The IU/JAX Alzheimers Disease Precision Models Center

https://neurodegenerationresearch.eu/survey/the-iu-jax-alzheimers-disease-precision-models-center/

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Country

USA

Title of project or programme

The IU/JAX Alzheimers Disease Precision Models Center

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

€ 22,935,779.82

Start date of award

30/09/2016

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... Clinical Research... Clinical Research - Extramural... Dementia... Genetics... Human Genome... Neurodegenerative... Neurosciences... Prevention... Translational Research

Research Abstract

PROJECT SUMMARY OVERALL COMPONENT Alzheimer’s disease (AD) is a major cause of dementia, disability and death in the elderly. Despite recent advances in our understanding of basic biological mechanisms underlying AD, we do not yet know how to prevent AD or have an approved disease modifying intervention. Both are essential to slow or stop the growth in dementia prevalence. The National Alzheimer’s Project Act (NAPA) seeks to prevent and effectively treat AD by 2025 through innovative research on etiology, early detection, and therapeutics. In support of NAPA’s goals, one of the targeted areas of research identified at the NIA sponsored 2015 Alzheimer’s Disease Research Summit was the development of the next generation of animal models of AD that will prove more predictive in preclinical studies and thus accelerate the drug testing pipeline. While our current animal models of AD have provided multiple novel insights into AD disease mechanisms, thus far they have not been successfully utilized to predict the effectiveness of therapies that have moved into AD clinical trials. The Indiana University (IU)/Jackson Laboratory (JAX) Alzheimer’s Disease Precision Models Center (IU/JAX ADPMC) will leverage IU’s strengths in neurodegenerative research including 25 years as an NIA-supported Alzheimer’s Disease Center (ADC) and considerable expertise in preclinical drug testing with JAX’s eight decades of expertise in mammalian genetics and disease modeling to develop, validate and disseminate new, precise animal models of Alzheimer’s disease (AD). In addition, the IU/JAX ADMPC contains Sage Bionetworks to provide expertise in data organization and dissemination. The IU/JAX ADPMC brings together an international, multi-disciplinary team—including geneticists and genetics technology experts, quantitative and computational biologists, clinical experts in AD and neuroimaging, pharmacologists and world leaders in the development of precision animal models of disease—that possesses the collective ability to foresee disease modeling needs as they emerge on the international stage. This will allow the IU/JAX ADPMC to serve the AD scientific community effectively and efficiently. The IU/JAX ADPMC will generate new AD modeling processes and pipelines, data resources, research results and models that will be swiftly shared through JAX’s and Sage’s proven dissemination pipelines and through the NIA- supported AD Centers, academic medical centers, research institutions and the pharmaceutical industry worldwide. Ultimately, this will accelerate the application of advances in animal models for the greatest possible medical benefit. The Specific Aims of the IU/JAX ADPMC are: 1. Maximize Human Datasets to Identify Putative Variants, Genes and Biomarkers for AD. 2. Generate and Characterize the Next Generation of Mouse Models of AD. 3. Validate the Next Generation of Mouse Models of AD and Develop a Preclinical Testing Pipeline. !

Lay Summary

PROJECT NARRATIVE Alzheimer’s disease is a major cause of death and disability in the United States and the National Alzheimer’s Project Act seeks to identify a treatment or prevention for Alzheimer’s disease (AD) by the year 2025. In order to meet this ambitious goal, the current, interdisciplinary Indiana University/Jackson Laboratory Alzheimer’s Disease Precision Models Center (IU/JAX ADPMC) seeks to generate and characterize novel animal models of AD, assess the relevance of these to model to human disease and to develop a preclinical testing pipeline through which novel therapies can be tested to greatly accelerate the process by which therapies are successfully moved forward to human AD clinical trials. Importantly, the IU/JAX ADPMC will generate new AD modeling processes and pipelines, data resources, research results and models that will be swiftly shared via existing infrastructure at the participating institutions and through the NIH- supported AD Centers, academic medical centers, research institutions and the pharmaceutical industry worldwide.

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