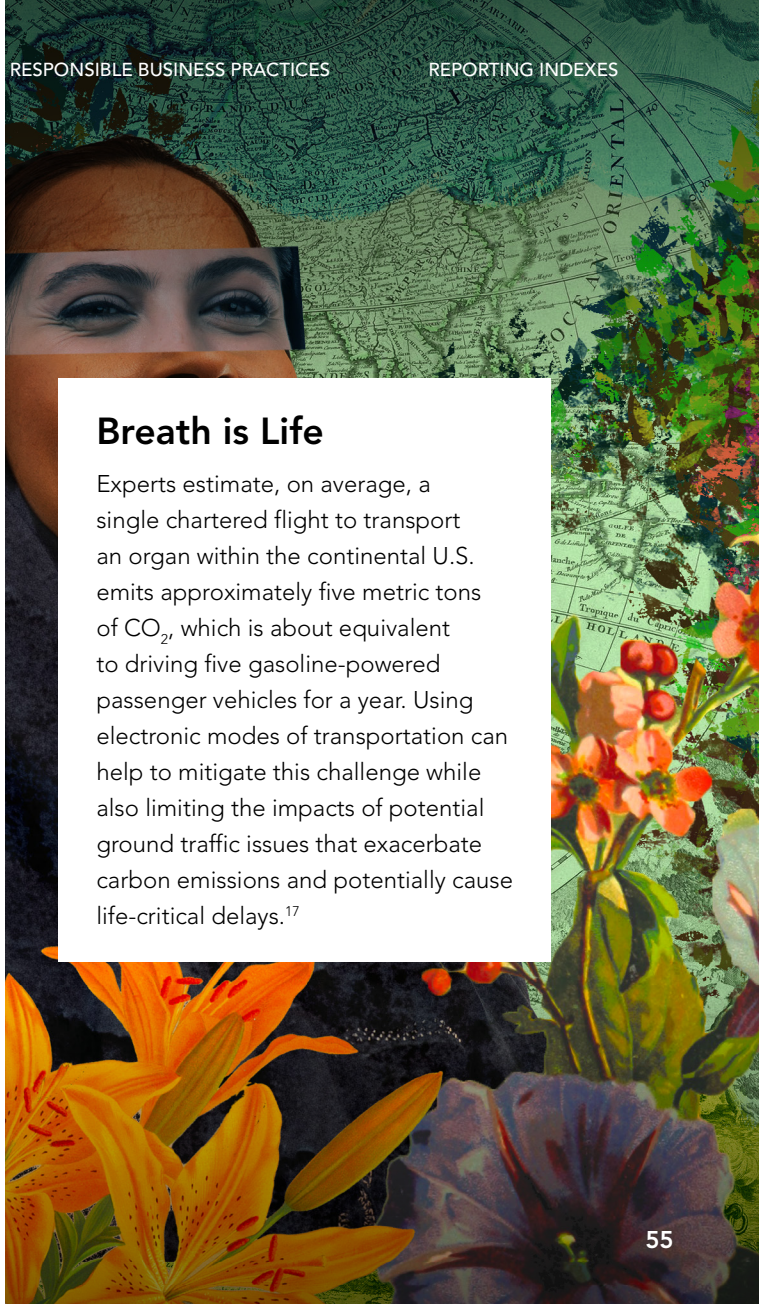
This work does not stop with compliance.

Our EHSS team works with internal and external stakeholders to promote a culture of protecting and preserving our planet, focusing on environmental stewardship and sustainability, while working to see that our global operations meet regulatory requirements and compliance obligations.

CLEAN AIR

Our core patient population with PH – a disease that affects hearts and lungs – is especially affected by air quality and climate[16] and we are working hard to avoid exacerbating these challenges.

We look for co-benefits when we innovate. For example, the transportation of organs needed for transplantation can be carbon intensive, particularly when moved long distances, or in last-mile ground transport between airport and transplant facility. In addition to working on solutions to provide an unlimited supply of organs to those who need them, we are paving the way for the future of sustainable and reliable organ transplant delivery. Our **Unither Bioeléctronique** subsidiary is developing electrically powered, optionally piloted, powered-lift aircraft that have the capability to take off and land vertically at hospitals without the use of fossil fuels. See *Innovation in Flight* on page 20 for more information about this program.



Breath is Life

Experts estimate, on average, a single chartered flight to transport an organ within the continental U.S. emits approximately five metric tons of CO_2, which is about equivalent to driving five gasoline-powered passenger vehicles for a year. Using electronic modes of transportation can help to mitigate this challenge while also limiting the impacts of potential ground traffic issues that exacerbate carbon emissions and potentially cause life-critical delays.[17]

[16] Balakrishnana, B., et al.. "Climate Change for the Pulmonologist: A Focused Review." CHEST. 11 April 2023. https://www.sciencedirect.com/science/article/pii/S0012369223005056

[17] Estimates drawn from the following: Wall, Anji E., et al. The carbon footprint of organ acquisition in the United States. *The American Society of Transplantation and the American Society of Transplant Surgeons*. 2022; Volume 22 (Issue 12): pages 3184-3185. https://doi.org/10.1111/ajt.17196 Accessed online: https://onlinelibrary.wiley.com/doi/pdf/10.1111/ajt.17196

WATER MANAGEMENT

As noted above, we seek to design our buildings with our priorities for our people and communities in mind. Our green roof gardens help mitigate stormwater run-off at the same time they provide habitats for pollinators and outdoor spaces for Unitherians to enjoy. The Unisphere stormwater catch basin helps mitigate potential flooding in local communities. When we build new or retrofit, we prioritize use of WaterSense® Certified water efficient products and seek opportunities to close the loop on water we use when possible, such as we have done with our geoexchange systems and process water chillers.

We are also careful with the water we use in our manufacturing processes, and aim to both use it efficiently, and return it to the national and regional wastewater authorities as clean as it comes. Some highlights:

- We monitor water use at our manufacturing sites to track consumption, evaluate efficiency, and meet regulatory requirements
- We maintain an outstanding record related to discharge limits, receiving for the past several years pretreatment wastewater stewardship awards from the Washington Suburban Sanitary Commission (**WSSC**)
- In 2022, we received the WSSC Gold Level award for five or more consecutive years of consistent pre-treatment wastewater compliance
- Both our main operating sites in Maryland and North Carolina received No Exposure Certification (**NEC**) related to stormwater runoff and the EPA Clean Water Act[18]

We plan to undertake projects to enable us to capture our water usage data to enable future disclosures.

RESPONSIBLE WASTE MANAGEMENT

We manage hazardous and non-hazardous waste across our manufacturing and R&D sites, focusing first on minimizing waste at the source and then minimizing waste to landfill while complying with relevant waste management regulations, including the Resource Conservation and Recovery Act and Hazardous Waste Operations and Emergency Response Standard in the U.S. We anticipate that these efforts will help us reduce our Scope 3 GHG emissions by reducing energy-intensive waste treatment. Some highlights:

- Our hazardous waste management program is designed to minimize impact and manage materials sustainably
- We continue to facilitate proactive third-party audits of our hazardous and medical waste programs, implementing best practice recommendations in 2022
- We use isolation technology to reduce our need for as many ISO Class 5 cleanrooms for aseptic preparation of critical pharmaceutical processing activities; this helps us maintain lower HVAC energy consumption needed to account for potential microbiological contamination introduced by personnel in cleanrooms, and limits the consumption of gowning materials[19]

[18] For a facility to qualify for an NEC status, it must certify that there are no industrial materials or activities exposed to precipitation at that site and must state that its status is continuously maintained

[19] An ISO Class 5 environment is an atmospheric environment that complies with the ISO/TC209 International Cleanroom Standards, specifically ANSI/IEST/ISO-14644-1:1999: Cleanrooms and associated controlled environments--Part 1: Classification of air cleanliness, first edition dated May 1, 1999. An isolator is intended to provide an ISO Class 5 or Grade A environment in a compact, completely biodecontaminated space

Other Sustainability Initiatives

We believe that prevention is one of the most direct paths to multiple beneficial outcomes for patients, for employees, and for the planet. We seek to develop innovations that help us meet our purpose while helping us meet other PBC objectives. For example:

- Our chemical R&D and production team seeks to incorporate the **12 Principles of Green Chemistry**[20] into blueprints for new product development to help prevent waste, design safer chemicals and products, and increase energy efficiency where possible
- Our **medical device packaging team** is exploring ways to optimize the size of packaging for device equipment that delivers product intact while reducing the burden for material disposal on our patients
- In both our Maryland and North Carolina campuses, we maintain **composting and recycling programs for our office and café waste**; in Maryland, we **diverted about 56%** of our office and café waste from landfills in 2022, and we **composted more than 38,000 pounds** of organic waste across both campuses
- We are a member of the Pharmaceutical Product Stewardship Work Group (**PPSWG**) and participate in required extended producer responsibility initiatives; also known as take-back programs, the **MyOldMeds** program is operated by PPSWG's designated program operator, MED-Project, to enable the proper collection, management, and disposal of our medicines[21]
- We installed **55 electric vehicle charging stations** across our footprint since 2008 to help our employees and visitors reduce their own environmental impacts
- We offer SmartBenefits® to employees in the DC-metro area that help commuters take advantage of lower carbon local transit

Unitherians in an R&D lab

We expect that as we develop innovations to meet unmet needs of our patients, there may be trade-offs we will need to consider in other impact areas. What we also expect, and have experienced, is that subsequent generations of solutions often improve on initial designs. We will continue to challenge ourselves and our partners to develop innovations that reduce the environmental impact of our products, technologies, and solutions while meeting patient needs.

[20] https://www.epa.gov/greenchemistry/basics-green-chemistry

[21] The MyOldMeds website is provided by PPSWG as an easy way for consumers to easily access free and convenient options to safely dispose of unwanted, unused, or expired household medicines. As a member of PPSWG, we are proud to assist in the funding of this valuable service to our customers.

Our Communities

2022 Community Impacts at a Glance

Data as of December 31, 2022 unless noted otherwise.

