Optimizing stratification for trial design in Alzheimer’s disease

Fact Sheet

Project Information

STRATA-ALZ

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Funded under
Marie Skłodowska-Curie Actions (MSCA)

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€ 0,00

EU contribution
€ 206 887,68

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1 April 2023

End date
31 March 2025

Coordinated by
LUNDS UNIVERSITET
Sweden

Objective

Alzheimer’s disease (AD) heterogeneity is associated with distinct risk factors, clinical manifestations, rates of cognitive decline, and comorbidities. However, this population variance is not properly incorporated in clinical trial design, directly hampering successful development of treatments. As the field is shifting towards (early) secondary or event primary intervention, the overall objective of the current project is to optimize clinical trial design of an early AD population, by providing data-driven guidelines for sample stratification and outcome measures. To this end, I will assess neurobiological heterogeneity in ~2000 cognitively unimpaired (CU) and ~900 mildly impaired (MCI) subjects enrolled in the BioFINDER study from Lund University (host institution). Using their unique data-set, I aim to identify subtypes of amyloid-β (Aβ)-vascular interplay, the two most common co-occurring and interacting pathologies in the aging brain. Next, the role of neuronal function, microglial
activation, and novel targets through proteomics analyses based on CSF/plasma biomarkers on disease progression within these subgroups will be determined. Finally, resulting tau-PET accumulation patterns and cognitive decline across domains across will be assessed. A main innovative aspect and strength of this project is the utilization of regional information available from the imaging modalities, an aspect of analyses which I have specialized in. In turn, the expertise of the host institution regarding fluid biomarkers and tau-PET imaging is paramount to support this multi-modal project. Finally, our respective experience with longitudinal study design will support a critical aspect of the project, which is lacking even in the most comprehensive studies to date. Unravelling heterogeneity in disease trajectories is paramount to optimize trial population selection and stratification, directly increasing the changes of positive trial outcomes.

Keywords

Alzheimer's disease  biomarkers  clinical trials  neuroimaging  vascular disease  stratification  disease heterogeneity

Programme(s)

HORIZON.1.2 - Marie Skłodowska-Curie Actions (MSCA)

Topic(s)

HORIZON-MSCA-2022-PF-01-01 - MSCA Postdoctoral Fellowships 2022

Call for proposal

HORIZON-MSCA-2022-PF-01

See other projects for this call

Funding Scheme

HORIZON-TMA-MSCA-PF-EF - HORIZON TMA MSCA Postdoctoral Fellowships - European Fellowships
Coordinator

LUNDS UNIVERSITET

Net EU contribution
€ 206 887,68

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Links
Contact the organisation
Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

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