



Scientists in Missouri, Virginia receive pediatric heart transplantation research grants

American Heart Association and Enduring Hearts award nearly \$3 million in grants in the latest round of funding for pioneering research in heart transplants for children

DALLAS, April 22, 2024 — Scientific researchers in Missouri and Virginia have been awarded nearly \$1.4 million each in grants to study ways to extend the life expectancy and improve the quality of life for [children with a transplanted heart](#). These two research awards mark the latest round of funding for a joint \$3 million scientific research initiative between the [American Heart Association](#), [celebrating 100 years of lifesaving service](#) as the world's leading nonprofit organization focused on heart and brain health for all, and [Enduring Hearts](#), the only non-profit organization solely dedicated to funding pediatric heart transplant research.

The announcement comes during National Pediatric Transplant Week, April 21-28, 2024.

According to Enduring Hearts, nearly 500 children undergo a heart transplant in the U.S. each year. The average pediatric heart transplant lasts less than 20 years and although medical advances have improved over the years, many of these children and their families still face a lifetime of challenges.

"Aligning with the American Heart Association in this critical work puts a crucial spotlight on pediatric heart transplant research. We look forward to innovative outcomes that will advance this field," said Lynda Lee Smith, Chief Executive Officer of Enduring Hearts.

The new grants are the latest of the [Translational Research Awards in Pediatric Heart Transplantation](#), a collaboration of the American Heart Association and Enduring Hearts that represents a shared research commitment of \$5.5 million since 2021.

- **Contemporary Approach to Desensitization: Targeted therapies for HLA sensitized Pediatric Heart Transplant Candidates** at Washington University School of Medicine in St. Louis, Missouri – Led by Lakshmi R. Gokanapudy Hahn, M.D., an assistant professor of pediatrics in the university's division of pediatric cardiology, this team will study new treatments for children who need heart transplants but who may be sensitized with significant antibody burden. Sensitization is a major obstacle to transplantation, leading to longer wait times, increased waitlist mortality and increased risk of complications like rejection after transplant. Children born with heart disease are at increased risk for having antibodies in their blood that can attack the new heart due to the many surgeries that they have had to undergo for their condition. The current treatment options to get rid of these antibodies do not work well for many children and this team hopes to address this gap in knowledge with the goal of enhancing transplant opportunities and long-term survival for these patients.

- **Phenotyping Net Immune State with MicroRNAs in Pediatric Heart Transplantation** at Inova Schar Heart and Vascular in Falls Church, Virginia – Led by Palak Shah, M.D., director of the Inova Cardiovascular Genetics Center and medical director of mechanical circulatory support for Inova Fairfax Medical Campus, this team will work to develop a new blood test that doctors can use to optimize the immunosuppression medications needed after transplant. More than 15-20% of transplant patients have acute rejection of their new heart in the first year. It's important that patients are given the best treatments that can balance the risk of complications such as infection against potential organ rejection. This study seeks to determine if a molecule called a microRNA can help in that process. The goal is to personalize the dose of medications a patient needs to adequately suppress their immune system and reduce the risk of rejecting the new heart.

"The aims of these studies are well aligned with Enduring Hearts' priorities to improve pre-transplant candidacy and help develop novel post-transplant surveillance therapies. We are thrilled to collaborate with the American Heart Association to fund these two multicenter research initiatives," said Janet Scheel, M.D., chair of Enduring Hearts Scientific Advisory Committee.

"The American Heart Association is proud to support this research aimed at improving the lives and long-term survival of our youngest survivors. This highly innovative research will hopefully open new doors of discovery that result in life-changing opportunities for these children, giving health and hope to them and their families," said Joseph C. Wu, M.D., Ph.D., FAHA, current volunteer president of the American Heart Association, director of the Stanford Cardiovascular Institute and the Simon H. Stertzer Professor of Medicine and Radiology at Stanford School of Medicine. "We are excited about our ongoing collaboration with Enduring Hearts and crucial impact the findings from these projects can potentially make in real-world treatments."

The new research grants began April 1 and will extend for four years.

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About the American Heart Association

The American Heart Association is a relentless force for a world of longer, healthier lives. We are dedicated to ensuring equitable health in all communities. Through collaboration with numerous organizations, and powered by millions of volunteers, we fund innovative research, advocate for the public's health and share lifesaving resources. The Dallas-based organization has been a leading source of health information for a century. During 2024 - our Centennial year - we celebrate our rich 100-year history and accomplishments. As we forge ahead into our second century of bold discovery and impact our vision is to advance health and hope for everyone, everywhere. Connect with us on [heart.org](https://www.heart.org), [Facebook](#), [X](#) or by calling 1-800-AHA-USA1.

The American Heart Association has funded more than \$5.7 billion in lifesaving cardiovascular research since 1949.

The Association receives funding primarily from individuals; foundations and corporations (including pharmaceutical, device manufacturers and other companies) also make donations and fund specific Association programs and events. The Association has strict policies to prevent these relationships from influencing the

science content. Revenues from pharmaceutical and biotech companies, device manufacturers and health insurance providers and the Association's overall financial information are available [here](#).

About Enduring Hearts

Enduring Hearts is a national nonprofit that launched in 2013 to fund innovative research globally to improve longevity and the quality of life for children living with a heart transplant. Enduring Hearts has funded over \$10M in targeted pediatric heart transplant research. Enduring Hearts provides a variety of programs to offer both tangible and educational support to families during their transplant. Connect with us on enduringhearts.org, [Facebook](#) or [Twitter](#).

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heart.org and stroke.org