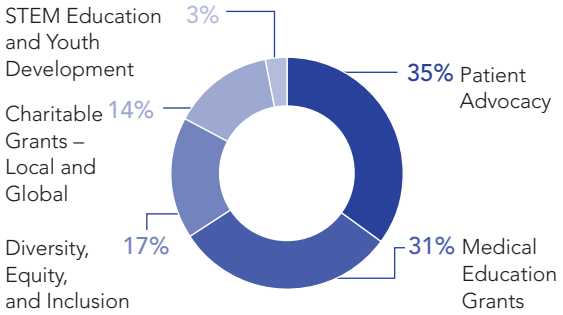
Our Targets

- Support investigator-sponsored studies and medical education aligned with our areas of scientific interest
- Support initiatives that strive to enhance disease awareness, patient treatment, and the local community through charitable grants, funding for patient advocacy or support groups, and sponsorships
- Engage Unitherians in meaningful community service activities

UN SDG Alignment

Progress Highlights

- More than **$6 million** in grants, sponsorships, or donations to more than **150** organizations in 2022 in the following impact categories:



- Over the past **10 years,** we sponsored almost **40** volunteer days, facilitated **thousands of employee volunteer hours,** and collected in-kind donations to support our local communities

Unitherians volunteer for Habitat for Humanity

Contributing to a Brighter Future for All Humanity

We know that the commitment to our public benefit purpose – how we operate in the communities in which we live and work, and how we contribute to a positive future for humanity at large – matters.

We are proud to share some highlights about where we focused our grants, sponsorships, and employee service in 2022.

Impact Category[22]

Medical Education Grants and Patient Advocacy[23]

"Identify the corridors of indifference and run like hell down them." Paul Mahon's mantra has become a Unitherian slogan. This is why UT supports other organizations that share our commitment to advancing awareness and solutions for rare diseases

UN SDG Alignment

Key 2022 Initiatives

We provided **more than $2 million to support the patient advocacy and education** initiatives of groups such as:

- the **Pulmonary Hypertension Association**
- the **Pulmonary Fibrosis Foundation**
- the **International Society of Heart and Lung Transplantation**
- the **American Thoracic Society**
- the **Pulmonary Hypertension Society**
- **Evan's Victory Against Neuroblastoma Foundation**, and more

See further discussion of our patient support services in the *Patient Support* section starting on page 29

We also provided almost **$2 million to support investigator-sponsored studies** through the various phases of development and to support independent medical education grants designed to enhance the level of patient care. Recipients of these grants focused on therapeutic areas including PH, pediatric neuroblastoma, organ transplantation, lung diseases outside of PH, and other cancers


Unitherian in a lab

[22] Please note that many of these initiatives help us advance multiple impact categories; the groupings reflect primary alignment for the purpose of category reporting
[23] Grants and sponsorships must not be based on or linked to the prescribing, formulary, purchasing or reimbursement policies or practices of any institution. They cannot be made on behalf of individual HCPs or group practices and may not be used to pay the cost of entertainment or recreational activities or to compensate for time spent at meetings by attendees

Impact Category

Diversity, Equity, and Inclusion

We believe that outcomes across all sorts of issues and indicators are better when people can bring their authentic selves to the work at hand.

UN SDG Alignment

Key 2022 Initiatives

Named after our founder's daughter, whose own diagnosis was the spark that led to the formation of United Therapeutics, our two flagship **Jenesis awards** are designed to advance emerging and women innovators in science.

- The **Jenesis Innovative Research Awards™** provide support to U.S.-based junior faculty who are engaged in innovative research that can advance scientific knowledge and enhance patient care in PH. This program issues three awards of **up to $100,000 each,** annually, and encourages submissions exploring topics in health equity, determinants of health, and marginalized populations.
- The **Jenesis Trailblazer Awards™**, established in 2022, recognize up to two exceptional U.S.-based women researchers or clinicians who have completed innovative research in the field of PH. This is a non-monetary award program. See 2022 awardees on the next page; for general information about Jenesis awards, see http://utjenesisawards.com/

We are committed to advancing women in leadership roles. For that reason, we sponsored organizations such as:

- **Nvolve** (https://www.nvolveme.org/), a nonprofit organization dedicated to increasing the participation of women in technology, engineering, life sciences, and health careers by helping to overcome gender, racial, and socioeconomic barriers
- **Vital Voices** (https://www.vitalvoices.org/), founded on the universal truth that women are the key to progress in their communities and nations cannot move forward without women in leadership positions
- We are also proud sponsors of the **CHEST 2022 Women and Pulmonary Luncheon Workshop at the American College of CHEST Physicians**

We continue to champion efforts to encourage racially and ethnically diverse people to enter health professions and are proud to continue our sponsorship of the **Thomas J. Blocker Society**, an association of health professional alumni of **Morehouse College**, a historically Black men's college in Atlanta, Georgia, who are committed to encouraging and mentoring Morehouse College undergraduates and students of color interested in health professions

Jenesis Rothblatt, Project Leader, Corporate Telepresence and Robotics, speaking at an awards event

JENESIS AWARD RECIPIENTS

2022

Jenesis Innovative Research Awards™

Vineet Agrawal, MD, PhD
Vanderbilt University Medical Center

- Proposal title: *Harnessing Genetics for Novel Therapeutic Targets in Pulmonary Hypertension due to Heart Failure*

Rahul Kumar, PhD
University of California, San Francisco

- Proposal title: *Role of Classical Monocytes in Hypoxic Pulmonary Hypertension*

Justin K. Lui, MD, MS
Boston University School of Medicine

- Proposal title: *Biomarkers of Left Ventricular Strain in Systemic Sclerosis-Related Pulmonary Hypertension*

Yogesh N. Reddy, MD, MSc
Mayo Clinic, Rochester, Minnesota

- Proposal title: *Comprehensive O_2 Transfer Analysis from the Lung to Mitochondria with Inhaled Treprostinil in ILD Pulmonary Hypertension*

Jenesis Trailblazer Awards™

Erika Berman Rosenzweig, MD
Director, Adult and Pediatric Pulmonary Hypertension

Comprehensive Care Center and CTEPH Program Director, PPHNet, Vice Chair for Clinical and Translational Research, Department of Pediatrics, Professor of Pediatrics (in Medicine)

Columbia University Irving Medical Center – New York Presbyterian

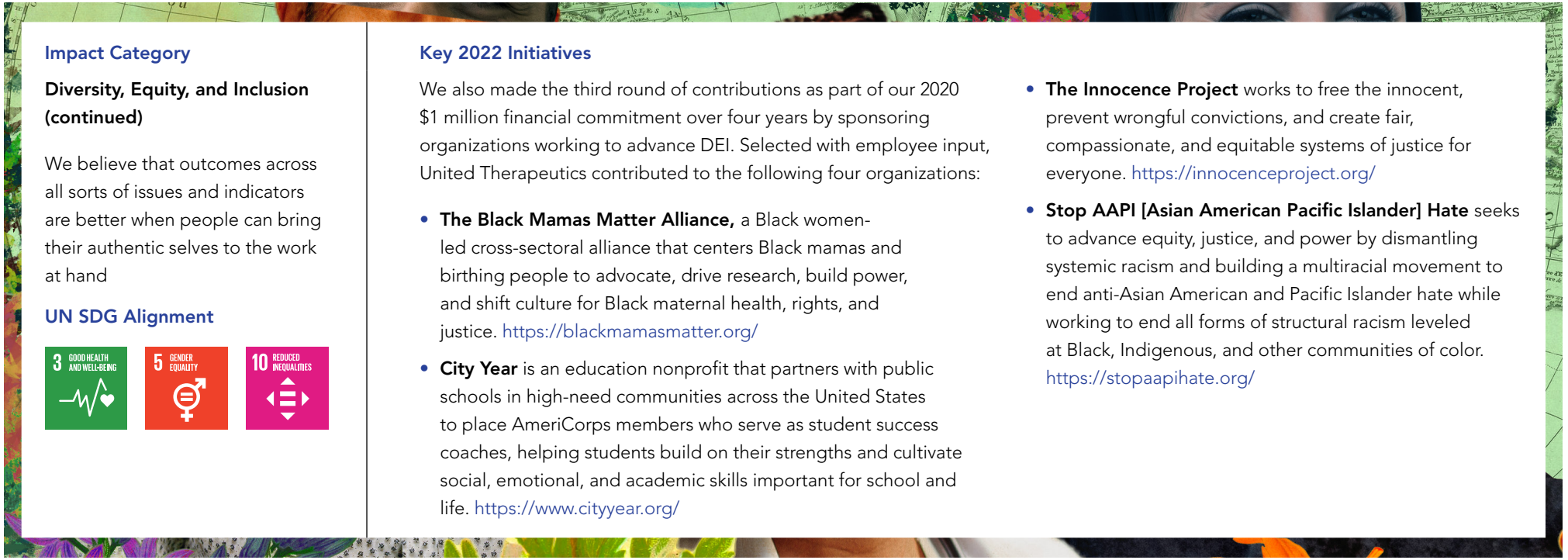
Scientific Review Committee (SRC)

Applications are assessed by an independent SRC comprised of leaders in the fields of PAH and PH-ILD. Scientific merit, originality, feasibility, and potential impact in the fields of PAH or PH-ILD are considered.

