For Immediate Release

# UNITED THERAPEUTICS CORPORATION ANNOUNCES HISTORIC ACHIEVEMENTS IN ITS XENOTRANSPLANTATION PROGRAMS

*UKidney™ procedure data published in the American Journal of Transplantation; the first such data published in a peer-reviewed journal*

*UHeart™ recipient patient reaches a two-week milestone post-transplant*

*UThymoKidney™ procedure represents a historic first preclinical human model study*

SILVER SPRING, Md. and RESEARCH TRIANGLE PARK, N.C., January 21, 2022 -- United Therapeutics Corporation (**UT**) (Nasdaq: UTHR), a public benefit corporation with a purpose to provide a brighter future for patients, announced today that the world's first recipient of an investigational genetically-modified xenotransplanted organ, UT's UHeart™, reached a two-week milestone. University of Maryland School of Medicine (**UMSOM**) surgeons report continued post-operative cardiovascular improvement in the patient with normal organ function. In addition, the first peer-reviewed publication of a similarly gene-edited investigational xenograft, UT's UKidney™, in a human preclinical model at the University of Alabama at Birmingham Marnix E. Heersink School of Medicine (**UAB**) was published yesterday in the *American Journal of Transplantation*.

These major medical milestones come on the heels of the September 2021 historic transplant of UT's UThymoKidney™ at New York University Langone Health (**NYU**). That human preclinical model proved for the first time that UT's GalSafe™ pig could, as modified, transcend the most proximate immunological barriers to xenotransplantation. The GalSafe pig was approved by the U.S. Food and Drug Administration (**FDA**) for human food and as a potential source for biomedical use in December 2020. These achievements rely on UT's development, through its Revivicor subsidiary, of genetically modified pigs that are designed to provide a supply of organs for people who are unable to receive human organ donations.

Also relevant to UT's organ development efforts are:

- **Drone delivery of organs.** UT's historic October 2021 first-ever delivery of a transplanted lung by electric drone at Toronto General Hospital, demonstrating the feasibility of UT's goal to deliver its transplantable organs with zero carbon footprint aircraft; and

- **Ex-vivo lung perfusion.** More than 200 human donor lungs successfully transplanted after being saved from disposal by UT's subsidiary Lung Bioengineering at its facilities in Silver Spring, Maryland and on the Mayo Clinic campus in Jacksonville, Florida.

"It is enormously gratifying to see these xenotransplantation breakthroughs achieved after working on this for over twenty years," said **Martine A. Rothblatt, Ph.D**, Chairperson and Chief Executive Officer. "At UT, we are relentlessly pursuing our goal of producing an unlimited supply of transplantable organs from xenotransplantation, regenerative medicine, and 3D bioprinting technology, and we expect to make additional breakthrough announcements in each of these fields in the coming years. Indeed, we have commenced work on a large clinical-quality organ facility to support upcoming UHeart and UKidney clinical trials."

Dr. Rothblatt noted that hundreds of people had made important contributions to UT's recent xenotransplantation successes, and as leader of the project she wanted to publicly acknowledge three key mentors:

- **Dr. Tom Starzl**, who served on UT's Scientific Advisory Board until his passing in 2017, and taught how the body can be induced to tolerate xenografts;

- **Sir Magdi Yacoub**, who continues to serve on UT's Scientific Advisory Board and guides the company through multiple transplantation technologies; and

- **Dr. Craig Venter**, whose team at Synthetic Genomics (now UT's Exponential Biotherapeutic Engineering group) provided essential porcine gene engineering expertise.

**More about UMSOM and the UHeart:** UMSOM, along with the University of Maryland Medical Center produced a video of the historic xeno UHeart transplant surgery. Further information can be found at https://www.umms.org/ummc/news/2022/first-successful-transplant-of-porcine-heart-into-adult-human-heart.

**More about UAB and the UKidney:** UAB produced an animation of the xeno UKidney procedure. Further information about UAB's xeno UKidney efforts can be found at go.uab.edu/xenotransplant.

**More about NYU and the UThymoKidney:** NYU produced an interview with the surgeon who led last year's UThymoKidney transplant. More information about NYU's xeno UThymoKidney efforts can be found at https://nyulangone.org/news/progress-xenotransplantation-opens-door-new-supply-critically-needed-organs.

**More about Unither Bioelectronics and drone delivery:** UT's Unither Bioelectronics subsidiary produced a video of the electric drone delivery of a lung that was subsequently transplanted. More information about Unither Bioelectronics' efforts can be found at unither.aero.

**More about Lung Bioengineering and ex-vivo lung perfusion:** UT's Lung Bioengineering subsidiary is dedicated to increasing the utilization of marginal lungs donated for transplant through the use of ex-vivo perfusion technology. More information about Lung Bioengineering cans be found at lungbioengineering.com.

UOrgans™ like the UHeart, UThymoKidney, and UKidney are not approved by the FDA. The UHeart transplant conducted by surgeons at UMSOM and UMMC was authorized by the FDA for the treatment of the individual patient. UT hopes to complete clinical trials for its xeno UOrgan products in the coming years and, if approved by FDA, provide a source of organ transplants for the hundreds of thousands of patients unable to achieve them through the organ transplant list.

**United Therapeutics: Enabling Inspiration**
We build on the strength of our research and development expertise and a distinctive, entrepreneurial culture that encourages diversity, innovation, creativity, sustainability, and, simply, fun. Since inception, our mission has been to find a cure for pulmonary arterial hypertension and other life-threatening diseases. Toward this goal we have successfully gained FDA approval for five medicines, we are always conducting new clinical trials, and we are working to create an unlimited supply of manufactured organs for transplantation.

We are the first publicly-traded biotech or pharmaceutical company to take the form of a public benefit corporation (**PBC**). 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.

You can learn more about what it means to be a PBC here: unither.com/PBC.

## Forward-looking Statements

Statements included in this press release that are not historical in nature are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, among others, statements relating to our goal of producing an unlimited supply of transplantable organs from xeno, regenerative medicine, and 3D bioprinting technology, our expectations that we will make additional medical history breakthrough announcements in xeno, regenerative medicine, and 3D bioprinting in the coming years, our ongoing and future preclinical and clinical trials and other research and development efforts, and our goals of furthering our public benefit purpose. These forward-looking statements are subject to certain risks and uncertainties, such as those described in our periodic reports filed with the Securities and Exchange Commission, that could cause actual results to differ materially from anticipated results. 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 Securities and Exchange Commission, 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 Private Securities Litigation Reform Act of 1995 for forward-looking statements. We are providing this information as of January 21, 2022 and assume no obligation to update or revise the information contained in this press release whether as a result of new information, future events, or any other reason.



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