

A Method to Treat Hearing Loss

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Technology description

Invention

The technology is the use and re-purpose of a tumor necrosis factor-alpha (TNF) blocker to effectively treat blast-induced hearing loss, specifically tinnitus.

Background

During 2001 to 2008, an estimated 30 million Americans over than 12 years old experienced hearing loss in both ears and estimated 48 million experienced hearing loss in at least on ear. Specifically, hearing loss can occur following explosive blasts because of the increased expression of the TNF-alpha. Unfortunately, hearing aids require sufficient function of hair cells in order to be effective, which is often not the case following explosive blasts. In addition, alternative options like cochlear implants require and expensive and invasive surgery before positive results may be seen.

Application area

New medication to treat acute and chronic hearing loss, specifically tinnitus.

Advantages

Can be administered orally or via injection

Prevents hair cell death

Restores up to 80% of blast-induced hearing loss

Institution

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