



For Immediate Release

## United Therapeutics Corporation Announces FDA Clearance to Proceed with UHeart Xenotransplantation Clinical Trial

*First-ever human clinical trial of a xenoheart intended to support potential registration through the submission of a Biologics License Application to the U.S. FDA*

SILVER SPRING, Md. and RESEARCH TRIANGLE PARK, N.C., May 15, 2026: United Therapeutics Corporation (Nasdaq: UTHR), a public benefit corporation, today announced that the U.S. Food and Drug Administration (**FDA**) has granted clearance under the company's Investigational New Drug application to proceed with a clinical study of its investigational UHeart™ derived from a pig with 10 gene edits. The study, known as *EXPRESS*, will enroll an initial cohort of up to two participants. United Therapeutics will provide the FDA with safety and efficacy data from the first UHeart xenotransplant recipient in the study before enrolling a second participant. Following FDA review of available safety and efficacy data from the initial two transplants, the study may then be further expanded, with the intent to support a Biologics License Application (**BLA**) with the FDA.

"Moving a porcine-derived heart into human clinical trials represents another defining advancement for the field of xenotransplantation," said **Kristina DeSmet, Ph.D., DABT**, Senior Director, Product Development at United Therapeutics. "The heart is one of the most complex solid organs to transplant, and proceeding into the clinic reflects years of coordinated scientific progress. For United Therapeutics, this milestone represents our third clinical trial in xenotransplantation and underscores the breadth of our platform, spanning end-stage renal disease and now life-threatening heart disease. Together, these programs reinforce our commitment to expanding transplant options for patients who currently have no other alternatives."

**Noah Byrd, Ph.D., RAC**, Vice President, Global Regulatory Affairs at United Therapeutics, added: "Patients with end stage heart disease continue to face profound limitations in available treatment options. This FDA clearance to proceed with our *EXPRESS* clinical trial will allow us to begin evaluating an innovative therapeutic option designed to address this unmet need."

### About *EXPRESS*

#### Study Design

The study will start at a single center enrolling up to two participants. If safety and efficacy data from these initial participants are supportive, United Therapeutics intends to expand the study to enroll participants at additional centers to support submission of a BLA. The study is designed as a phase 1/2/3 trial (sometimes referred to as a "phaseless" study) to evaluate safety and efficacy of the UHeart seamlessly without moving through separate phase 1, phase 2, and phase 3 studies that are typically associated with conventional drug approvals. Participants will receive a UHeart transplant followed by a 24-week post-transplant follow-up period, including the evaluation of all study endpoints and safety assessments. After the 24-week post-transplant follow-up period, participants who received a UHeart will continue to be followed for the rest of their lives, including for survival, UHeart survival, and screening for zoonotic infections.

Safety and efficacy data will be reviewed frequently by an independent Data Monitoring Committee. After at least 12 weeks post-transplant of the first participant, United Therapeutics will provide data to FDA prior to initiating a second transplant. If safety and efficacy results from the first 2 participants are supportive, the study sample size will be increased to enable the study to support registration.

### **Efficacy Endpoints**

Efficacy endpoints include participant survival rate, UHeart survival rate, UHeart function<sup>1</sup>, change in quality of life in participants<sup>2</sup> at 24 weeks post-transplant, and participant exercise capacity<sup>3</sup>. Overall survival time of participants receiving a UHeart and overall survival time of the UHearts themselves are also efficacy endpoints.

### **Safety Endpoints**

Safety endpoints include the incidence of adverse events and serious adverse events, all-cause mortality, and the incidence of arrhythmias, thromboembolic and ischemic strokes, zoonotic infections, and opportunistic infections.

### **Key Participation Criteria**

Key participation criteria include those  $\geq 50$  years of age, diagnosed with end-stage or advanced heart failure (**HF**) classified as American College of Cardiology/American Heart Association stage D and New York Heart Association Class IV, and no remaining therapeutic options. Participants will be screened using a crossmatch assay to assess expected immunological compatibility with the UHeart. Participants must not need multiple organ transplants; must not have had a prior solid organ transplant; must not have support with venoarterial ECMO; must not have severe medical co-morbidities, including but not limited to chronic liver disease, severe central vascular disease, severe neurologic diseases, and uncontrolled diabetes; and must not have a history of medical noncompliance that may preclude adherence to the demands and requirements of xenotransplantation.

Full inclusion and exclusion criteria for this study will be provided in a future listing on the [clinicaltrials.gov](https://clinicaltrials.gov) website.

## **About Advanced Heart Failure**

According to the *Journal of Cardiac Failure*, in the United States nearly 6.7 million adults 20 years of age or older have HF, and in 2023, HF was responsible for 14.6% of all causes of death according to a CDC report<sup>4</sup>. In 2023, only a fraction of Americans with HF were considered candidates and waitlisted for a human heart transplant (0.12% or 8,000 Americans), and only approximately 4,000 heart transplants were performed<sup>5</sup>.

## **About UHeart**

United Therapeutics' xenoheart, known by the proposed trade name UHeart, is an investigational xenoheart from a pig with 10 gene edits. Six human genes are added to the pig genome to facilitate immunological acceptance and compatibility of the organ in the human recipient. Four porcine genes are inactivated or "knocked out" to reduce the risk of organ rejection and to moderate growth.

## **About United Therapeutics**

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<sup>1</sup> UHeart function defined as left ventricular ejection fraction, global longitudinal strain, and right ventricular free-wall strain

<sup>2</sup> Quality of life will be measured using the following three surveys: the EuroQol 5-Dimension 5-Level, the Kansas City Cardiomyopathy Questionnaire-23, and the Patient Global Impression of Change.

<sup>3</sup> Exercise capacity will be measured by change in 6-minute walk distance from baseline to 24 weeks post transplant.

<sup>4</sup> About Heart Failure, Centers for Disease Control, <https://www.cdc.gov/heart-disease/about/heart-failure.html>.

<sup>5</sup> Organ Procurement and Transplantation Network/Scientific Registry of Transplant Recipients 2025.

Founded by CEO Martine Rothblatt to discover a cure for her daughter's life-threatening rare disease, pulmonary arterial hypertension, United Therapeutics transforms the treatment of rare diseases and pioneers alternatives to expand the supply of transplantable organs. From our innovative therapies to our groundbreaking manufactured organs, we are bold and unconventional. We move quickly from scientific theory to practical technologies that can save lives. As a public benefit corporation, even our legal structure reflects our commitments. We serve patients, act with integrity, create long-term shareholder value, and operate with sustainable practices that protect the future we are working to build. Visit us at [www.unither.com](http://www.unither.com) and follow us on [LinkedIn](#), [Facebook](#), and [Instagram](#).

## 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: our plans with respect to the conduct of the *EXPRESS* study of our UHeart product, including the potential to expand the study following review of data from the first two participants; our plan to submit a BLA seeking FDA approval of the UHeart; our commitment to expanding transplant options for patients through our xenotransplant programs; our belief that presentations of data from our clinical studies will provide important clinical insights that can meaningfully reshape how diseases are managed and improve outcomes; and our goals of expanding the supply of transplantable organs, developing practical technologies that can save lives, creating long-term shareholder value, and operating with sustainable practices. 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 May 15, 2026, 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.

UHEART is a trademark of United Therapeutics Corporation.

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