The BrightFocus Foundation grants an Alzheimer’s Disease Research Standard Award to a CNIC project

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The project will examine long-term changes in plasma biomarkers of neuronal injury, neuroinflammation, and Alzheimer's disease in participants in the PESA-CNIC-SANTANDER study who have undergone imaging studies to map brain metabolism. The goal of the project is to determine how cardiovascular risk factors during midlife impact brain function

The US nonprofit organization BrightFocus Foundation has granted an **Alzheimer's Disease Research Standard Award** to the project 'Understanding the impact of midlife cardiovascular risk factors & subclinical atherosclerosis on brain health: a role in Alzheimer´s disease'. The project is coordinated by **Dr. Marta Cortés Canteli** at the Centro Nacional de Investigaciones Cardiovasculares (CNIC) together with CNIC General Director Dr. Valentín Fuster and **Dr. Juan Domingo Gispert**, of the CNIC and the Barcelonaβeta Brain Research Center.

The project will receive annual funding of **$100,000** over 3 years. Also participating in the project are CNIC scientists **Dr. Borja Ibáñez** and **Dr. Fátima Sanchez Cabo** and external partners Dr. Kaj Blennow and Dr. Henrik Zetterberg of the University of Gothenburg (Sweden), who are world leaders in the measurement of plasma biomarkers.

The project will examine longitudinal changes in plasma biomarkers of neuronal injury, neuroinflammation, and Alzheimer's disease in participants in the PESA-CNIC-SANTANDER study who have undergone imaging studies to map brain metabolism (J Am Coll Cardiol 2021;77:888–98). The project will determine whether these biomarkers are linked to the presence of cardiovascular risk factors and subclinical cardiovascular disease, among other variables. In this way, aim is to determine if there is an association between cardiovascular and cerebral disease during their subclinical phases and to identify the mediators and possible causes of this association.

The **Progression of Early Subclinical Atherosclerosis** (PESA-CNIC-SANTANDER) study is a long-term prospective study that is now in its second decade. The study monitors the cardiovascular health of more than 4000 asymptomatic middle-aged individuals with the aim of determining the presence of subclinical atherosclerotic disease and associated disorders from the earliest stages through to the onset of the symptomatic phase.

Results from PESA published in various scientific journals show that subclinical atherosclerosis is frequent in this cohort of middle-aged, healthy individuals. Moreover, Dr. Cortes Canteli noted that the results show "that in PESA participants with subclinical atherosclerosis, cardiovascular risk and cardiovascular disease are associated with cerebral hypometabolism in brain regions that are also hypometabolic in Alzheimer's disease."

The new study will mark an important advance toward the development of preventive interventions to reduce the incidence of Alzheimer dementia in old age

Dr. Cortes Canteli went on to say that now, with the funding from BrightFocus, "**we will take this analysis further and determine if this cerebral hypometabolism is the result of a neuronal lesion and if it is associated with neuroinflammation and signs of Alzheimer's disease.**"

Dr. Cortes Canteli concluded that the new study "will mark an important advance toward the development of preventive interventions to reduce the incidence of Alzheimer dementia in old age."

"We are so proud and excited to be funding Dr. Cortés Canteli 's project that will provide invaluable information about how cardiovascular risk contributes to cognitive decline and the onset of dementia," said **Sharyn Rossi**, PhD, Director of Scientific Programs, Neuroscience at BrightFocus.

Source

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