Chair:

Mardi Gomberg-Maitland, MD, MSc
Professor of Medicine Director of the Pulmonary Hypertension Program George Washington University Washington, DC

2022 Jenesis Award Recipients with SRC members



Impact Category

Diversity, Equity, and Inclusion (continued)

We believe that outcomes across all sorts of issues and indicators are better when people can bring their authentic selves to the work at hand

UN SDG Alignment

Key 2022 Initiatives

We also made the third round of contributions as part of our 2020 $1 million financial commitment over four years by sponsoring organizations working to advance DEI. Selected with employee input, United Therapeutics contributed to the following four organizations:

- **The Black Mamas Matter Alliance,** a Black women-led cross-sectoral alliance that centers Black mamas and birthing people to advocate, drive research, build power, and shift culture for Black maternal health, rights, and justice. https://blackmamasmatter.org/
- **City Year** is an education nonprofit that partners with public schools in high-need communities across the United States to place AmeriCorps members who serve as student success coaches, helping students build on their strengths and cultivate social, emotional, and academic skills important for school and life. https://www.cityyear.org/
- **The Innocence Project** works to free the innocent, prevent wrongful convictions, and create fair, compassionate, and equitable systems of justice for everyone. https://innocenceproject.org/
- **Stop AAPI [Asian American Pacific Islander] Hate** seeks to advance equity, justice, and power by dismantling systemic racism and building a multiracial movement to end anti-Asian American and Pacific Islander hate while working to end all forms of structural racism leveled at Black, Indigenous, and other communities of color. https://stopaapihate.org/

Impact Category

Local and Global Charities

We aim to be good neighbors and collaborators with local and global partners through direct service, donation drives, and charitable grants

UN SDG Alignment

17 PARTNERSHIPS FOR THE GOALS

Key 2022 Initiatives

We provided more than **$800,000** in grants and sponsorships to more than **50** local and global organizations, including the following:

- **SEEC (Seeking Employment, Equality and Community for People with Developmental Disabilities)** is a progressive nonprofit agency providing a wide range of community support to help people with intellectual and developmental disabilities live lives of their choosing. https://www.seeconline.org/
- **Book Harvest** provides an abundance of books and ongoing literacy support to families and their children from birth and serves as a model for communities committed to ensuring that children are lifelong readers and learners. https://bookharvest.org/
- **Ronald McDonald House of Chapel Hill** offers physical comfort and emotional support to families with a member in long-term hospital care through programs dedicated to the well-being of the whole family. https://rmhch.org/
- **World Central Kitchen, American National Red Cross,** and **GlobalGiving** for support of Ukranian refugees displaced by the war

In addition, in 2022, after the hiatus taken during the heights of the COVID-19 pandemic, we were excited to be able to relaunch our UT Community Service Days program, which engaged Unitherians to deliver hundreds of hours of service cumulatively in activities ranging from packing ready-prep meals for local foodbank distribution, to building playhouses for families in need to be distributed by **Habitat for Humanity.**

Unitherian volunteering at a food bank

These are just some of the ways United Therapeutics is present to the issues of concern to Unitherians, and in the communities we call home

HCPs and qualified organizations can learn more about our sponsorship and grant guidelines, at https://www.unithermedaffairs.com/grant-requests/

For Goodness' Sake

As it did in many places around the world, the COVID-19 pandemic exacerbated housing insecurity in Durham, North Carolina, home to one of United Therapeutics' co-headquarters. Inspired by his favorite restaurants in Europe, which pivoted from preparing meals for paying customers to preparing meals for those most in need, **Michael Benkowitz**, our President and COO, wondered, "Can we do something like that?" He asked our Corporate Executive Chef **Graeme Ritchie** to figure it out. And that's exactly what Chef Graeme did.

In early 2022, Chef Graeme connected with the Urban Ministries of Durham (**UMD**) Community Café, which offers three meals daily throughout the year to anyone who is hungry. Serving nearly 250,000 meals annually and staffed almost entirely by volunteers, the group relies on donations from community members to provide meals to those who need them. Chef Graeme made them an offer they wouldn't refuse: United Therapeutics would provide a full dinner for 200 one night a week.

Unitherians have volunteered to deliver meals prepared by Chef Graeme and his team to the UMD Community Café one day every week since April 2022. Chef Graeme explained: "On Wednesdays, we prepare dinner – a main dish, two sides, salad, and a dessert – for 200 people. We also send along brown bag lunches for distribution by the Café team the next day, complete with a sandwich, chips, a piece of fresh fruit, cookies, and a bottle of water."

Altogether, Chef Graeme and his team spend an additional 16 hours a week to complete this service, and the direct food and packaging cost to United Therapeutics is about $3,000 weekly. But Chef Graeme is quick to point out the unquantifiable benefits of this effort. "Food is not just for consumption. Food can provide happiness," he said. "And after I got feedback … that the UMD Community Café team is always excited to see our volunteer drivers, and that some of the people the UMD Community Café serves told our volunteers they look forward to Wednesday meals, especially… well, that makes it worth it."

> **"Food is not just for consumption. Food can provide happiness."**

Graeme Ritchie
Corporate Executive Chef

Impact Category

STEM Education and Youth Development

Today's students are the researchers, scientists, engineers, artists, and overall innovators of the future. We are proud champions of organizations that engage young people in life-changing experiences that help them nurture their creative sparks to build a better tomorrow

UN SDG Alignment

Key 2022 Initiatives

Our more than **$200,000 funding** of STEM education and youth development opportunities in 2022 through grants or sponsorships went to several organizations, including the following:

- The **American Academy of Achievement** brings aspiring young people together with the preeminent leaders and innovators of our times. https://achievement.org/
- **FIRST – For Inspiration & Recognition of Science and Technology**, a global robotics community preparing young people for the future. https://www.firstinspires.org/
- **Students to Scholars**, created by a Boys and Girls Club volunteer in North Carolina to help prepare promising students to compete academically for placement in institutions of higher learning. https://www.students2scholars.org/
- **Maryland STEM Festival**, established to encourage all students to take greater interest in STEM. https://marylandstemfestival.org/

Our subject matter experts also regularly share their knowledge to advance our public benefit goals. For example, in 2022, our CRE team shared their knowledge and experience building first-of-their-kind innovative green buildings with hundreds of students, academics, community members, and peers through presentations and tours of our net zero energy buildings.

Responsible Business Practices

Responsible Business Practices

2022 Responsible Business Practices at a Glance

Data as of December 31, 2022 unless noted otherwise.

- 42% of board members are women
- 25% of board members are racially or ethnically diverse
- 100% of employees are trained on the Code of Conduct and key policies and programs including our Global Anti-Bribery and Corruption Policy, Privacy Policy, Data Privacy Policy, Policy on Reporting Concerns of Non-Compliance, and organizational resilience

Governance

We have established a strong tone at the top, with leaders who care deeply about improving the lives of patients, empowering our people, and serving as careful stewards of our resources and contributing to the communities in which we work and live. We are guided by doing the right thing, while also relentlessly pushing to do better.

ESG and PBC Governance

Sustainability has always been core to our mission and vision, and we are committed to continuing to evolve our ESG-related programs and disclosures. We have an active, engaged, and diverse Board of Directors, which oversees our key business strategies and objectives, our risk management process, and our compliance program. Our Board – and specifically our Nominating and Governance Committee of our Board – has formal oversight of our ESG program and PBC goal setting, performance assessment, and reporting.

Recent ESG governance and reporting enhancements include:

- In 2021, we amended the Nominating and Governance Committee's charter to provide express, formal oversight of our ESG program and PBC goals, which includes our climate-related activities and ambitions
- In January 2023, we launched an internal cross-functional ESG Cabinet to steward our overall corporate responsibility and environmental sustainability efforts, including our climate-related initiatives

Connector, Silver Spring campus

This Report was reviewed by representatives at all levels of our ESG governance model

Strategic Oversight

Nominating and Governance Committee

- Advisory oversight and governance of our PBC purpose and ESG program
- Receives updates on our ESG and PBC activities at least semi-annually and briefs the entire Board on these at least annually
- Contracts with external consultants to enhance the Committee's ESG knowledge, including climate-related issues

Executive Direction and Support

Executive Team

- Executive sponsorship of ESG program and disclosure
- Reviews and advises on the program, strategy, and priorities

Stewardship and Action

ESG Cabinet

- Establishes and oversees execution of ESG program, strategy, tactics, and disclosure, including climate-related ambitions
- Represents key functions across the organization including CRE, EHSS, HR, Finance and Accounting, Manufacturing, Quality, Legal, Innovation, and others as needed
- Leads and oversees respective expert action teams to implement ESG priorities
- Typically meets every other month

Our Board of Directors

We believe that our directors should possess the highest personal and professional ethics, integrity, and values, and should be committed to advancing the interests of our stakeholders. We also endeavor to have a Board of Directors that represents a range of experiences in medicine and healthcare, government, education, technology, sustainability, and other areas that are relevant to our business. 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 our Board, including with respect to gender, race, and ethnic diversity

INDEPENDENCE

11 Independent
1 Not Independent

BOARD DIVERSITY

6/12 (50%)
Diverse

5/12 (42%) Women
Women representation on each Board committee

3/12 (25%) Ethnically Diverse
1 Hispanic/Latinx
2 Black/African American

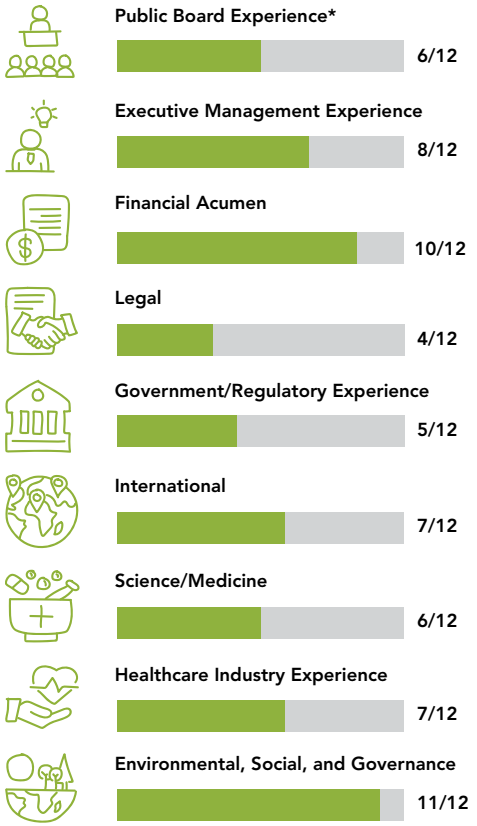
Board Diversity and Skills

We believe it is important that our Board is composed of individuals reflecting the diversity represented by our employees, our patients, and our communities. In recent years, our Nominating and Governance Committee has taken this priority to heart in its nominations process, and the diversity of our Board across various factors has grown significantly

As of April 28, 2023	Causey	Dwek	Giltner	Klein	Kurzweil	Maxwell	Mesa	Olian	Patusky	Rothblatt	Sullivan	Thompson
Gender												
Male	●	●	●		●				●		●	●
Female				●		●	●	●		●		
Race / Ethnicity												
African American or Black						●					●	
Alaskan Native or American Indian												
Asian												
Hispanic or Latinx							●					
Native Hawaiian or Pacific Islander												
White	●	●	●	●	●	●	●	●	●	●		●
LGBTQ+										●		

* Denotes experience serving on the board of directors of one or more public companies other than United Therapeutics

Knowledge, Skills and Experience



Board Risk Oversight

We take risk oversight very seriously. Our Board committees each tackle various risks facing our company to oversee efforts by our management team to identify and mitigate the risks most material to our company

Board Committee	Key Risk Oversight Areas
Nominating and Governance Committee	Enterprise risk management system; corporate compliance program; and PBC/ESG activities, including climate-related risks
Audit Committee	Auditing, accounting, and financial matters, as well as cybersecurity
Compensation Committee	Compensation programs, as well as diversity and other human capital priorities

Ethics and Compliance

One of our strategic objectives is to achieve our goals by doing the right thing and using the highest ethical standards. This is evidenced by our commitment to a robust compliance program, ethical operations and marketing, scientific integrity, responsible sourcing, and environmental sustainability. Ethics is one of our core values, and we continue to enhance our programs across all these areas.

