

Mitochondrial transplantation as a novel treatment for sensorineural hearing loss

PAEAN BIOTECHNOLOGY



OTHERS	Candidate
Product Type	Biopharmaceuticals (Mitochondria)
Indication	Sensorineural hearing loss
Target	Sensorineural hearing loss (with mitochondrial defects)
MoA(Mechanism of Action)	<ul style="list-style-type: none"> • Rescuing damaged mitochondria in cochlear hair cells <ul style="list-style-type: none"> - Increasing ATP production (through enzyme regulation and normalization of energy metabolism) - Reducing ROS level (normalize ion flux by normalization of OXPHOS process) • Decreasing apoptotic hair cell death <ul style="list-style-type: none"> - Inhibition of cytochrome C release
Competitiveness	<ul style="list-style-type: none"> - The only treatment that restores hair cells by delivering intact mitochondria into hair cells - Existing drugs are typically antioxidants that provide substrates or catalysts for ATP production, or reduce free radicals. Meanwhile, injection of mitochondria (PN-101) has multiple functions, including the increase of ATP production, reduction of free radical levels, and decrease of inflammation and apoptosis.
Development Stage	Candidate
Route of Administration	Intravenous injection (or local injection into inner ear)