Resource Summary Report

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AgedBrainSYSBIO

RRID:SCR_003825
Type: Tool

Proper Citation

AgedBrainSYSBIO (RRID:SCR_003825)

Resource Information

URL: http://www.agedbrainsysbio.eu/

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Description: Consortium focused on identifying the foundational pathways responsible for the aging of the brain, with a focus on Late Onset Alzheimer's disease. They aim to identify the interactions through which the aging phenotype develops in normal and in disease conditions; modeling novel pathways and their evolutionary properties to design experiments that identify druggable targets. As early steps of neurodegenerative disorders are expected to impact synapse function the project will focus in particular on pre- or postsynaptic protein networks. The concept is to identify subsets of pathways with two unique druggable hallmarks, the validation of interactions occurring locally in subregions of neurons and a human and/or primate accelerated evolutionary signature. The consortium will do this through six approaches: * identification of interacting protein networks from recent Late-Onset Alzheimer Disease-Genome Wide Association Studies (LOAD-GWAS) data, * experimental validation of interconnected networks working in subregion of a neuron (such as dendrites and dendritic spines), * inclusion of these experimentally validated networks in larger networks obtained from available databases to extend possible protein interactions, * identification of human and/or primate positive selection either in coding or in regulatory gene sequences, * manipulation of these human and/or primate accelerated evolutionary interacting proteins in human neurons derived from induced Pluripotent Stem Cells (iPSCs) * modeling predictions in drosophila and novel mouse transgenic models * validation of new druggable targets and markers as a proof-of-concept towards the prevention and cure of aging cognitive defects. The scientists will share results and know-how on Late-Onset Alzheimer Disease-Genome Wide Association Studies (LOAD-GWAS) gene discovery, comparative functional genomics in mouse and drosophila models, in mouse transgenic approaches, research on human induced pluripotent stem cells (hiPSC) and their differentiation in vitro and modeling pathways with emphasis on comparative and evolutionary aspects. The four European small to medium size enterprises (SMEs) involved

will bring their complementary expertise and will ensure translation of project results to clinical application.

Abbreviations: AgedBrainSYSBIO

Resource Type: portal, consortium, organization portal, data or information resource

Keywords: consortium, drug, drug development, brain, phenotype, presynaptic, protein network, postsynaptic, systems biology, synapse, neuron, protein interaction, network, induced pluripotent stem cell, pathway, genome wide association study, cognitive defect, gene, protein

Funding: European Union FP7 305299

Resource Name: AgedBrainSYSBIO

Resource ID: SCR_003825

Alternate IDs: nlx_158132

Record Creation Time: 20220129T080221+0000

Record Last Update: 20250418T055030+0000

Ratings and Alerts

No rating or validation information has been found for AgedBrainSYSBIO.

No alerts have been found for AgedBrainSYSBIO.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 3 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET.

Teipel S, et al. (2018) Use of nonintrusive sensor-based information and communication technology for real-world evidence for clinical trials in dementia. Alzheimer's & dementia : the journal of the Alzheimer's Association, 14(9), 1216.

Mertes F, et al. (2016) Combined sequencing of mRNA and DNA from human embryonic stem cells. Genomics data, 8, 131.

Mertes F, et al. (2015) Combined ultra-low input mRNA and whole-genome sequencing of

human embryonic stem cells. BMC genomics, 16, 925.