

Novel quinolin-2-yl nitrones useful for the prevention and/or treatment of neurodegenerative diseases

Field of use
Medical sciences

Current state of
technology
Preclinical studies

Intellectual property
Patent application filed

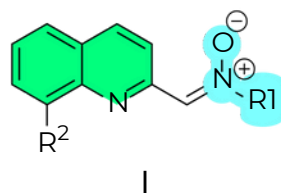
Developed by
University of Ljubljana,
Faculty of Pharmacy

Reference
821-9/2022

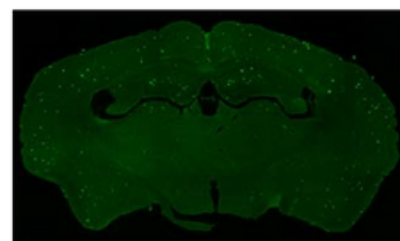
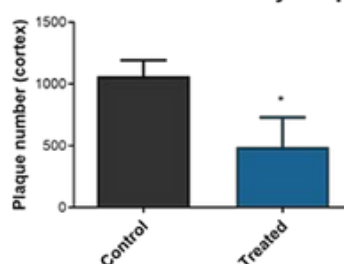
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Amyloid β plaque reduction



Background

Alzheimer's disease is a neurodegenerative disease characterized by progressive deterioration of memory and learning ability due to a variety of pathological changes in the central nervous system. Parkinson's disease is a chronic neurodegenerative disease characterized by the progressive death of dopaminergic neurons. Due to the aging of the population, both diseases place an increasing burden on patients' families and healthcare systems. New therapeutic options are needed to mitigate the consequences of neurodegenerative diseases and improve the quality of life not only for patients but also for their families.

Description of invention

The invention relates to quinolin-2-yl nitrones having formula I, which can be used as drugs for the treatment of neurodegenerative diseases by inhibiting butyrylcholinesterase and monoamine oxidase B either alone or in combination with other beneficial activities, such as antioxidant properties and metal chelation. The present invention is currently being tested in animal models of neurodegenerative diseases and beyond, and our goal is to further develop it for human application.

Main advantages

Drugs developed for the treatment of Alzheimer's and Parkinson's disease usually have low activity and cause severe undesirable side effects. Our drug candidates act through different and innovative mechanisms of action that can provide better therapy and limit side effects. In addition, they are also expected to have a disease-modifying effect due to their multifunctional profile of action.