

## MEDESIS PHARMA HAS COMPLETED ITS CLINICAL STUDY FOR THE TREATMENT OF ALZHEIMER’S DISEASE WITH NANOLITHIUM

All patients treated for 12 months  
 Relevant interim results and lack of side effects  
 Final results expected before the end of Q1 2025

Montpellier, France, November 20, 2024 at 5:45pm – **MEDESIS PHARMA**, a pharmaceutical biotechnology company developing drug candidates based on its proprietary technology for administering active ingredients in nano micelles via the endo-oral mucosal route **Aonys®**, announces que the **66 patients in the study completed a 12-month treatment course at the end of October, without any side-effects. Initial results (Phase 2a), after 3 months of treatment, showed a positive change in the course of the disease in patients treated with Medesis Pharma’s NanoLithium. Final results are expected before the end of Q1 2025.**

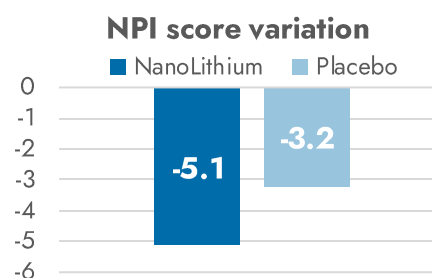
### The first phase (2a) of the clinical trial demonstrated the clinical efficacy of NanoLithium in the treatment of severe symptoms of Alzheimer’s disease

In this proof-of-concept study, NanoLithium achieved its objective by showing a 40% reduction in the psycho-behavioral symptoms of Alzheimer’s disease patients (NPI score) compared with placebo over 3 months of treatment. This score includes: delusions, hallucinations, agitation and aggression, depression, anxiety, mood elevation, apathy and indifference, disinhibition, irritability, aberrant motor behavior, sleep disorders, appetite disorders. However, this significant difference did not reach statistical significance, due to the high variability of patients’ symptoms and the limited sample size. Nevertheless, according to experts in the field, the gain in improvement is clinically relevant, particularly in an indication for the treatment of a disease with no real therapeutic option.

#### Analysis of NPI score variation

	NanoLithium Medesis Pharma	Placebo control
Number of patient	33	33
NPI at inclusion	26.0	21.6
NPI at 3 months	20.6	18.3
Variation in NPI*	-5.1	-3.2
% of variation	-20.8%	-13.0%

\* adjusted value of averages



### 12-month treatment completion for patients

Patients completed a 12-month course of treatment at the end of October 2024, the first 3 months of which were double-blind (33 patients received NanoLithium and 33 patients received placebo) and the last 9 months all patients received open-label active treatment.

### No side effects

No treatment-related side-effects were observed, with perfect tolerance and acceptability by patients of the buccal administration of NanoLithium according to the detailed analysis of the independent safety committee (DSMB). Thanks to Aonys, Medesis Pharma’s proprietary technology for endo-buccal mucosal administration of active ingredients in nanomicelles, Nanolithium contains 50 times less Lithium than a conventional drug (1.8 mg per day).

## Disease modifying” effect analysis

As part of a research collaboration between Medesis Pharma and the Neuropharmacology Laboratory at McGill University in Montreal, several preclinical studies have demonstrated the activity of nano-doses of lithium (40 ng/kg) on mechanisms closely linked to the irreversible progression of Alzheimer's disease. These studies have resulted in 3 scientific publications:

- Wilson EN, Do Carmo S, Welikovitch LA, Hall H, Aguilar LF, Foret MK, Iulita F, Jia DT, Marks AR, Allard S, Emmerson JT, Ducatzenzeiler A, and Cuello C – NPO3, a microdose Lithium Formulation, Blunts Early Amyloid Post-Plaque Neuropathology in McGill-R-Thy1-APP Alzheimer-Like Transgenic Rats – *J. of Alzheimer's Disease*, 73 (2020) 723-739.
- Wilson EN, Do Carmo S, Iulita MF, Hall H, Austin G, Jia D, Malcolm J, Foret M, Marks AR, Butterfield D and Cuello C, – Microdose Lithium NPO3 Diminishes Pre-Plaque Oxidative Damage and Neuroinflammation in a Rat model of Alzheimer's-like Amyloidosis – *Current Alzheimer Research*, 2018, 15, 1220-1230.
- Wilson EN, Do Carmo S, Iulita MF, Hall H, Ducatzenzeiler A, Marks AR, Allard S, Jia DT, Windheim J and Cuello AC: BACE 1 inhibition by microdose lithium formulation NPO3 rescues memory loss and early stage amyloid neuropathology - *Translational Psychiatry* (2017) 7, e1190.

Biomarker analyses will be performed after 12 months on all patients in addition to clinical evaluation, including NPI, cognitive performance and clinical tolerance:

- Biological: specific biomarkers: amyloid beta protein; Tau protein, neurofilaments, BDNF - Non-specific biomarkers: inflammatory cytokines.
- Imaging: PET Metabolic scans

These additional results from the NanoLithium study, currently being analyzed, will be available before the end of Q1 2025.

Medesis Pharma's objective is to license the NanoLithium product to a pharmaceutical partner who will pursue clinical development. In anticipation of this objective, Medesis Pharma is in the process of raising the necessary resources from its shareholders and from investors such as foundations and family offices, to enable it to continue its activities over the coming months.

### 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, the result of 17 years of research.

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

### For more information:

[www.medesispharma.com](http://www.medesispharma.com)

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