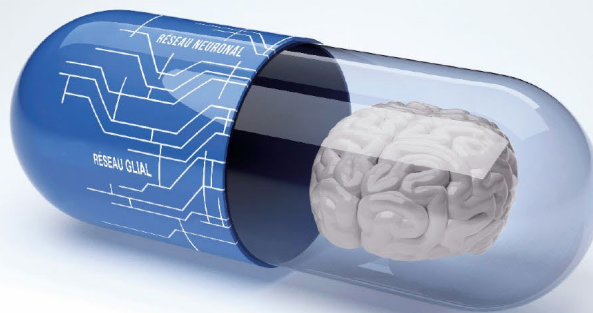




# Theranexus

SHIFTING THE LINES AGAINST  
CENTRAL NERVOUS SYSTEM  
DISORDERS



## Theranexus Announces the Clinical Results of its Phase Ib Study Demonstrating the Extended Pharmacological Profile of its Drug Candidate THN201 Compared to Donepezil

- Improved speed of memory
- Significant increase in EEG power in the Gamma band related to cognitive activity
- Similar profile with respect to other pharmacological, pharmacokinetic and tolerance endpoints

**Lyon, 15 January, 2020** – Theranexus, a biopharmaceutical company innovating in the treatment of neurological diseases and pioneer in the development of drug candidates modulating the interaction between neurons and glial cells, has announced the results of its Phase Ib study in healthy subjects establishing the pharmacological profile of its drug candidate THN201 compared to the standard-of-care treatment in Alzheimer's disease-related neurocognitive disorders. THN201 is a proprietary combination of donepezil (the first-line treatment for managing Alzheimer's disease-related neurocognitive disorders) and mefloquine, an approved drug that has been repositioned at a low dose as an agent for modulating the neuron-glia interface.

The results revealed an extension of the pharmacological profile of THN201 compared to donepezil monotherapy. This extension is consistently reflected in greater speed of memory as measured by the Cognitive Drug Research (CDR) computerized assessment<sup>1</sup> and a greater power in the gamma band reported by quantitative EEG analyses related to cognitive activity<sup>2</sup>. Data regarding the other measured pharmacological endpoints reveal that the profiles of THN201 and donepezil are similar.

Pharmacodynamic endpoints	Speed of memory measured by the cognitive drug research (CDR) computerized assessment	Power in the gamma band measured by quantitative EEG related to cognitive activity
<b>Focused analysis 1 hour after administering scopolamine (greatest impact in terms of cognitive function)</b>	Significant increase of speed of memory by THN201 versus placebo (p=0.04) / (not significant for donepezil versus placebo)	Significant increase in EEG power in the gamma band by THN201 versus donepezil (p=0.05)

Moreover, data on safety endpoints demonstrate that THN201 displays excellent tolerability similar to that of donepezil.

<sup>1</sup> (Lenz et al 2012)

<sup>2</sup> (Herrmann et al 2005, Palop et al 2016)

*"I would like to thank the participants and the other investigators for the commitment they have shown working alongside me to ensure that this phase Ib clinical study was conducted according to best practice. The positive effects of THN201 on high-level cognitive functions such as executive processes suggest a potential for differentiation compared to donepezil. This would be worth further exploration in patients suffering from neurocognitive disorders,"* comments Professor Régis Bordet, principal investigator for the study (University of Lille, Lille Teaching Hospital, Inserm).

*"We would like to thank Professor Régis Bordet as principal investigator of the study, as well as the 9 other investigators in Europe. We would also like to thank the subjects who took part in the study. These positive results confirm the potential of the Theranexus platform and the benefit of modulating the neuron-glia interface as a new therapeutic approach that we are pioneering. The extended pharmacological profile that emerges from this phase Ib study provides an opportunity to continue developing THN201 and will allow us to pursue discussions with industrial partners,"* concludes Franck Mouthon, CEO of Theranexus.

#### About the Phase Ib trial of THN 201 in Alzheimer's disease-related cognitive disorders

This multicenter study was conducted at 10 sites in Europe (ClinicalTrials.gov: NCT03698695). It included 152 healthy subjects. A total of 147 subjects completed the trial which was conducted as a double-blind, randomized, three parallel-group study (THN201, donepezil alone or placebo). Subjects were randomized to one of two treatment arms (or the placebo arm) and treated for 15 days. On day 1, participants received a 50 mg oral dose of mefloquine in the THN201 arm or a corresponding placebo in the placebo and donepezil arms. THN201 repeated-dose treatments – mefloquine (10 mg) and donepezil (5 mg) or donepezil (5 mg) and placebo mefloquine, or placebo donepezil and placebo mefloquine – were administered orally once daily in the morning from D-1 to D-15. The tolerance and pharmacokinetics of THN201, compared with donepezil alone and the placebo, were evaluated repeatedly over the 15 days of treatment. On D-15, pharmacodynamic activity (analysis of cognitive activity measured by neuropsychological test batteries and of electrophysiological activity with quantitative EEG and event-related potentials) was assessed after measurable and reversible cognitive deficits were induced with scopolamine, a reference model for evaluating the pro-cognitive activities of drug candidates in healthy volunteers. Scopolamine is an inhibitor of the neurotransmission pathway stimulated by donepezil. It enables direct exploration of the pharmacological effect of donepezil and its possible modulation through the addition of mefloquine. The results demonstrate that the approach is methodologically robust, since the overall profile of donepezil after inducing reversible cognitive deficits with scopolamine is consistent with data from the literature in this field<sup>1</sup>.

A summary of results is available in a presentation that can be downloaded from the company website ([lien](#)). The data will be presented at an international conference in this field.

As a reminder, the Phase Ib trial is an integral part of the CX-COG project. It is conducted in partnership with Lille Teaching Hospital and Synerlab Développement, funded by the Single Inter-Ministry Fund (FUI), FUI AAP22, and approved by the Lyonbiopôle and Atlanpôle Biothérapies competitive clusters.

#### ABOUT THERANEXUS

Theranexus is a clinical-stage biopharmaceutical company that emerged from the French Alternative Energies and Atomic Energy Commission (CEA) in 2013. It develops drug candidates for the treatment of nervous system diseases. Theranexus identified the key role played by non-neuronal cells (also known as "glial cells") in the body's response to psychotropic drugs (which target the neurons). The company is a pioneer in the design and development of drug candidates affecting the interaction between neurons and glial cells. The unique, patented technology used by Theranexus is designed to improve the efficacy of psychotropic drugs already approved and on the market, by combining them with a glial cell modulator. This strategy of combining its innovations with registered drugs means Theranexus can significantly reduce development time and costs and considerably increase the chance of its drugs reaching the market.

The proprietary, adaptable Theranexus platform can generate different proprietary drug candidates offering high added-value for multiple indications.

Theranexus is listed on the Euronext Growth market in Paris (FR0013286259- ALTHX).

More information at: [www.theranexus.com](http://www.theranexus.com)



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