One important aspect of our approach to business ethics is a well-defined set of Compliance Principles that outlines the behavior and clear leadership attributes that we expect from all Unitherians. Our Compliance Principles revolve around the overarching tenet that *WE DO THE RIGHT THING*.

Other principles include:

WE ARE PASSIONATE FOR PATIENTS

- We get the right products, to the right patients, for the right reasons
- We manufacture to the highest quality standards
- We promptly report adverse events and product complaints

WE RESPECT PRIVACY

- We protect the privacy of our patients, caregivers, customers, and employees
- We use and share information carefully and sensibly
- We avoid and disclose conflicts of interest

WE DON'T PAY TO PLAY

- We operate with the highest standards of integrity
- We don't use money or favors to inappropriately advance business objectives
- We only interact for appropriate and legitimate purposes

WE COMMUNICATE ETHICALLY AND HONESTLY

- We communicate at the right time, to the right people, with the right message
- We communicate in an honest, transparent, and accurate way
- We document our books, records, and actions with integrity and attention to detail

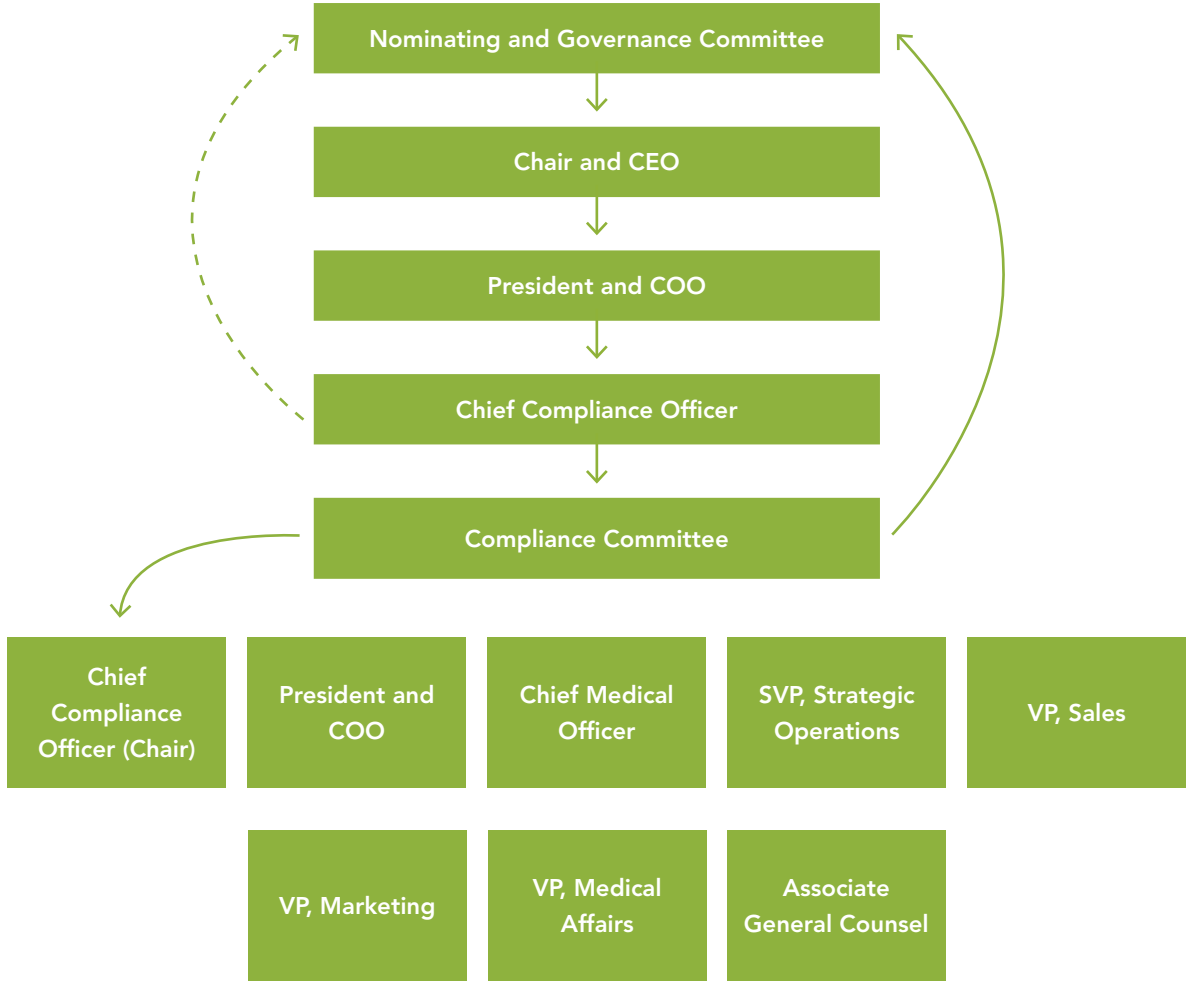
Our Compliance Model

Our Compliance Committee oversees our compliance activities, including the administration of our Code of Conduct and compliance program. It is chaired by our Chief Compliance Officer and composed of senior executives. Twice a year, our Chief Compliance Officer reports to our Nominating and Governance Committee on the activities of the Compliance Committee and Compliance Department.

Our Code of Conduct and Compliance Program

We foster a culture of ethics and compliance through required adherence to our Code of Conduct, updated in 2020, as well as written policies and SOPs. We provide annual training on our Code of Conduct and other key policies, as well as conduct monitoring and auditing to assess compliance. Our Board, employees, and relevant vendors also receive compliance-related training specific to their roles at United Therapeutics.

The Code applies to all employees (including temporary workers) officers, and directors of United Therapeutics and its subsidiaries worldwide. Key topics of our Code of Conduct include anti-discrimination and anti-harassment, employee health and safety, scientific integrity, fraud prevention, bribery and corruption, confidentiality and privacy, marketing promotion, distribution, and sales of our products, public disclosure, conflict of interest, insider trading, grants and other third-party support, and government interaction.



Our Code of Conduct serves as a foundational tool to help employees do the right thing in their day-to-day operations. The biotechnology industry is dynamic and ever-changing, and no one can assume that the right course of action is always clear. Our Code, with support from our existing principles, policies, and procedures, provides guidelines for our decisions and actions.

2022 Highlights

- Redesigned our Compliance Program Resources site, which serves as a central repository for all compliance-related policies and procedures, including a new **HCP Hub**, that provides guidance related to engaging or interacting with healthcare professionals (**HCPs**)
- Updated several policies including our Promotional Speaker Program, Communication of Healthcare Economic Information, and Social Media policies, and released a new Data Governance SOP

Key Compliance Policies

PREVENTING BRIBERY AND CORRUPTION

Unitherians must comply with the U.S. and international anti-bribery and anti-corruption laws that apply where we do business. We have a zero-tolerance policy with respect to bribery and corruption, under which we do not tolerate bribery of any person, in any form, at any time, for any reason, including HCPs, healthcare organizations, government officials, vendors, customers, competitors, collaborators, or patients.

We also direct our employees to carefully evaluate and systematically oversee the third parties with whom we engage to monitor their compliance with our policies and applicable laws, including our Global Anti-Bribery and Anti-Corruption Policy.

CONFLICT OF INTEREST POLICY

Conflicts of interest may exist when an individual's private interest competes with their professional duties and may or does influence his or her ability to perform obligations for United Therapeutics.

Unitherians are strictly prohibited from engaging in any activity that may result in such a conflict of interest unless a prior written exception is obtained from Legal or our Board of Directors.

If they are in doubt as to whether a conflict of interest exists, our employees are also advised to seek guidance from Legal and be aware that they all have a duty to report even potential conflicts of interest to their manager or the Legal Department.

PROMOTIONAL COMMUNICATIONS POLICY

This policy is applicable to employees in our Commercial organization and reinforces our requirements for promotional communications that reference FDA-approved products or provide information about disease education or awareness. All promotional materials must be approved by the Promotional Review Board (**PRB**), led by Regulatory Affairs and composed of representatives from Global Medical Affairs and Legal. The PRB operates in accordance with the Promotional Review Board SOP, and may escalate issues to the President, Chief Medical Officer, Chief Compliance Officer, and Deputy General Counsel for final decision. Employees may use only approved materials in accordance with intended uses, and all claims about products must be accurate, truthful, and not misleading.

Employees are prohibited from engaging in direct communications with patients, caregivers, or their families except authorized ASSIST personnel, or unless explicitly authorized in our policies, such as our Patient Interactions Policy. Our employees are also strictly prohibited from providing diagnostic or treatment advice, and Commercial employees must refer any questions regarding off-label indications or uses to Global Medical Information.

GRANTS AND OTHER THIRD-PARTY SUPPORT

Consistent with our mission and corporate funding priorities, we may provide financial and/or in-kind support for a variety of bona fide third-party activities, including medical education grants, charitable contributions, and community donations. Our policies do not permit us to provide such support or funding to influence or reward any recipient for present, past, or future support of United Therapeutics or recommendation, referral, purchase, or use of our products. For more information about our grants and sponsorships, see the *Our Communities* section starting on page 58.

