Congenital hearing loss could be treated with ‘Trojan horse’ virus

There are more than 300 genetic defects that have been found to prevent the hair cells in the human inner ear, the sensory cells of the ear as it were, from working properly. This can result in severe hearing impairment and even to complete hearing loss. Together with researchers at the Medical School in Harvard, Boston, Lukas Landegger of MedUni Vienna’s Department of Ear, Nose and Throat Diseases has now succeeded, for the very first time, to repair this defect in an animal model – by using a modified, non-pathogenic adeno-associated virus (Anc80L65), which is introduced into the ear by way of a “Trojan Horse” to deliver genes to restore the functionality of the damaged hair cells.

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Once the functionality of the virus had been initially proven in the treatment of a mouse model for Usher syndrome, which is the commonest cause of deafblindness worldwide (Pan et al. Nat Biotechnol 2017), further studies are required to determine the tolerability of the vector, so that this approach will soon be available for treating newborn babies with congenital hearing loss.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Modified virus as ‘Trojan Horse’ for delivering genes to repair congenital hearing loss

For more background on the Genetic Literacy Project, read GLP on Wikipedia