Leibniz Institute on Aging –
Fritz Lipmann Institute

Press release
August 20, 2020

FLI researcher receives Chan Zuckerberg Initiative grant for research on neurodegenerative diseases

The Chan Zuckerberg Initiative (CZI) announced $4.5 million in funding to support 30 pairs of researchers to collaborate and apply novel approaches for gaining greater insight into neurodegenerative disorders such as Alzheimer's, Parkinson's, and ALS. Participants in the 18-month projects will address cross-cutting questions that will help increase our understanding of these diseases. As one of 30 pairs of researchers, CZI supports a collaborative research project of the Leibniz Institute on Aging – Fritz Lipmann Institute (FLI / Dr. Alessandro Ori) in Jena, Germany and the National Institutes of Health (NIH / Dr. Michael E. Ward), USA.

Jena/Bethesda. The Chan Zuckerberg Initiative (CZI) supports a collaborative research project of Dr. Alessandro Ori of the Leibniz Institute on Aging – Fritz Lipmann Institute (FLI) in Jena, Germany and Dr. Michael E. Ward of the National Institutes of Health (NIH), USA. As one of 30 pairs of researchers, they receive a grant out of the CZI Neurodegeneration Challenge Network (NDCN), aiming at novel approaches for gaining greater insights into neurodegenerative disorders.

Dr. Ori's lab uses a very short-lived fish, called killifish (*Nothobranchius furzeri*), as a model to investigate effects of aging on a molecular level. In the current project, the team will contribute biochemical and computational approaches to study protein complexes using quantitative mass spectrometry, and develop novel genetic tools to model neurodegenerative disorders in killifish. They will collaborate with Dr. Ward's lab at the NIH's National Institute of Neurological Disorders. His lab combines induced pluripotent stem cell technology and advanced molecular and genetic analysis techniques to study how cells from patients with inherited forms of dementia and other neurodegenerative disorders die and wrack the brain.

Together, the two teams combine clinical and basic science expertise to investigate the central question on how gene mutations and aging work together to accelerate neurodegenerative diseases. At present, very little is known about how genetic and age-related changes at the molecular and cellular level interact and trigger neurodegenerative diseases.

Their studies will concentrate on the gene TDP-43, a gene associated with frontotemporal dementia (FTD) and amyotrophic lateral sclerosis (ALS). They will analyze how loss of TDP-43 function accelerates the age-related decline of protein complexes, thus impairing protein quality control programs in the brain and finally leading to neurodegeneration. Any findings could have important implications for understanding how aging increases risk for neurodegenerative diseases.

Both teams will receive $75,000 seed funds for the first phase of this novel initiative by the CZI, founded by Dr. Priscilla Chan and Mark Zuckerberg in 2015. Successful project teams will be eligible to apply for additional grant awards of $1.6 million over four years.

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Website:

CZI press release

https://chanzuckerberg.com/newsroom/czi-awards-4-5m-to-advance-innovative-approaches-to-fighting-neurodegenerative-diseases/

CZI grantee website

https://chanzuckerberg.com/science/programs-resources/neurodegeneration-challenge/projects/?award=collaborative-pairs-pilot-project

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Background information

The **Leibniz Institute on Aging – Fritz Lipmann Institute (FLI)** - upon its inauguration in 2004 - was the first German research organization dedicated to research on the process of aging. More than 350 employees from around 40 nations explore the molecular mechanisms underlying aging processes and age-associated diseases. For more information, please visit www.leibniz-fli.de.

The **Leibniz Association** connects 96 independent research institutions that range in focus from natural, engineering and environmental sciences to economics, spatial and social sciences and the humanities. Leibniz Institutes address issues of social, economic and ecological relevance. They conduct basic and applied research, including in the interdisciplinary Leibniz Research Alliances, maintain scientific infrastructure, and provide research-based services. The Leibniz Association identifies focus areas for knowledge transfer, particularly with the Leibniz research museums. It advises and informs policymakers, science, industry and the general public. Leibniz institutions collaborate intensively with universities – including in the form of Leibniz ScienceCampi – as well as with industry and other partners at home and abroad. They are subject to a transparent, independent evaluation procedure. Because of their importance for the country as a whole, the Leibniz Association Institutes are funded jointly by Germany's central and regional governments. The Leibniz Institutes employ around 20,000 people, including 10,000 researchers. The financial volume amounts to 1.9 billion euros. See https://www.leibniz-gemeinschaft.de/en/ for more information.