RTP campus

Ethics and Animal Welfare

We are committed to and work to abide by applicable ethical requirements related to animal welfare in research, teaching, and testing. Research involving the use of live animals must be approved by Institutional Animal Care and Use Committees (**IACUC**) at both our in-house facilities and our partner institutions, in accordance with federal and state laws. Each IACUC must be composed of a minimum of three members one of whom must be a Doctor of Veterinary Medicine with training or experience related to laboratory animal research, and one member must have no relation with the institution except for serving on the IACUC. In addition, we embrace the principles of the internationally recognized "Three Rs" framework (**Replacement, Reduction, and Refinement**), widely accepted ethical principles that are now embedded in the conduct of animal-based science in many countries around the world. United Therapeutics and our subsidiaries strive to partner with organizations that have earned accreditation from the Association for Assessment and Accreditation of Laboratory Animal Care (**AAALAC**) International, a non-profit that assesses organizations that use animals in research, teaching, or testing. More than 1,000 companies, universities, hospitals, government agencies, and other research institutions in 49 countries have been accredited through AAALAC's rigorous program and site evaluation review.

Speak up!

Unitherians are encouraged to contact their manager or the Compliance Team to address any compliance-related questions or to raise compliance concerns. Employees may also file a report using **EthicsPoint**, a comprehensive and confidential reporting tool, that maintains a 24/7/365 anonymous phone line.

Data Privacy and Security

One of our core values is "We respect privacy." Gathering and using certain personal information from various sources, including patients, clinical trial subjects, customers, HCPs, and our employees, is essential to what we do as a business. We are committed to protecting the privacy and integrity of this information. We do this through robust data privacy and cybersecurity programs and by driving training and awareness for our Unitherians.

Data Privacy Program

Our Data Privacy Office manages our approach to privacy-related matters. We obtain input from outside legal counsel and operational advisors to help us follow applicable privacy laws and regulations, administer our program and navigate key issues. Some of the key attributes of our data privacy program include the following:

- Our external privacy notice and internal policy and related SOPs
- Appropriate limitation of the internal sharing of personal data with the right people and for the right reasons
- Assessment of software programs and applications to identify risk related to misuse, inadvertent release of, or breach of any personal information, and partnering with the business owners to mitigate such risks
- We respond to requests and inquiries from data subjects in accordance with applicable laws and regulations

Dedicated Data Privacy Email

Our employees, patients, and other third parties can reach us for any data privacy requests or questions at privacyoffice@unither.com.

Unitherians at our information technology desk

Cybersecurity

We use a "defense in depth" cyber strategy that is designed to leverage multiple layers to protect our information and build operational resiliency. We also emphasize innovation so that our information systems enable continued patient-focused R&D innovation. Led by our head of Information Security, Risk and Compliance, who reports directly to our Chief Information Officer, our cybersecurity program is organized around the following five key pillars:

GOVERNANCE

- Board-level oversight is assigned to our Audit Committee; our Audit Committee is 100% comprised of independent directors
- The head of Information Security, Risk and Compliance provides written reports to the Chair of the Audit Committee each quarter, leads discussion with the full Audit Committee each year, and meets annually with our independent auditor
- The Information Technology security team leverages the National Institute of Standards and Technology (**NIST**) Cybersecurity Framework
- Our Data Privacy Office and Information Technology operations teams collaborate on implementing proper controls for data protection and data use
- We have a highly-engaged executive leadership team that understands and is aligned on our cybersecurity approach
- Information Technology security team members have industry-leading security certifications such as Certified Information Systems Security Professional (**CISSP**), Certified in Risk and Information Systems Control (**CRISC**), and Certified Information Privacy Manager (**CIPM**)

CONTINUOUS MONITORING

- A 24/7/365 managed security service provider monitors our cyber environment and alerts us of any suspicious activity
- We oversee ongoing managed vulnerability scanning and patching through our vulnerability management program
- We facilitate targeted audits and penetration tests throughout the year by internal and external entities

TRAINING AND AWARENESS

- IT security and privacy training provided at hiring and annually to all employees
- Ongoing training around phishing, with frequent changes and differing levels of difficulty to improve awareness and rewards for Unitherians that recognize and report phishing exercises

BUSINESS RESILIENCE

- Collaborate with Enterprise Risk Management to support organizational business resilience and maintenance of an Incident Response Program
- Maintain a Disaster Recovery Program to identify critical business systems, real-time replication, and periodic recovery testing
- Maintain cyber insurance coverage that covers data privacy and data security events

IDENTIFYING AND MITIGATING CYBER RISK

- Leverage the ISO 27005 model, Control Objectives for Information and Related Technologies (**CoBIT**), and Committee of Sponsoring Organizations of the Treadway Commission (**COSO**) frameworks to manage cyber risk
- Verify that systems are built to comply, and remain in compliance, with regulatory requirements including the Sarbanes Oxley Act (**SOX**) and GxP programs

Enterprise Risk Management and Organizational Resilience

The Enterprise Risk Management (**ERM**) Program is an important aspect of our corporate strategy, and we use a variety of methods in our efforts to appropriately manage our enterprise risks. The Organizational Resilience (**OR**) Program is a central component of our risk management strategy designed to assess, mitigate, and respond to key operational risks throughout the enterprise.

Our ERM Program

- Assists in identifying and assessing a broad array of risks that could negatively impact our ability to meet our corporate objectives, including emerging issues such as climate-related risks
- Engages functional leaders to identify and prioritize risks and maintain appropriate ownership and accountability of those enterprise risks
- Provides our executive leadership and Board with key information regarding enterprise risks, priorities, and trends to support risk-informed action and decision-making
- Facilitates the development and implementation of appropriate risk mitigation actions
- Is ongoing and operates on an annual cycle corresponding with four phases – plan, discover, report, and manage
- Is aligned to leading frameworks and standards such as the Integrated Framework of the Committee of Sponsoring Organizations of COSO as well as guidance issued by the International Organization for Standardization (**ISO**)

Governance and Process

Effective ERM starts with clarity around risk strategy and governance, with the following roles and responsibilities of key stakeholders:

Nominating and Governance Committee

- Seeks understanding of the enterprise risks facing United Therapeutics and provides guidance
- Oversees enterprise risk management activities

Executive Sponsors

- Include our CEO, President and COO, CFO, General Counsel, and EVP, Technical Operations
- Maintain alignment between the ERM assessment and corporate objectives
- Review ERM outputs and oversees ERM Program Management team
- Co-develop any additional risk mitigation strategies, at the direction of the Nominating and Governance Committee of our Board, with risk owners

Interviewees

- Include functional leaders as well as key employees in critical areas
- Identify and presents risks impacting their business area for consideration as potential enterprise risks

Risk Owners

- Co-develop risk mitigation strategy with executive sponsors
- Drive the execution of risk mitigation tactics and escalates challenges or concerns, as needed

ERM Program Management

- Oversees execution of our ERM Program
- Reviews and assesses corporate risks presented by Risk Owners and other stakeholders
- Promotes transparency across the enterprise and facilitates risk-informed decision-making through various reporting mechanisms
- Regularly improves the ERM Program and function

Our Organizational Resilience Program

Our OR program seeks to reduce the impact of unplanned business disruptions and protect employee life and safety, critical business processes, and key applications and systems. To accomplish this, we have developed a comprehensive set of safety, security, and risk management plans, processes, and procedures to assess, mitigate, and respond to risks and recover from crises. These resources, and the dedicated Unitherians who execute and support organizational resilience, facilitate the rapid, efficient, and cost-effective recovery of our critical operations and put us in a position to react quickly, decisively, and cooperatively to any crisis or emergency.

Climate Related Risks

For many, climate risk is business continuity risk. FM Global, our property insurance provider, assessed and identified mitigation strategies in five categories of climate-related events: extreme precipitation, wind, temperature, drought, and sea-level rise. According to FM Global's 2023 assessment, United Therapeutics has lower exposure or has mitigation strategies better than 87% of their other exposed clients.

Our OR framework includes four key components:

CRISIS MANAGEMENT	BUSINESS CONTINUITY	DISASTER RECOVERY	EMERGENCY MANAGEMENT
coordinate crisis response at the executive and site/facility level	continue critical business processes and functions during a disruption	protect and recover IT systems and applications	protect people and assets

Organizational resilience is the ability of the organization to survive and prosper in the face of sudden disruptions or crises. The United Therapeutics OR Program strives to:

- **Promote** and **enhance** the safety and security of our employees, their families, physical assets, and the communities in which we operate
- Enable us to **continue, recover,** and **restore** critical business processes and systems following a disruption
- **Safeguard** the interests of our clients and the integrity and continuity of our operations
- **Protect** our public reputation, shareholder value, and standing as an industry leader
- Be aligned and operate consistently with NIST and ISO guidance and industry best practices

We also maintain several risk management plans, including those that are specific to unique scenarios that may pose a risk to company operations, health and safety, and key assets, including:

- a **Corporate Crisis Management Plan** to mobilize and direct response and recovery actions at the company level and a **Crisis Communications Plan** to enable effective internal and external communications no matter the severity of the event
- **Business Continuity Plans** to provide the procedures to maintain or resume business processes in the event of a disruption to business operations, including disruptions posed by potential climate-related events
- The information contained in **Disaster Recovery Plans** defines the recovery processes necessary to coordinate the various recovery personnel and to specify detailed activities at each phase of the recovery process
- **Global Emergency (Contingency) Plans** are in place for our facilities to outline and guide emergency management response actions, including, but not limited to, information and actions around facility evacuation, first aid, shelter-in-place, communications, and emergency training and drills
- an **Aviation Response Plan** that guides and informs actions to plan for, respond to, and mitigate aviation incidents, and
- a **Pandemic/Infectious Disease Plan** to safeguard employee health and continue to provide essential services during an infectious disease outbreak. This plan has been in place since 2017 and was instrumental in guiding our actions during the COVID-19 pandemic, helping us to keep the safety and well-being of our employees as a top priority while also providing patients continued access to their therapies

All plans are living documents and must be regularly exercised, updated, and maintained to be effective tools to respond to emergencies, crises, and disruptions. Our OR Program includes a comprehensive training and exercise framework to help maintain our plans in a state of readiness.

