

MRI-PET Tau population risk study

Work Package EM10



Dementias Platform^{UK}
Medical Research Council

Objective(s):

1. Obtain Ethical and Other Approvals for Project
2. Align with linked cohort (PREVENT) Studies and Identification/Consent of 80-100 Suitable Individuals
3. Scanning of 80-100 Study Participants
4. Analysis and Data Sharing

Overview Summary:

The aim of the current project is to carry out additional tau PET imaging as a DPUK-funded Experimental Medicine sub-study linked to the PREVENT cohort. Obtaining information regarding *in vivo* tau aggregation, in addition to Amyloid PET data and the comprehensive biomarker profile available from his group will create an unprecedented dataset for modelling of the early stages of Alzheimer's Disease and subsequent Dementia.

Executive Summary:

The aim of the current project is to carry out additional tau PET imaging as a DPUK-funded Experimental Medicine sub-study linked to the PREVENT cohort. Obtaining information regarding *in vivo* tau aggregation, in addition to Amyloid PET data and the comprehensive biomarker profile available from this highly phenotyped group will create an unprecedented dataset for modelling of the early stages of Alzheimer's Disease and subsequent Dementia.

We will recruit 100 volunteers from the PREVENT cohort, all of whom will have had an amyloid PET scan within the preceding 24 months. For each PET scan, participants will receive an intravenous injection of PI-2620 with data acquisition for 60 minutes. Study outcome measures will relate to PET measures of Tau deposition in individuals from the Amyloid Imaging in PREVENT cohort and its relationship to longitudinal cognitive and structural imaging indices. The primary outcome measure will be a ratio of regional radiotracer (PI2620) concentrations (SUVR) at the end of each Tau PET scan.

Summary of Outputs: (as per Researchfish categories)

Publications:

Awaited

Collaborations & Partnerships

None

Further Funding

None

Next Destinations

None

Engagement Activities

None

Influence of policy, practice, patients & the public

None

Research Tools & Methods

None

Research Databases & Models
None
Intellectual property & licencing
None
Medical products, interventions & clinical trials
None
Artistic & creative products
None
Software & technical products
None
Spin outs
None
Awards & recognition
None
Other outputs & knowledge/future steps
None
Use of facilities & resources
None
Other:
None
Most successful outcome and what it means for future dementia research:
Due to issues around commencement of the study outcomes are awaited.
Lessons learned:
<p>We are hoping to have the tracer available by May/June but have had to push back timelines due to the lack of tracer. As soon as this happens, we have everything in place to consent and screen the first participant.</p> <p>This project has been affected by both COVID and the impact of Brexit.</p>
Date of Report:
04/03/2021