Gene therapy to restore hearing in deaf works in mice; humans next

Gene therapy for deafness is moving closer to reality, with new research showing the technique for fixing faulty DNA can improve responses in mice with genetic hearing loss.

Separately, a clinical trial backed by Novartis is under way to help a different group of people who have lost their hearing through damage or disease.

After missteps in the late 1990s and early 2000s, when safety scares set back research, gene therapy is enjoying a renaissance, with positive clinical results recently in conditions ranging from blood diseases to blindness.

“We are somewhat late in the auditory field but I think we are getting there now,” said Tobias Moser of the University Medical Center Gottingen, Germany, who was not involved in the new research. “It’s an exciting time for gene therapy in hearing.”

Much of the hearing loss in older people is noise-induced or age-related, but at least half of deafness that occurs before a baby learns to speak is caused by defects in one of more than 70 individual genes.

It is these infants Swiss and U.S. researchers hope to help, after showing that replacing a mutated gene improved the function of hair cells of the inner ear and partially restored hearing in deaf mice.

Scientists from the Ecole Polytechnique Federale de Lausanne and the Boston Children’s Hospital, who reported their work in the journal Science Translational Medicine, tested hearing in newborn mutant mice by seeing how high they jumped when startled by a noise.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: Gene therapy for deafness moves a few steps closer