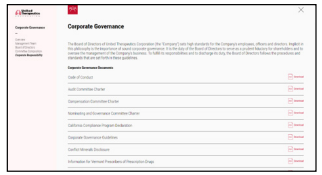
Useful Resources

Proxy Statement

Annual Report

UK Tax Strategy

Conflict Minerals Disclosure



Corporate Governance website

Reporting Indexes

About This Report and Stakeholder Engagement

As part of our commitment to disclosing our corporate responsibility and ESG strategy, in 2020 we published our first Corporate Responsibility (**CR**) Report. This is our fourth annual CR report and second annual PBC Report. This Report references Global Reporting Initiative (**GRI**) Standards, selected indicators from the Sustainability Accounting Standards Board (**SASB**), now managed by the International Sustainability Standards Board (**ISSB**), recommendations from the Task Force on Climate-related Disclosures (**TCFD**), and aligns with the UN Sustainable Development Goals (**UN SDGs**). While we do not disclose our calculated Scope 1 and Scope 2 emissions, we discuss our alignment with *The GHG Protocol Corporate Accounting and Reporting Standard* (**GHG Protocol**).

Please note that information contained in this Report does not constitute a guarantee, commitment, or promise with regard to business activities, performance, or future results and is not intended to create legal rights or obligations. This Report may contain, or incorporate by reference, public information not separately reviewed, approved, or endorsed by United Therapeutics and no representation, warranty, or undertaking is made by United Therapeutics as to the accuracy, reasonableness, or completeness of such information.

Unless otherwise noted, the reporting period for this Report is January 1, 2022 to December 31, 2022, and data covers all employees and operations.

See prior year Corporate Responsibility disclosures at https://ir.unither.com/corp-governance/default.aspx#responsibility.

Below are some of the ways that we actively engaged with our broad range of stakeholders – patients, patient organizations, employees, HCPs, investors, governmental entities, community groups, and to the planet and all its denizens. We will continue to refine our understanding of priority ESG issues and engagement of our stakeholders over time.

Stakeholder Group	How We Engage
Patients	• PAH Initiative, an ever-expanding resource designed to educate and support the PAH community • Dedicated ASSIST team for insurance coverage, financial assistance, and other questions
Patient Organizations	• Participate in and support the Pulmonary Hypertension Association, among others

Stakeholder Group	How We Engage
Employees	• Town halls • Regular company-wide emails and mailings from senior leadership • Listening sessions on diversity, equity, and inclusion • Performance management programs • Annual employee surveys • Open door policy for ongoing, informal engagement
Healthcare Professionals and Healthcare Organizations	• Interact through website portal and ASSIST team • Participate in a wide range of public fora to communicate safety and efficacy of our treatments • Conduct advisory boards and other programs to learn the views of HCPs • Offer training to nursing or pharmacy staff on our products and treatments
Investors	• Quarterly earnings conference calls open to investors and available on our website • Participation in sell-side conference presentations • Annual Meeting of Shareholders • Investor Relations website • Meetings with large institutional investors and other shareholders, including direct shareholder engagement by our Lead Independent Director/Chair of the Compensation Committee and Chair of the Nominating and Governance Committee • In 2022, we reached out twice to shareholders that collectively held over 70% of our outstanding shares, and we held meetings with two shareholders that collectively held 10% of our outstanding shares, with engagement focused on our PBC conversion and other governance topics
Governmental Entities	• In-depth discussions on our sustainable building and EHSS practices
Community Groups	• Volunteering and financial support • Tours of, and presentations on, the Unisphere and our other net-zero and LEED-certified properties

GRI Standards

GRI is an international independent standards organization that helps business, governments, and other organizations understand and communicate their impacts on various issues. We have applied the GRI Sustainability Reporting Standards as an identification and cross-reference tool to make meaningful data accessible to our stakeholders.

Statement of use	United Therapeutics has reported the information cited in this GRI content index for the period January 1, 2022 through December 31, 2022 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

DISCLOSURE	LOCATION
GRI 2: General Disclosures 2021	
2-1 Organizational details	United Therapeutics Corporation is a publicly-traded (Nasdaq: UTHR), public benefit corporation incorporated in Delaware. Co-headquarters at Silver Spring, Maryland and Research Triangle Park, North Carolina 2023 Report: Who We Are (pgs. 5-12) 2022 Form 10-K: Item 1. Business – Overview (pg. 3), Item 2. Properties (pg. 44) Corporate Website: Our Company
2-2 Entities included in the organization's sustainability reporting	2022 Form 10-K: Exhibit 21

DISCLOSURE	LOCATION
2-3 Reporting period, frequency and contact point	**Reporting period**: January 1, 2022 through December 31, 2022, our fiscal 2022 year. In some cases, we include data and information about programs and activities relevant to our ESG priorities that occurred in the 2023 fiscal year, as noted. Reporting cycle: Annual Publication date of this Report: September 12, 2023 Contact point for questions regarding the report: ir@unither.com
2-4 Restatements of information	N/A
2-5 External assurance	N/A
2-6 Activities, value chain and other business relationships	United Therapeutics Corporation is the first publicly traded biotech or pharmaceutical company to take the form of a public benefit corporation. Our public benefit purpose is to provide a brighter future for patients through (a) the development of novel pharmaceutical therapies; and (b) technologies that expand the availability of transplantable organs. At the same time, we seek to provide our shareholders with superior financial performance and our communities with earth-sensitive energy utilization. 2023 Report: Who We Are (pgs. 5-12) 2022 Form 10-K: Item 1. Business (pgs. 3-30) Corporate Website: Our Company
2-7 Employees	2023 Report: 2022 Unitherians at a Glance (pg. 36)
2-8 Workers who are not employees	Contingent workers make up 5.3% of the workforce, and we do not experience seasonal variations of our workforce.

DISCLOSURE	LOCATION
2-9 Governance structure and composition	2023 Report: Governance (pgs. 67-70) 2023 Proxy Statement: Our Corporate Governance (pgs. 17-36) Corporate Website: Corporate Governance
2-10 Nomination and selection of the highest governance body	2023 Proxy Statement: Selecting Directors (pgs. 17-21)
2-11 Chair of the highest governance body	2023 Proxy Statement: Board Structure (pg. 30)
2-12 Role of the highest governance body in overseeing the management of impacts	2023 Report: ESG and PBC Governance (pgs. 67-68) Proxy Statement: Board Roles and Responsibilities (pgs. 33-34) Corporate Website: Audit, Compensation and Nominating and Governance Committee Charters
2-13 Delegation of responsibility for managing impacts	2023 Report: ESG and PBC Governance (pgs. 67-68), Our Patient Safety Operations (pg. 24), Our Quality Operations (pg. 26), Diversity, Equity, and Inclusion (pgs. 40-42), Our Approach to Climate (pgs. 50-51), Our Compliance Model (pg. 71), Data Privacy and Security (pgs. 74-75), Enterprise Risk Management and Organizational Resilience (pgs. 76-78)
2-14 Role of the highest governance body in sustainability reporting	2023 Report: ESG and PBC Governance (pgs. 67-68)
2-15 Conflicts of interest	2023 Report: Ethics and Compliance (pgs. 70-73) 2023 Proxy Statement: Selecting Directors (pgs. 17-19) Corporate Website: Code of Conduct

DISCLOSURE	LOCATION
2-16 Communication of critical concerns	2023 Report: Ethics and Compliance (pgs. 70-73) 2023 Proxy Statement: Shareholder Communication with Directors (pg. 36) Corporate Website: Code of Conduct
2-17 Collective knowledge of the highest governance body	2023 Proxy Statement: Board of Directors and Nominees (pgs. 22-29), Board Education (pg. 36)
2-18 Evaluation of the performance of the highest governance body	2023 Proxy Statement: Selecting Directors (pgs. 17-20) Corporate Website: Nominating and Governance Committee Charter and Corporate Governance Guidelines
2-19 Remuneration policies	2023 Proxy Statement: Non-Employee Director Compensation (pgs. 37-39), Executive Compensation (pgs. 40-59)
2-20 Process to determine remuneration	2023 Proxy Statement: Non-Employee Director Compensation (pgs. 37-39), Executive Compensation (pgs. 40-59)
2-21 Annual total compensation ratio	2023 Proxy Statement: Pay Ratio (pg. 71)
2-22 Statement on sustainable development strategy	2023 Report: A Message from Our CEO (pg. 3), Our Purpose and Progress (pgs. 9-11), A Message from Our Chief Medical Officer (pg. 14), A Message from Our Chief People Officer (pg. 35), A Message from Our General Counsel (pg. 48)
2-23 Policy commitments	2023 Report: Our Purpose and Progress (pgs. 9-11), Where our PBC Goals and ESG Priorities Meet (p. 12), Ethics and Compliance (pgs. 70-73) Corporate Website: Corporate Governance
2-24 Embedding policy commitments	2023 Report: Our Purpose and Progress (pgs. 9-11), Where our PBC Goals and ESG Priorities Meet (pg. 12), 2022 Innovation at a Glance (p. 15), Clinical Trials (pg. 17), Product Quality and Patient Safety (pgs. 22-28), 2022 Patient Support at a Glance (pg. 29), 2022 Reliable Supply at a Glance (pg. 33), 2022 Unitherians at a Glance (pgs. 36-37), 2022 Environmental Stewardship at a Glance (pg. 49), 2022 Community Impacts at a Glance (pg. 58), ESG and PBC Governance (pgs. 67-68), Ethics and Compliance (pgs. 70-73)

DISCLOSURE	LOCATION
2-25 Processes to remediate negative impacts	2023 Report: Environmental Stewardship (pgs. 49-57), Clinical Trials (pg. 17), Product Quality and Patient Safety (pgs. 22-28), Responsible Business Practices (pgs. 67-78)
2-26 Mechanisms for seeking advice and raising concerns	2023 Report: Ethics and Compliance (pgs. 70-73)
2-27 Compliance with laws and regulations	2023 Report: Ethics and Compliance (pgs. 70-73) 2022 Form 10-K: Item 1. Business – Government Regulation and Environmental Matters (pgs. 17-29), Item 1A. Risk Factors (pgs. 32-43), Item 8. Financial Statements and Supplementary Data – Note 14. Litigation (pgs. F-32-F-35) Corporate Website: Code of Conduct, UK Tax Strategy
2-28 Membership associations	We maintain strategic memberships in local, regional, national, and international associations and/or organizations unique to biopharma, environmental, regional, and community-oriented matters.
2-29 Approach to stakeholder engagement	Shareholder engagement is a core part of our corporate governance process, and includes direct involvement from our Board. Engagement with other relevant stakeholders occurs throughout our organization at the business unit level. 2023 Report: Our PBC Objectives and ESG Priority Issues (pg. 12), About This Report and Stakeholder Engagement (pgs. 80-81)
2-30 Collective bargaining agreements	None
GRI 3: Material Topics 2021	
3-1 Process to determine material topics	2023 Report: Where our PBC Goals and ESG Priorities Meet (pg. 12), About This Report and Stakeholder Engagement (pgs. 80-81)
3-2 List of material topics	2023 Report: Where our PBC Goals and ESG Priorities Meet (pg. 12)
3-3 Management of material topics	2023 Report: Our Purpose and Progress (pgs. 9-11), Where our PBC Goals and ESG Priorities Meet (pg. 12), ESG and PBC Governance (pgs. 67-68)

