

Medical Students Show off Research Chops at Otolaryngology Meeting

A University of Miami Miller School of Medicine student, Jake Langlie, and research fellow, Ariel Feinberg, were honored at the recent Florida Combined Otolaryngology Meeting (FCOM). Langlie and Feinberg won first and second place, respectively, in the research poster competition. Langlie was recognized for his work on minimizing adverse effects of cochlear implants, while Feinberg investigated a potential therapy for noise-induced hearing loss.



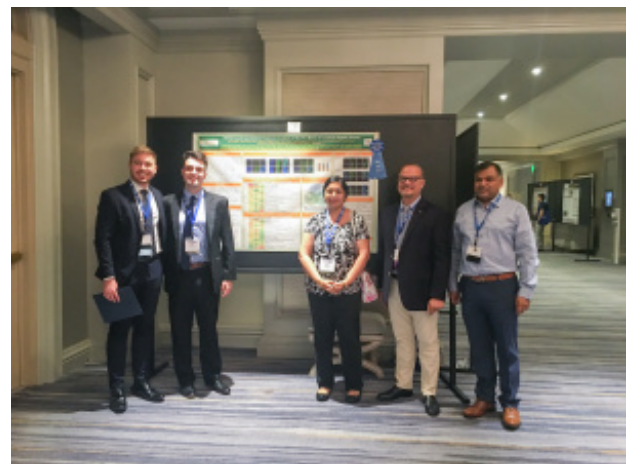
From left, Dario Ebode, Jeenu Mittal, Rahul Mittal, Nicolas Eshraghi, Adrien Eshraghi, M.D, Jake Langlie, and Ariel Feinberg

FCOM brings together world-renowned otolaryngologists, plastic

surgeons, medical audiologists, and industry leaders from the Florida Society of Otolaryngology Head and Neck Surgery, the Florida Society of Facial Plastic and Reconstructive Surgery, the Network of Florida Otolaryngologists, and the Network of Medical Audiology Professionals.

Five medical programs in Florida compete for various awards at FCOM, according to Adrien Eshraghi, M.D., professor of otolaryngology, neurosurgery, pediatrics, and biomedical engineering. Both Langlie and Finberg conducted their work in Dr. Eshraghi's Hearing Research and Cochlear Implant Laboratory at the Miller School. "The research awards are the most coveted," Dr. Eshraghi said, "so coming in first and second is huge."

Fresh Insights Into Hearing Loss Syndromes



From left, Jake Langlie, Ariel Finberg, Jeenu Mittal, Adrien Eshraghi, M.D., and Rahul Mittal

Langlie's winning poster presented his investigation into the

loss of residual hearing following cochlear implant surgery. Cochlear implants can help the hearing-impaired, but the implantation procedure can cause cochlear trauma, leading to a loss of residual hearing.

His work identified several proteins associated with cochlear damage. Identifying these potential therapeutic targets could eventually lead to new treatments that mitigate cochlear damage and preserve residual hearing following cochlear implantation.

“Prevention of induction of sensory cell inflammatory and apoptotic pathways will lead to greater preservation of residual hearing and improved cochlear implant outcomes,” said Langlie.

“Developing strategies to mitigate cochlear implant trauma will benefit more individuals who have sensorineural hearing loss,” said Rahul Mittal, Ph.D., co-author and researcher in Dr. Eshraghi’s lab.

Finberg focused on a small-molecule drug that could protect hearing from noise-induced trauma. While noise-induced hearing loss is common, there are currently no treatments. In an animal study, Finberg found that the target molecule was protective against hearing loss, offering strong potential for further development.

“I am very grateful for the opportunity to work with Dr. Eshraghi in his laboratory, which has allowed me to discover and test a novel agent for both the protection and restoration of hearing lost in this manner,” said Finberg.

"As of today, only very few drugs are available to protect hearing. By identifying new molecular targets after cochlear implantation, or by preventing noise induced hearing loss in an animal model, these studies are showing very promising results for innovative drug development," said Dario Ebode, a visiting scholar in Dr. Eshraghi's lab from Sorbonne University and co-author on this study.

These awards highlight the commitment of Miller School students in conducting rigorous research on top of their medical school obligations.

"Our students really shined in a challenging competition with an expert jury," said Dr. Eshraghi. "The results display Miller School leadership in hearing research, particularly translational research that moves innovative ideas forward to help patients."

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