



Miller School Student Leads Groundbreaking Cochlear Implant Study

A first-year student at the University of Miami Miller School of Medicine led a new study that could increase the use of cochlear implants to treat patients with severe hearing loss.



Dimitri A. Godur, M.D. '26

Dimitri A. Godur, '26, and a team of medical students, residents, and researchers at the Miller School's Hearing



Research and Cochlear Implant Laboratory found that a compound called taurodeoxycholic acid (TDCA) can preserve residual hearing in cochlear implant procedures, leading to better clinical outcomes.

"The chance to build my knowledge in the field of otology early on through laboratory studies has solidified the medical path I strive to pursue," said Godur. "I am humbled by the opportunity to contribute to the emerging field of cochlear implant research."

The study, "Molecular Mechanisms Underlying Otoprotection by Taurodeoxycholic Acid for Cochlear Implant Trauma," won a first-place poster award at the Florida Combined Otolaryngology Meeting Nov. 11-13 in Boca Raton.

Other Miller School co-authors included medical students Julian Alexander, Keelin McKenna, and Andrea Monterrubio; Dario Ebode and Maria-Pia Tuset, international visiting research scholars; Jeenu Mittal, research associate; Jorge Bohorquez, Ph.D., professor of biomedical engineering; Rahul Mittal, Ph.D., research scientist; and Adrien A. Eshraghi, M.D., M.Sc., FACS, professor of otolaryngology, neurosurgery, pediatrics, and biomedical engineering and co-director of the University of Miami Ear Institute.

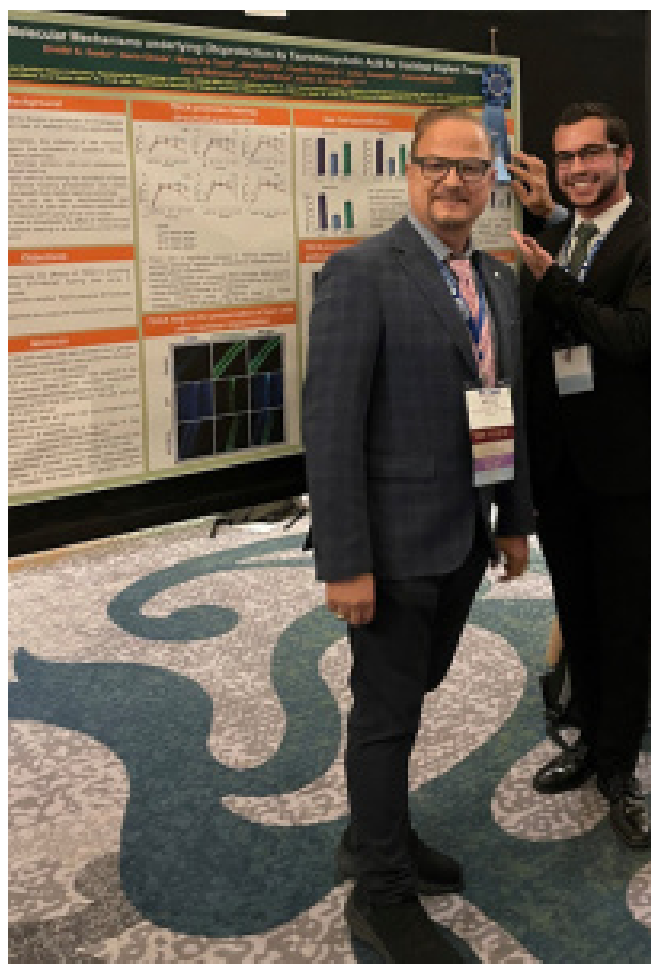
"Cochlear implants are one of the technologies we use to benefit patients with hearing loss," said Dr. Mittal. "Our goal is to find the best personalized solution for improving their quality of life."

Preserving Residual Hearing

During cochlear implantation, the insertion of an electrode can trigger the activation of oxidative stress and



inflammation, which can damage sensory cells, according to Dr. Eshraghi. “The ability to preserve residual hearing would make help many patients to benefit from cochlear implants,” he said.



(From left) Adrien A. Eshraghi, M.D., M.Sc., FACS, and Godur

Dr. Eshraghi’s team has been screening various otoprotective compounds in cellular cultures and experimental models for several years. “Taurodeoxycholic acid, a bile salt, shows the most promise,” he said. “It is now in the preclinical stage, and we hope to keep moving it forward.”

Growing up in Miami, Godur knew he wanted to pursue medicine



at an early age. “I was able to shadow physicians in the operating room when I was in high school,” he said. “I wanted to connect with patients while developing my technical skills. I am also a musician, so the way sounds interface with the auditory system increased my interest in otolaryngology.”

After earning a bachelor’s degree in psychology at Columbia University in 2020, Godur returned home and spent two years working in the Miller School Department of Medical Education while obtaining a master’s degree in biomedical sciences. Earlier this year, he began working with Drs. Eshraghi and Mittal on the TDCA project.

“I love producing and recording music, so the cochlear implant study was an exciting opportunity for me,” he said.

Dr. Eshraghi added that his team is very happy to mentor medical students like Godur who are interested in research projects. “We want to involve future physicians at an early stage, so they understand what’s involved in going from the laboratory to patient care,” he said. “It is very rewarding for us to mentor outstanding students seeking to integrate research into their careers.”

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