DISCLOSURE	LOCATION
GRI 201: Economic Performance 2016	
201-1 Direct economic value generated and distributed	2023 Report: 2022 Year in Review (pg. 7)
201-2 Financial implications and other risks and opportunities due to climate change	Given the significant threat of climate change, United Therapeutics has taken aggressive and groundbreaking steps to diminish its climate impact. 2023 Report: Our Approach to Climate (pgs. 50-51), Our Organizational Resilience Program (pg. 77)
201-3 Defined benefit plan obligations and other retirement plans	2022 Form 10-K: Item 8. Financial Statements and Supplementary Data – Note Employee Benefit Plans. Litigation (pgs. F-28-F-30) As of December 31, 2022, we had 96.9% participation in our U.S. 401(k) plan.
GRI 202: Market Presence 2016	
202-1 Ratios of standard entry level wage by gender compared to local minimum wage	2023 Report: Our Culture and Benefits Program (pgs. 38-39) We pay all employees a minimum base salary of $62,500 (with a total of approximately $75,000 per year including each employee's bonus opportunity), well above all applicable minimum wage levels.
202-2 Proportion of senior management hired from the local community	Not tracked
GRI 203: Indirect Economic Impacts 2016	
203-1 Infrastructure investments and services supported	2023 Report: No Patient Left Behind (pgs. 29-33), Humankind (pgs. 48-65)
203-2 Significant indirect economic impacts	2023 Report: No Patient Left Behind (pgs. 29-33), Humankind (pgs. 48-65)

DISCLOSURE	LOCATION
GRI 204: Procurement Practices 2016	
204-1 Proportion of spending on local suppliers	We track our spend on all of our major projects, with an emphasis on selecting vendors and service providers located in the county or state where the project is located. For example, most of the 600 pre-qualified GMP suppliers are based in the North America.
GRI 205: Anti-corruption 2016	
205-1 Operations assessed for risks related to corruption	2023 Report: Ethics and Compliance (pg. 70)
205-2 Communication and training about anti-corruption policies and procedures	2023 Report: Ethics and Compliance (pg. 70)
205-3 Confirmed incidents of corruption and actions taken	None
GRI 206: Anti-competitive Behavior 2016	
206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	2022 Form 10-K: Item 8. Financial Statements and Supplementary Data – Note 14. Litigation (pgs. F-32-F-35)
GRI 301: Materials 2016	
301-1 Materials used by weight or volume	Within the boundaries defined by patient safety and regulatory compliance, United Therapeutics works to minimize the footprint we leave with raw materials consumption in our operations.
301-3 Reclaimed products and their packaging materials	We participate in the Pharmaceutical Product Stewardship Work Group (PPSWG) MyOldMeds industry takeback program.

DISCLOSURE	LOCATION
GRI 302: Energy 2016	
302-1 Energy consumption within the organization	We are in the process of validating all environmental data, closing certain data gaps, and creating an assurance-ready set of data collection and management procedures with the assistance of an audit firm. See Our Approach to Climate, which relies on energy data, (pgs. 50-51)
302-2 Energy consumption outside of the organization	We have not evaluated our Scope 3 category energy sources and emissions.
302-3 Energy intensity	We are in the process of validating all environmental data, closing certain data gaps, and creating an assurance-ready set of data collection and management procedures with the assistance of an audit firm. See Our Approach to Climate, which relies on energy data, (pgs. 50-51)
302-4 Reduction of energy consumption	We are in the process of validating all environmental data, closing certain data gaps, and creating an assurance-ready set of data collection and management procedures with the assistance of an audit firm. See Our Approach to Climate, which relies on energy data, (pgs. 50-51)
GRI 303: Water and Effluents 2018	
303-1 Interactions with water as a shared resource	2023 Report: Water Management (pg. 56)
303-2 Management of water discharge-related impacts	Sites that have wastewater discharge permits comply with water quality standards for the quality of effluent discharge established by the conditions contained in the permits.
303-3 Water withdrawal	We are integrating water and waste data into our centralized environmental data management system to enable future comprehensive reporting.
303-4 Water discharge	Sites that have wastewater discharge permits comply with water quality standards for the quality of effluent discharge established by the conditions contained in the permits.
303-5 Water consumption	We are integrating water and waste data into our centralized environmental data management system to enable future comprehensive reporting.

DISCLOSURE	LOCATION
GRI 305: Emissions 2016	
305-1 Direct (Scope 1) GHG emissions	2023 Report: See Our Approach to Climate (pg. 50)
305-2 Energy indirect (Scope 2) GHG emissions	2023 Report: See Our Approach to Climate (pg. 50)
305-3 Other indirect (Scope 3) GHG emissions	2023 Report: See Our Approach to Climate (pg. 50)
305-4 GHG emissions intensity	2023 Report: See Our Approach to Climate (pg. 50)
305-5 Reduction of GHG emissions	2023 Report: See Our Approach to Climate (pg. 50)
GRI 306: Waste 2020	
306-1 Waste generation and significant waste-related impacts	2023 Report: Responsible Waste Management (pg. 56)
306-2 Management of significant waste-related impacts	2023 Report: Responsible Waste Management (pg. 56)
306-3 Waste generated	We are integrating water and waste data into our centralized environmental data management system to enable future comprehensive reporting.
306-4 Waste diverted from disposal	We are integrating water and waste data into our centralized environmental data management system to enable future comprehensive reporting.
306-5 Waste directed to disposal	We are integrating water and waste data into our centralized environmental data management system to enable future comprehensive reporting.

DISCLOSURE	LOCATION
GRI 401: Employment 2016	
401-1 New employee hires and employee turnover	2023 Report: 2022 Unitherians at a Glance (pg. 36)
401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	2023 Report: Our Culture and Benefits Program (pgs. 38-39) In 2022, we began to provide access to medical, dental, and vision benefits to part-time Unitherians.
401-3 Parental leave	2023 Report: 2022 Unitherians at a Glance (pg. 36) All full-time employees are eligible for parental leave.
GRI 403: Occupational Health and Safety 2018	
403-1 Occupational health and safety management system	2023 Report: Safe and Healthy Workplaces (pgs. 45-46)
403-2 Hazard identification, risk assessment, and incident investigation	Hazard identification, risk assessments, and incident investigations are used on a routine and non-routine basis through compliance initiatives, loss profile reviews, new process and engineering reviews, and incident, near miss and hazard analysis reporting. Employees are encouraged to report work-related hazards and hazardous situations to their management and through other appropriate channels.
403-3 Occupational health services	2023 Report: Safe and Healthy Workplaces (pgs. 45-46)
403-4 Worker participation, consultation, and communication on occupational health and safety	2023 Report: Safe and Healthy Workplaces (pgs. 45-46) We collaborate with employees and leadership through collective group forums to develop practices that directly improve our occupational health and safety performance. Group forums meet routinely to help facilitate collaboration and successful employee involvement.

DISCLOSURE	LOCATION
403-5 Worker training on occupational health and safety	2023 Report: Safe and Healthy Workplaces (pgs. 45-46) Training needs have been assessed by EHSS, and a comprehensive training curriculum has been developed and assigned to all manufacturing and laboratory workers. This training is compliance-based and specific to work-related hazards and potentially hazardous activities in each worker's job function. Training is delivered during work hours in a hybrid format, both online in multiple languages through Universe and in-person in our state-of-the-art training rooms.
403-6 Promotion of worker health	2023 Report: Our Culture and Benefits Program (pgs. 38-39), Safe and Healthy Workplaces (pgs. 45-46)
403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	2023 Report: Safe and Healthy Workplaces (pgs. 45-46) The prevention and mitigation of occupational health and safety impacts that are directly linked to our operations, products, or services by business relationships and the related hazards and risks are managed by line management. For example, safety information, engineering controls, and PPE relating to hazardous materials, including pharmaceutical compounds and pharmaceutical intermediate materials, are available to train and protect workers from hazards associated with our operations.
403-8 Workers covered by an occupational health and safety management system	2023 Report: Safe and Healthy Workplaces (pgs. 45-46)
403-9 Work-related injuries	2023 Report: 2022 Unitherians at a Glance (pg. 36)
403-10 Work-related ill health	2023 Report: 2022 Unitherians at a Glance (pg. 36)

DISCLOSURE	LOCATION
GRI 404: Training and Education 2016	
404-1 Average hours of training per year per employee	2023 Report: 2022 Unitherians at a Glance (pg. 36); Our Culture and Benefits Program (pg. 38)
404-2 Programs for upgrading employee skills and transition assistance programs	2023 Report: 2022 Unitherians at a Glance (pg. 36); Our Culture and Benefits Program (pg. 38), The Unitherian Journey (pgs. 43 - 44)
404-3 Percentage of employees receiving regular performance and career development reviews	2023 Report: 2022 Unitherians at a Glance (pg. 36); Our Culture and Benefits Program (pg. 38)
GRI 405: Diversity and Equal Opportunity 2016	
405-1 Diversity of governance bodies and employees	2023 Report: 2022 Unitherians at a Glance (pg. 36)
GRI 413: Local Communities 2016	
413-1 Operations with local community engagement, impact assessments, and development programs	2023 Report: Our Communities (pgs. 58-65)
GRI 416: Customer Health and Safety 2016	
416-1 Assessment of the health and safety impacts of product and service categories	2023 Report: Product Quality and Safety (pgs. 22-28)
416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	FDA website

DISCLOSURE	LOCATION
GRI 417: Marketing and Labeling 2016	
417-1 Requirements for product and service information and labeling	2022 Form 10-K: Item 1. Business – Government Regulation (pgs. 17-28)
417-2 Incidents of non-compliance concerning product and service information and labeling	None
417-3 Incidents of non-compliance concerning marketing communications	None
GRI 418: Customer Privacy 2016	
418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	None

SASB Topics

SASB is an independent, private sector standards-setting organization whose mission is to help businesses around the world identify, manage, and report on the sustainability topics that SASB believes matter most to investors. We have considered the industry standards (as defined by SASB's Industry Classification System) for the Biotechnology and Pharmaceuticals Sector, and the table below represents some topics that we believe are relevant to our company and that are discussed in our 2023 Report. In certain instances, and as noted below, a specific SASB topic may be discussed generally in our 2023 Report but we do not currently track or report progress on the corresponding SASB metrics.

