

PUBLICATION OF A SCIENTIFIC ARTICLE IN THE JOURNAL OF ALZHEIMER'S DISEASE ON THE USE OF LITHIUM FOR THE TREATMENT OF ALZHEIMER'S DISEASE

Montpellier, October 11, 2023 at 6:00 p.m. – MEDESIS PHARMA, a pharmaceutical biotechnology company, developing drug candidates based on its proprietary technology for administering active ingredients in nano micelles buccally, Aonys, announces the publication of an article entitled "Lithium, a treatment option for Alzheimer's disease? A review of existing evidence and discussion on future perspectives. » in the Journal of Alzheimer's Disease.

After more than 50 years of use, lithium salts remain the first-line treatment for bipolar disorders. Throughout this period, the potential of lithium salts has been extensively studied and there is evidence supporting its use in the treatment of neurodegenerative disorders such as Alzheimer's disease.

The authors reviewed clinical cases and studies on the effect of lithium on the neuropsychological symptoms of Alzheimer's disease and as a disease-modifying treatment for cognitive symptoms. The study summarizes the multiple molecular pathways of action of lithium on the different mechanisms of the disease: inhibition of the GSK3 Beta pathway and its role on the tau protein, neuroinflammation, oxidative stress, apoptosis, reduction of BACE -1 which helps reduce beta-amyloid protein, prevents the agglutination of neurofibrils, stimulates neurogenesis as well as many other mechanisms involved in the disease.

The limits of its current use in Alzheimer's disease are discussed, mainly the toxicity of the therapeutic doses necessary for classical lithium salts with a very low therapeutic index, particularly limitations in older or fragile patients.

Ongoing studies using different forms of lithium such as Nanolithium, are reviewed in the article along with perspectives on its place in Alzheimer's Disease treatment landscape.

NanoLithium development for the treatment of Alzheimer's Disease is supported by several publications on proof-of-concept studies carried out by the Neuropharmacology Laboratory of McGill University in Montreal. The efficacious dose of Lithium used in NanoLithium in clinic is 50 times lower than the effective dose of the classical salts.

Nanolithium is currently being studied in a phase 2 clinical study in 8 centers in France (Montpellier, Toulouse, Paris, Lille, Lyon, Limoges, Marseille and Strasbourg). The first patient was included in May 2022 and enrolling will be finalized in October. First efficacy outcomes from interim analysis should be available by 1st quarter of 2024.



The Journal of Alzheimer's Disease is a peer-reviewed medical journal published by IOS Press, covering the etiology, pathogenesis, epidemiology, genetics, treatment and psychology of Alzheimer's disease. The journal publishes research reports, reviews, short communications, hypotheses, ethics reviews, book reviews and letters to the editor.

At the request of the editors, this manuscript is a contribution to the Handbook "Prevention and Alzheimer's Disease". This manual focuses on both prevention and intervention strategies for Alzheimer's disease.

About Medesis Pharma

To advance the treatment of serious diseases without effective treatments, Medesis Pharma creates drug candidates based on its proprietary Aonys® technology for the oral administration of active ingredients in nanodroplet form, enabling active ingredients to be effectively delivered to all cells, with passage through the blood–brain barrier (BBB).

This innovative approach is being applied to future drugs to treat major diseases that do not have effective treatments: Alzheimer's disease, Huntington's disease, and resistant cancers.

Medesis Pharma is also developing treatments dedicated to populations contaminated or irradiated after a civil or military nuclear accident.

French biopharmaceutical company based near Montpellier, Medesis Pharma is the author of 15 scientific publications, holds 12 patent families and 72 patents, resulting from 17 years of research.

Medesis Pharma shares are listed on Euronext Growth Paris: FR001844464 - ALMDP

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