Tau Oligomer Platform Validation Using Lead Series Candidate in htau Mice

https://neurodegenerationresearch.eu/survey/tau-oligomer-platform-validation-using-lead-series-candidate-in-htau-mice/

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Contact information of lead PI
Country

USA

Title of project or programme

Tau Oligomer Platform Validation Using Lead Series Candidate in htau Mice

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

€ 1,375,770.64

Start date of award

01/05/2016

Total duration of award in years

1

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Acquired Cognitive Impairment... Aging... Alzheimer's Disease... Alzheimer's Disease including Alzheimer's Disease Related Dementias (AD/ADRD)... Brain Disorders... Dementia... Neurodegenerative... Neurosciences... Translational Research

Research Abstract

? DESCRIPTION (provided by applicant): The prevalence of Alzheimer’s disease (AD) is increasing worldwide due to demographic shifts resulting from an aging population. It is the most costly disease in the US with a financial burden of over $226 billion annually in direct costs that are estimated to increase to $1 trillion by 2050. Disease-modifying drugs that change the clinical course and delay symptomatic progression could reduce the economic burden by multiples of tens of billions of dollars per year if the onset of AD is delayed even a few years. To-date, all completed phase 3 clinical studies based on the amyloid hypothesis have failed to meet their clinical endpoints underscoring the critical need for alternative approaches for the development of AD therapeutics. The Company is developing disease-modifying small molecule drugs for AD that target the initial step in tau aggregation leading to the formation of tau oligomers, the toxic tau aggregates responsible for neuronal loss and impairment of memory formation. Competing programs use methods to select compounds inhibiting the formation of tau fibrils or large aggregates, previously thought to be the most toxic tau species. We hypothesized that by targeting the first step in tau self-association all forms of tau aggregates should be reduced. The long-term goal of the project is to advance disease-modifying drugs for AD to clinical studies and the market. The objective of this proposal is to validate our small molecule discovery platform targeting tau oligomer formation. The top candidate from our lead series of compounds will be used to demonstrate target engagement in the htau mouse model. The program aims are to 1) Select a compound from our lead series for the in vivo study 2) Produce and formulate the selected compound for the in vivo study 3) Demonstrate target engagement in the htau mouse model. Histological and biochemical analyses will be used to assess efficacy of compound for the in vivo reduction of tau pathology. Estimates show U.S only sales for a disease modifying therapeutic in the first year of launch of greater than $0.5 billion and surpassing $10 billion within 10 years post launch. The commercialization strategy is to form a strategic partnership with a large pharmaceutical company to accelerate to clinical studies and to the market. Significantly, the Company is now negotiating a collaboration with three different large pharma companies. This program will collaborate with Dr. Peter Davies, a major thought leader and world renowned expert in the study of tau pathology in Alzheimer’s disease and in whose lab the htau mouse model was developed.

Lay Summary

PUBLIC HEALTH RELEVANCE In this Direct to Phase II SBIR, Oligomerix plans to validate its drug discovery program using the most relevant mouse model for Alzheimer’s disease (AD) for tau aggregation. This will significantly enable the Company to develop drugs for clinical studies for AD. Additionally, this program is being performed with the involvement of Dr. Peter Davies, a world expert in the tau and AD fields, and in whose lab this mouse model was developed.

Further information available at:

Types:
Investments > €500k

Member States:
United States of America

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
N/A