SASB Topic	Code	Accounting Metric	Explanation or Location
Safety of Clinical Trial Participants	HC-BP-210a.1	Discussion of, by world region, management process for ensuring quality and patient safety during clinical trials	2023 Report: Our Patient Safety Operations (pgs. 24-25)
	HC-BP-210a.2	Number of FDA Sponsor Inspections related to clinical trial management and pharmacovigilance that resulted in: (1) Voluntary Action Indicated (VAI) and (2) Official Action Indicated (OAI)	None
	HC-BP-210a.3	Total amount of monetary losses as a result of legal proceedings associated with clinical trials in developing countries	None
Access to Medicine	C-BP-240a.1	Description of actions and initiatives to promote access to health care products for priority diseases and in priority countries as defined by the Access to Medicine Index	2023 Report: Our Purpose and Progress (pgs. 9-11), Our PBC Objectives and ESG Priority Issues (pg. 12), Innovation (pgs. 15-19), Patient Support (pgs. 29-32) While not listed as a company in scope for the 2023 Access to Medicine Index, we are deeply committed to increasing access to our medicines. Two of our Initial PBC goals – Address Unserved Needs and No Patient Left Behind – demonstrate this commitment. In addition, our current commercial and therapeutic footprint does not cover any priority countries or priority diseases listed in the Access to Medicine Index.
	C-BP-240.2	List of products on the WHO List of Prequalified Medicinal Products as part of its Prequalification of Medicines Programme (PQP)	We have no products on the WHO List of Prequalified Medicinal Products because our core therapeutic areas – pulmonary hypertension and pediatric neuroblastoma – are not in the therapeutic scope of the WHO List of Prequalified Medicinal Products.

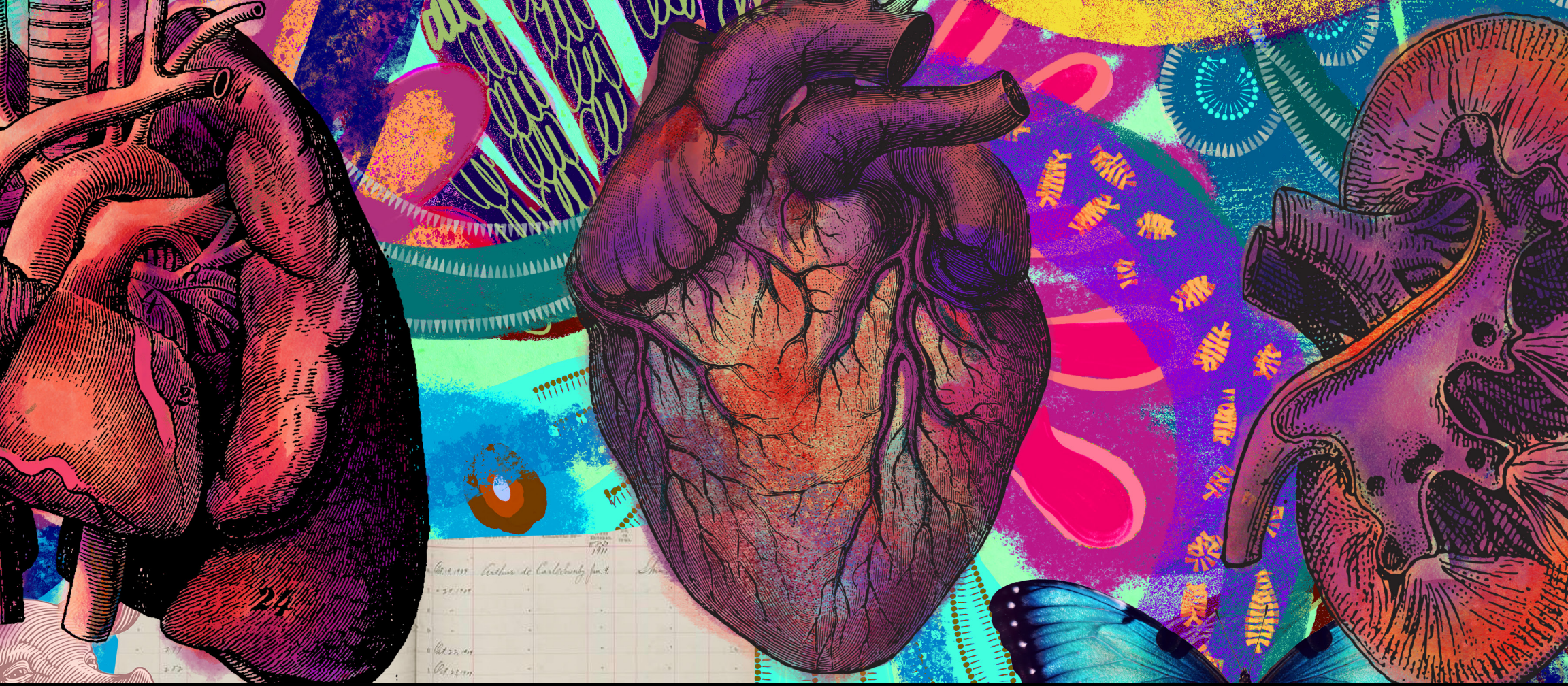
SASB Topic	Code	Accounting Metric	Explanation or Location
Affordability and Pricing	HC-BP-240b.2	Percentage change in: (1) average list price and (2) average net price across U.S. product portfolio compared to previous year	2023 Report: Pricing (pg. 32). Additional detail on this metric would potentially reveal competitive information given our small portfolio of five FDA-approved medicines as compared to larger pharmaceutical companies. We do not control pricing over our medicine Adcirca.
	HC-BP-240b.3	Percentage change in: (1) list price and (2) net price of product with largest increase compared to previous year	2023 Report: Pricing (pg. 32). Additional detail on this metric would potentially reveal competitive information given our small portfolio of five FDA-approved medicines as compared to larger pharmaceutical companies. We do not control pricing over our medicine Adcirca.
Drug Safety	HC-BP-250a.1	List of products listed in the Food and Drug Administration's (FDA) MedWatch Safety Alerts for Human Medical Products database	Please visit the FDA FAERS MedWatch website for more information.
	HC-BP-250a.2	Number of fatalities associated with products as reported in the FDA Adverse Event Reporting System	Please visit the FDA FAERS MedWatch website for more information.
	HC-BP-250a.3	Number of recalls issued, total units recalled	None
	HC-BP-250a.5	Number of FDA enforcement actions taken in response to violations of current Good Manufacturing Practices (cGMP), by type	None
Counterfeit Drugs	HC-BP-260a.1	Description of methods and technologies used to maintain traceability of products throughout the supply chain and prevent counterfeiting	2023 Report: Anti-Counterfeiting and Package Serialization (pg. 25)
	HC-BP-260a.3	Number of actions that led to raids, seizure, arrests, and/or filing of criminal charges related to counterfeit products	None

SASB Topic	Code	Accounting Metric	Explanation or Location
Ethical Marketing	HC-BP-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	None
	HC-BP-270a.2	Description of code of ethics governing promotion of off-label use of products	Corporate Website: unither.com > Investors > Corporate Governance > Code of Conduct
Employee Recruitment, Development and Retention	HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and research and development personnel	2023 Report: Our People (pp. 35-46)
	HC-BP-330a.2	(1) Voluntary and (2) involuntary turnover rate for: (a) executives/senior managers, (b) midlevel managers, (c) professionals, and (d) all others	2023 Report: 2022 Unitherians at a Glance (pg. 36)
Supply Chain Management	HC-BP-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in the Rx-360 International Pharmaceutical Supply Chain Consortium audit program or equivalent third-party audit programs for integrity of supply chain and ingredients	UT is a member of Rx-360 international through which we supplement our own vendor audit program with Rx-360 audits, and we have sponsored Rx-360 audits.
Business Ethics	HC-BP-510a.1	Total amount of monetary losses as a result of legal proceedings associated with corruption and bribery	None
	HC-BP-510a.2	Description of code of ethics governing interactions with health care professionals	Corporate Website: unither.com > Investors > Corporate Governance > Code of Conduct
Activity Metrics	HC-BP-000.A	Number of patients treated	Refer to Our Purpose and Programs, 2022 progress (pg. 10)
	HC-BP-000.B	Number of drugs (1) in portfolio and (2) in R&D (Phases 1–3)	See our development programs on p. 16; see our pipeline at https://pipeline.unither.com/

TCFD Framework

The TCFD has developed a framework of recommendations to help public companies and other organizations more effectively disclose climate-related risks and opportunities through their existing reporting processes. The following table outlines our climate-related discussions in accordance with the TCFD framework.

TCFD Recommendation	Explanation or Location
Governance Disclose the organization's governance around climate-related risks and opportunities.	2023 Report: Our Approach to Climate (pgs. 50-51), ESG and PBC Governance (pgs. 67-68)
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	2023 Report: A Message from Our General Counsel (pg. 48), Our Approach to Climate (pgs. 50-51)
Risk Management Disclose how the organization identifies, assesses, and manages climate-related risks.	2023 Report: Our Approach to Climate (pgs. 50-51), Enterprise Risk Management and Organizational Resilience (pgs. 76-78)
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	We are in the process of validating all environmental data, closing certain data gaps, and creating an assurance-ready set of data collection and management procedures with the assistance of an audit firm; see Our Approach to Climate (pg. 50)



United Therapeutics
CORPORATION