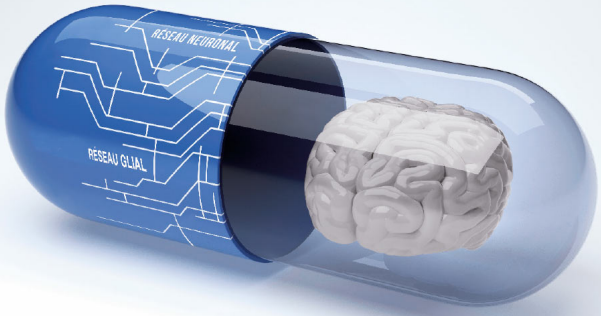
Theranexus

SHIFTING THE LINES AGAINST CENTRAL NERVOUS SYSTEM DISORDERS



THERANEXUS ANNOUNCES THE PUBLICATION OF TWO SCIENTIFIC PAPERS AND A PRESENTATION AT THE EUROPEAN PAIN CONGRESS (EFIC) TO BE HELD ON 3-7 SEPTEMBER IN VALENCIA, SPAIN

- ***Publication of two papers in "ASSAY and Drug Development Technologies" and the "British Journal of Clinical Pharmacology" respectively***
- ***A presentation on the mechanism of action of THN101 on neuropathic pain***

Lyon, 3 September 2019 – 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 publication of two scientific papers, one focusing on the expansion of the proprietary library of glial cell modulators, and the other on the clinical pharmacological profile of THN102. Theranexus has also announced a presentation on the mechanism of action and efficacy in models of THN101 on neuropathic pain during the European Pain Federation conference (EFIC) on 3-7 September in Valencia, Spain.

"These various papers illustrate Theranexus' expertise in identifying, characterizing and developing new drug candidates. They also highlight the importance of academic collaborations between the company and leading research institutions. We are most grateful to these partners for their continuous support over the past few years. With this research, we continue to consolidate our portfolio of drug candidates and further our understanding of interactions between neurons and glial cells as new therapeutic targets", **concludes Mathieu Charvériat, Theranexus Chief Scientific Officer.**

Two new papers confirm the scientific merit and sound methodology of research conducted by Theranexus in collaboration with academic teams who are experts in their field.

A new paper, entitled **"High-Content Screening Identifies New Inhibitors of Connexin 43 Gap Junctions[1]"** and published in the scientific journal ASSAY and Drug Development Technologies in July, presents the findings of a connexin 43 (Cx43) targeted screening using a library of 1,280 FDA and/or EMA approved drugs. This protein is organized into gap junctions (GJs), structures that enable communication between astrocytes in the brain. Cx43 plays a major role in physiological and pathological processes in the interface between neurons and astrocytes. Identifying new pharmacological inhibitors of Cx43 with different mechanisms of action and from diverse chemical classes is therefore of key interest to Theranexus. The research, carried out in collaboration with the CEA and the Collège de France, has led to the identification of new pharmacological modulators of Cx43 made gap junctions. These molecules are part of the library of Theranexus connexin blockers and may be combined with various drugs used in neurology to increase their efficacy.

The second scientific paper, entitled **"Efficacy of THN102 (a combination of modafinil and flecainide) on vigilance and cognition during 40-hour total sleep deprivation in healthy subjects: Glial Connexins as a therapeutic target"**[2] and published recently in the **British Journal of Clinical Pharmacology**, presents the results of the Phase Ib trial conducted on healthy volunteers after sleep deprivation, in collaboration with the French Armed Forces Biomedical Research Institute (IRBA) with support from DGA (French Armed Forces Central Command) as part of a Rapid scheme (aimed at supporting dual-use technology) at the Percy Armed Forces Training Hospital.

[1] https://www.ncbi.nlm.nih.gov/pubmed/31314551
[2] https://bpspubs.onlinelibrary.wiley.com/doi/10.1111/bcp.14098

Peer-reviewed data from this clinical trial confirms the scientific merit of the pharmacological profile of THN102 in relation to modafinil, in particular for improving vigilance and executive functions. As these parameters are impaired in patients with Parkinson's disease and who suffer from excessive daytime sleepiness, the pharmacological efficacy profile of THN102 provides an opportunity to address the needs of these patients, for whom no approved treatment is currently available.

Presentation on the mechanism of action of THN101

Finally, Theranexus will give a presentation during the upcoming European Pain Federation conference (EFIC) on the mechanism of action of THN101, its drug candidate for treating neuropathic pain. THN101 is a combination of amitriptyline, which acts on neuronal activity, and low-dose mefloquine, affecting glial cell activity. It has recently been demonstrated that the involvement of adrenergic neuronal receptors is essential for amitriptyline efficacy. The research presented at EFIC, resulting from a collaboration between Theranexus and the University of Strasbourg (Institute of Cellular and Integrative Neurosciences), shows that the mechanism of action of THN101 on neuropathic pain mainly depends on a sub-type of adrenergic receptors –α2 but not β2 – which suggests that descending pathways have a preferential role in the action of THN101.

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

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