



THIS WEEK'S PROGRAM

April 14, 2026

2025-2026 Board Members

President Patrick Baker
Pres Elect Bill Bartee
Past Pres Kim Brattain
Secretary Bill Gill
Treasurer Craig Field
Exec Dir Christine Cipriano

Directors 2024-2026

Benton Bragg
John Cantrell
Tish Atkins Charles
Dena Diorio
Jesse Hite
Virginia Owen

Directors 2025-2027

Byrd Bergeron
Karen Calder
J Hill
Ayo Johnson
Lori Keeton
Michael Orzech
Robert Shaw
Elizabeth Teagarden
Mike Wollinger

Membership Co-Chairs:

Linwood Bolles &
Shelley Dean

Programs

Elizabeth Teagarden



Dr. R. Glenn Gaston *Program Director,* *OrthoCarolina Hand &* *Upper Extremity* *Fellowship*

by **Elly Clary**

Amputees who struggle with prosthetics now can operate fingers independently with a prosthetic hand, can feel touch and are free of phantom limb pain.

Such a transformation is possible through what Dr. Glenn Gaston calls translational medicine, which entails “getting an idea, researching it and putting it into practice.”

Dr. Gaston is a nationally recognized leader in hand and upper extremity surgery. He practices at Charlotte’s OrthoCarolina Research Institute and is program director for the OrthoCarolina Hand & Upper Extremity Fellowship.

“Ours is physician-led research,” Dr. Gaston told Rotarians. “We publish papers on how we make people better and get them back to their lives.”

The OCRI team took on opioid addiction by creating a substitute for the narcotic’s pain-killing properties. Dr. Gaston called it a multi-modal pain pathway – replacing opioids for surgical patients with a mixture of many different medicines. Patients find the medicinal cocktail works better and more than half opt out of opioids.

Complaints of those who receive prosthetic fingers or hands prompted Dr. Gaston to develop dramatic improvements for a silicone hand that appeared life-like but featured fingers that weren’t moveable. He and OCRI colleagues

developed “The Starfish Procedure” to move muscles that control fingers and install sensors. It produced a new hand myoelectric prosthesis for an injured soldier who regained finger control. Further, it caught the attention of Dr. Sanjay Gupta and CNN.

Still, patients couldn’t feel their artificial fingers and hands. So partnering with the Cleveland Clinic and the US Department of Defense, Dr. Gaston and cohorts learned to implant sensors around a patient’s hand nerves that “gave him the power of touch.” Television news program “60 Minutes” took note.

About 80 percent of amputees suffer constant phantom limb pain. A virtual reality headset developed by Dr. Gaston and associates retrains the brain to believe the missing limb is still there, eliminating the pain source. The device is the first to be FDA-registered for phantom limb pain.

There’s more. Dr. Gaston and his team performed quadruple amputations on three patients, gave them prosthetic limbs and placed them on virtual reality in recovery.

“In less than two months,” Dr. Gaston said, “the patients walked out of (the hospital) using both prosthetic arms and legs and using zero narcotics. And none of them have phantom limb pain.”

It’s an honor, the doctor said, to be changing care in Charlotte and across the globe.

OCRI is “outproducing pretty much every major academic medical center with 99 percent less funding,” he said.

A recording of the meeting can be found here

With Slides: <https://vimeo.com/1183522240?fl=pl&fe=sh>

Without Slides: <https://vimeo.com/1183522407?fl=pl&fe=sh>

The program introduction begins at approximately 29 minutes.