

QUINOLYLNITRONE DERIVATIVES FOR USE IN THE PREVENTION AND TREATMENT OF HEARING LOSS

A research group from CIBER, CSIC, UAM and Fundación Hospital Universitario Ramón y Cajal have identified several compounds with therapeutic potential in hearing loss.

The Need

Hearing loss is an important health problem due to its high prevalence and impact on quality of life. There is currently no curative treatment for hearing loss on the market and only devices such as hearing aids or cochlear implants are available. There is therefore the need of new pharmacological therapies which efficiently prevent or treat hearing loss.

The Solution

Quinolylnitrones are efficient in the prevention and treatment of auditory cell damage and hearing loss, with broad spectrum effect regardless hearing loss origin, compared to the reference compound N-acetyl cysteine.

Innovative Aspects

- ✓ The compounds can provide protective effect from the earliest stages of auditory damage/hearing loss.
- ✓ Major breakthrough in the amelioration of hearing loss.
- ✓ Broad spectrum effect, being efficient in the prevention and treatment of hearing loss regardless of its origin, whether caused by a physical agent, such as noise, or an ototoxic agent such as H_2O_2 .

Stage of Development:

Preclinical validation in mice models and cell lines (HEI-OC1 cells).

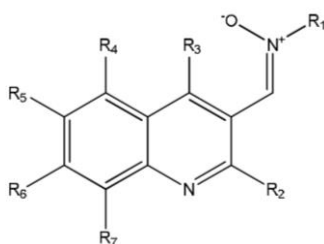


Figure 1. Compound formula of Quinolylnitrones.

Intellectual Property:

- Priority Spanish patent application filed in July 2022
- Suitable for international extension (PCT application)

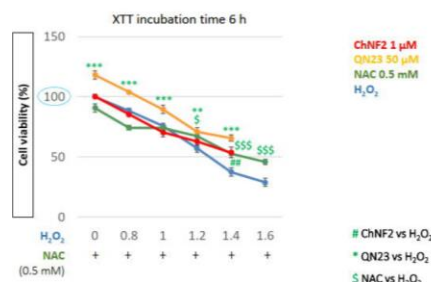


Figure 2. *In vitro* model of auditory cell damage, wherein cells were injured by administering H_2O_2 , the nitron QN23 provided a remarkable increase in the cell viability when compared with other conventional treatments.

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

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