

PREADAPT

Identification of personalized inflammatory profiles of aging and senescence which are modified specifically by risk factors of dementia modulating the predementia speed of symptomatic progression.

Age represents by far the largest risk factor for dementia, including Alzheimer's disease (AD) dementia. However, not every person will develop dementia during aging, indicating that age-related processes may not inescapably lead to dementia. The elucidation of the fundamental processes occurring in aging will likely offer new options to prevent or postpone the development of dementia. PREADAPT will build on the hypothesis that chronic systemic inflammation and neuroinflammation, quantified through a set of inflammatory mediators, accelerates the speeds with which the brain ages, thus allowing to predict future cognitive decline and dementia. Importantly, the levels and changes of these inflammatory mediators during aging are modulated by different genetic and environmental factors defining thereby a personalized risk for progressing to dementia. By integrating data generated on these inflammatory mediators, genetics, known AD biomarkers, and comorbidities, PREADAPT will generate combined Risk profiles which provide personalized information on the risk of progression to dementia. To achieve these goals, PREADAPT has gathered a team of leading experts in the field of neuroinflammation, epidemiology, genetics, epigenetics, neuropsychology, and clinical research. PREADAPT has access to state-of-the-art methodologies to quantify these inflammatory mediators in large epidemiological and clinical follow-up studies that are characterized in-depth using neuroimaging, genomics, and proteomics. This unique configuration will enable PREADAPT to identify, already at pre-dementia stages, age-related profiles informing on the personalized future risk to decline cognitively and to progress to dementia. From a translational perspective, PREADAPT will also provide first evidence showing that a personalized risk profile responds to specific intervention.

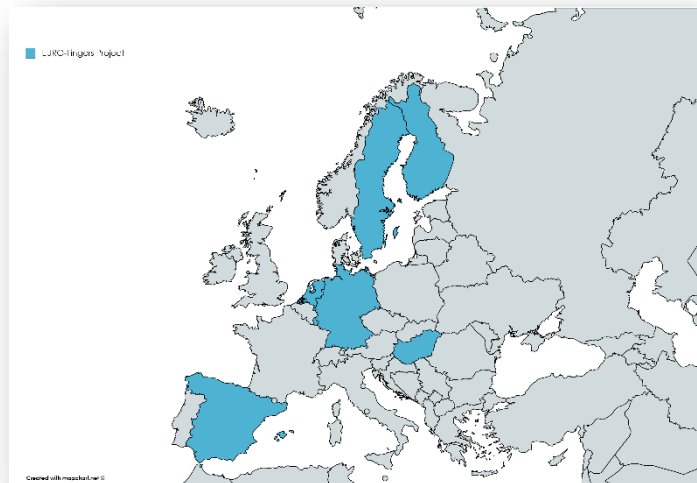
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