Case name
Hearing device that amplifies sound using a tympanostomy tube

Owner
University of California

Website
https://techtransfer.universityofcalifornia.edu/NCD/24605.html

description

Researchers at UC, Irvine have developed and improved a hearing aid apparatus for patients with moderate to severe hearing loss. This hearing aid device is comprised of a direct-DHD having a silicon mold on one end, the silicon having an attached magnet; and a tympanostomy tube with a ferromagnetic cap on the other end, the tympanostomy tube being insertable into a TM. Once the DHD is placed inside an ear canal, such that the magnet attached to the silicone mold is in contact with the ferromagnetic cap of the tympanostomy tube, the magnet of the DHD will lock with the ferromagnetic cap to establish a stable connection for mechanical actuation of the TM. Finally, the tympanostomy tube with the ferromagnetic cap transmits the driving force of the DHD onto the middle ear ossicles. This stable connection and driving force eliminates occlusion and feedback, and amplifies sound thereby improving a patient's quality of hearing.

Suggested uses

We are currently looking for a commercial partner to further develop this product to improve the quality of hearing in patients with hearing loss.

Advantages

- Noninvasive procedure to implant the hearing device.
- Low cost.
- Eliminates occlusion and feedback improving patient's quality of hearing.
- Significantly improved connection between the DHD and the TM to provide a secure attachment and more efficient transfer of mechanical energy to the middle ear.

Date
2017-01-08 00:00:00

Case Ref.
UC Case 2014-242-0

Industry
Healthcare

Application number
US9794704

Applicants
University of California

Limitations:

Meta information:

Meta title
Hearing device that amplifies sound using a tympanostomy tube

Support:

Access to additional documentation
Please inquire

Support from inventors
Please inquire