New piperazines effecting Abeta oligomer displacement from neuronal receptors

https://neurodegenerationresearch.eu/survey/new-piperazines-effecting-abeta-oligomer-displacement-from-neuronal-receptors/

Principal Investigators

IZZO, NICHOLAS JOHN

Institution

COGNITION THERAPEUTICS, INC.

Contact information of lead PI
Country

USA

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New piperazines effecting Abeta oligomer displacement from neuronal receptors

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1

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Research Abstract

? DESCRIPTION (provided by applicant): Cognition Therapeutics Inc.’s mission is to develop effective therapeutics for Alzheimer’s disease. Recent scientific discoveries have identified oligomers of the brain protein Abeta 42 as toxic culprits in the disease process. Cognition has discovered therapeutic molecules that displace Abeta oligomers from neurons and block the

downstream pathological signaling that inhibits memory formation. These therapeutic small molecules should prevent further oligomer-induced damage, and unmask existing memory capacity as synapses recover. These molecules act through modulating a newly identified receptor target. They are hypothesized to be disease-modifying treatments that would be effective throughout the course of the disease, and significantly impact the lives of millions of Alzheimer’s patients. Pharmaceutical industry efforts targeted specifically at Abeta oligomer blockade are currently limited. Cognition Therapeutics is one of the only companies uniquely focused on discovery of small molecule oligomer-displacing therapeutics. We have discovered a CNS drug-like lead series of oligomer-displacing compounds, the CT0109 Series. Analogs in this series displace oligomers from neurons and completely block Abeta oligomer-induced membrane trafficking changes and synapse loss. Members of this series are highly brain-penetrant and completely block oligomer-induced memory deficits in Alzheimer’s disease mouse models. Further preclinical development of these analogs is progressing. However, new structural variants with different physicochemical profiles will provide a measure of risk mitigation in the event that our current candidates fail to advance through the clinic due to unforeseen issues. We propose to explore a new piperazine variant of the CT0109 series. This new variant would possess physiochemical properties previously unexplored in the current series. This proposal will allow us to expand our portfolio of Abeta oligomer-displacing compounds and establish the feasibility of these variants to be optimized with the goal of obtaining orally efficacious candidates for further development as therapeutics for AD.

Further information available at:

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