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Secant Group, Nationwide Children's Hospital Collaborate to Advance Breakthrough Cardiovascular Technology

Novel polymer technology helps researchers edge closer to a solution for repairing congenital heart defects

Telford, Pa.—[Secant Group](#), a leading implantable biomaterials developer based in suburban Philadelphia, PA, and a subsidiary of Solesis, has signed an agreement with [The Abigail Wexner Research Institute at Nationwide Children's Hospital](#) in Columbus, OH, to explore potential solutions for repairing congenital heart defects in children.

The Secant Group and Nationwide Children's collaboration advances the development of implantable tissue-engineered vascular grafts (TEVGs) to treat conditions such as coronary artery defects in children. The novel TEVGs at the center of Nationwide Children's research have the potential to restore compromised vascular tissue into fully functioning vessels that naturally grow as children develop, potentially eliminating the need for multiple risky procedures throughout the patient's life.

The technology supporting the Secant Group-Nationwide Children's collaboration is Secant's novel biopolymer poly(glycerol sebacate) (PGS), a "stealth" material that does not overstimulate the body's immune system. PGS is a biocompatible, biodegradable, and tunable elastomer that enables TEVGs to regenerate and restore healthy, compliant tissue.

"As the contract developer and manufacturer of the TEVG implant, Secant Group is supporting the advancement of Nationwide Children's research to develop a solution for repairing heart defects. This is exactly the kind of unmet healthcare need that Secant Group set out to support with our polymer and textile expertise more than a decade ago," says Jeremy Harris, PhD, Senior Director of Research at Secant, who is responsible for innovating Solesis' core technologies in biomaterials and textile engineering.

"Research like this is vital in order to advance the care and treatment of children born with congenital cardiac anomalies," said Christopher K. Breuer, MD, director of the Center for Regenerative Medicine at Nationwide Children's Hospital. "We look forward to continuing this important work to take more steps forward toward best outcomes for this patient population."

About Secant Group

With decades of implantable textile and biomaterials expertise, Secant Group provides next-generation solutions for the medical device and pharmaceutical industries by engineering technologies that enable repair, recovery, and regeneration of the human body. Through strategic partnerships, Secant Group collaborates with clients from sketch to scale on designing and developing custom-engineered textiles for implantable medical devices in the cardiovascular, surgical, orthopedic, and neurovascular industries. Secant's patented polymer technology, poly(glycerol sebacate) (PGS), enables the pharmaceutical industry to advance patient compliance and global healthcare through controlled release, cell and gene therapy, and tissue engineering applications. Learn more at www.secant.com.

About Solesis

Solesis is a market leader specializing in biomaterials for the life sciences industry. Operating through three subsidiaries—[Secant Group](#), [SanaVita Medical](#), and [Charter Medical](#)—Solesis develops, manufactures, and sells critical components for implantable medical devices and single-use technologies for the biopharmaceutical market, including cell and gene therapies. Based in the United States, Solesis employs 360 people across four production facilities located in Pennsylvania and North Carolina.

About The Abigail Wexner Research Institute at Nationwide Children's Hospital

Named to the Top 10 Honor Roll on *U.S. News & World Report's* 2022-23 list of "Best Children's Hospitals," Nationwide Children's Hospital is one of America's largest not-for-profit free-standing pediatric health care systems providing unique expertise in pediatric population health, behavioral health, genomics and health equity as the next frontiers in pediatric medicine, leading to best outcomes for the health of the whole child. Integrated clinical and research programs are part of what allows Nationwide Children's to advance its unique model of care. As home to the Department of Pediatrics of The Ohio State University College of Medicine, Nationwide Children's faculty train the next generation of pediatricians, scientists, and pediatric specialists. The Abigail Wexner Research Institute at Nationwide Children's Hospital is one of the Top 10 National Institutes of Health-funded free-standing pediatric research facilities in the U.S., supporting basic, clinical, translational, behavioral and population health research. The AWRI is comprised of multidisciplinary Centers of Emphasis paired with advanced infrastructure supporting capabilities such as technology commercialization for discoveries; gene- and cell-based therapies; and genome sequencing and analysis.

More information is available at [NationwideChildrens.org/Research](#).