

Nemours Orthopedic Surgeon Alvin Su Receives Orthopaedic Research and Education Foundation Grant to Develop Engineered Cartilage

WILMINGTON, Delaware (June 22, 2026) — Nemours Children’s Health orthopedic surgeon Alvin Su, MD, PhD, has received a \$300,000 Career Development Grant from the Orthopaedic Research and Education Foundation (OREF) to develop engineered cartilage.

The grant will support development of a new type of cartilage as a potential treatment for patients with conditions ranging from sports injuries and trauma to congenital issues like bowed legs.

Dr. Su explained that human cartilage does not regenerate once it’s damaged, which leads to early arthritis. Presently, the only way to replace cartilage is with cadaver tissue.

“There’s a great need for a better option, as cadaver tissue may introduce risks of infection, and it may degrade over time,” Dr. Su said.

Dr. Su and his University of Delaware collaborators, Justin Parreno, PhD, MSc, and Xinqiao Jia, PhD, are working to develop an “off-the-shelf” engineered cartilage replacement. Their work draws on their combined expertise in sports medicine and orthopedics, biology, and mechanical engineering, with the goal of developing cartilage that could advance through clinical trials and receive approval by the U.S. Food and Drug Administration.

“For our pediatric patients, we don’t want to see them sitting out of their activities due to arthritis. Our engineered cartilage could help them restore function and return to the activities they love much faster,” Dr. Su said.

Dr. Su said his collaboration with colleagues at the University of Delaware embodies the principles of translational scientific research, beginning with basic research and continuing through product development.

“This is a long but promising path, and each result we achieve will be a small but important step into that future,” Dr. Su said. “Engineered cartilage could allow patients of all ages to maintain healthy, active lives.”

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About Nemours Children’s Health

Nemours Children’s Health is one of the nation’s largest multistate pediatric health systems, which includes two freestanding children’s hospitals and a network of more than 70 primary and specialty care practices. Nemours Children’s seeks to transform the health of children by adopting a holistic health model that utilizes innovative, safe, and high-quality care, while also addressing children’s needs well beyond medicine. In producing the highly acclaimed, award-winning pediatric medicine podcast Well Beyond Medicine, Nemours underscores that commitment by featuring the people, programs and partnerships addressing whole child health. Nemours Children’s also powers the world’s most-visited website with health information written for parents, kids and teens, Nemours [KidsHealth.org](https://kidshealth.org).

The Nemours Foundation, established through the legacy and philanthropy of Alfred I. duPont, provides pediatric clinical care, research, education, advocacy, and prevention programs to the children, families and communities it serves. For more information, visit [Nemours.org](https://nemours.org).

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