

Programme Objectives

This grant call is a collaboration between Alzheimer's Research UK, Alzheimer's Society and the National Institute for Health and Care Research (NIHR). It is made possible thanks to the incredible financial contribution by the People's Postcode Lottery.

The main objective of this call will be to produce clinical evidence and economic data that could help make the case for blood biomarker implementation in a healthcare setting in the UK.^{1,2}

With that in mind, this programme will fund a **prospective, community-based project** (duration 4-5 years) that assesses a panel of biomarkers in real-world populations. In this call we are partnering with **the Biomarker Factory** (<https://ukdri.ac.uk/news-and-events/biomarker-factory-launch>), at the UK Dementia Research Institute at UCL. Applicants are encouraged to contact Dr Amanda Heslegrave (a.heslegrave@ucl.ac.uk) to discuss their analytical requirements in regard to the Biomarker Factory capabilities.

In order to build a stronger case for future implementation, the final proposal should include a component of an **economic analysis of the use of blood biomarkers in a healthcare setting**.

The successful applicants will be required to work closely with the Policy and Influencing teams at Alzheimer's Research UK and Alzheimer's Society, both during the project and after completion, to **work towards the implementation of blood biomarkers in healthcare settings where the findings of the project support this**. Applicants do not need to budget for this workstream in their proposals.

Background

It is estimated that only 62% of people aged 65 or over with dementia in England receive a diagnosis, with the rate varying between 53% and 73% across the UK³. Many fewer people receive an accurate diagnosis of the type of dementia based on underlying pathophysiology.

A 2021 audit of memory units in England and Wales found that of the almost 6,000 patients included in the audit, only 2% were referred to one or more specialist investigation.⁴ 49 patients had a dopamine transporter (DAT) scan, 35 patients had a PET scan and only 8 patients had CSF examination.

There is an urgent need of an improved diagnostic workup and infrastructure for people with suspected dementia, and blood-based markers (BBMs) are poised to be a critical tool in the future. However, more research is needed before they are ready to be deployed in a clinical setting.

¹ <https://www.sciencedirect.com/science/article/abs/pii/S147444221730159X>

² <https://www.sciencedirect.com/science/article/abs/pii/S1474442221003616>

³ <https://digital.nhs.uk/data-and-information/publications/statistical/recorded-dementia-diagnoses/march-2022>

⁴ https://www.rcpsych.ac.uk/docs/default-source/improving-care/ccqi/national-clinical-audits/national-audit-of-dementia/round-5/final-1608-nad-mas-national-report-2021.pdf?sfvrsn=dc5b5d40_2

Potential Areas of Study

This is a one-off call for applications.

The funding partners would like to invite applications that produce data to bring a panel of BBMs up to the 4th phase of the Geneva biomarker development framework,¹ that is, data that may help demonstrate clinical utility. To achieve this, the applications may address, but may not be limited to, some of the points below:

- Determination of whether BBMs improve standard diagnostic assessment in secondary and tertiary memory clinics.
- Establishment of optimal biomarker combinations for improved diagnosis in secondary and tertiary memory clinics.
- Study factors that affect interpretation of BBMs levels in real-world populations, such as race and ethnicity, and comorbidities.
- Head-to-head studies comparing the performance of various BBMs assays in the same clinical context.
- Validation of biomarkers against suitable benchmarks, with neuropathological link.

The NIHR has specific interest in the economic evaluation aspect of this study. Therefore, the winning bid must have a component of economic analysis on the use of BBMs in healthcare settings, and this must be costed separately. The economic analysis could, for example:

- Help forecast what would be the cost of BBM implementation.
- Help calculate if they are cost-effective to the healthcare system (e.g., if they help produce different health outcomes by detecting the disease earlier), even in the absence of disease-modifying therapies (DMTs).
- If a DMT is approved during the duration of the project, help understand the cost implications BBMs may have in the access to treatments.

If the Lead Applicant's team does not have the necessary expertise, whenever possible, the Funding Partners can help match proposals from teams with complementary expertise and/or research goals.

We encourage potential applicants to consider a more complete list of existing gaps and research recommendations as outlined in a recent publication by Hansson et al.⁵

Available Funding

£4.5m for a single study, maximum duration 5 years.

Eligibility

This Request for Applications requires the study population to be **community-based**.

The Lead Applicant and point of contact **must be based in a UK academic/research institution**. However, the application can include researchers or institutions outside the UK.

⁵ <https://alz-journals.onlinelibrary.wiley.com/doi/10.1002/alz.12756>

The Lead Applicant is expected to have a **contract** (fixed term or tenure) **which covers the proposed duration of the grant**. The proposal **must include an early career researcher**, in any role. **Post-doctoral fellows are eligible to apply as a Lead Applicant, but must collaborate with an administrative Co-Applicant** who does have a contract until the end of the project. The administrative PI will be responsible for assisting in providing all institutional documents required for the project and will be required to sign any award contract. Training or mentoring-only proposals will not be considered.

The proposal must include **multiple study sites across the UK, with at least one of them having access to specialist techniques with link to other validated measures of underlying pathology, such as CSF or PET**.

The team or collaborators must have a **track record of community engagement and diverse recruitment in similar studies**. We expect the study to broadly represent the diversity of the UK population.

The following areas of research will be **outside of the remit of this funding call**:

- Analyses of samples from already-existing cohorts, except for specific subcomponents (e.g. validation against pathology) as the focus of this call is for a new prospective study.
- Early or preliminary studies of novel BBMs. Only BBMs broadly accepted to have reached phase 3 (demonstrated clinical validity) of the biomarker development framework¹ will be considered.
- Development of non-BBMs, such as PET, CSF, digital, etc.

Review process

Applications will be reviewed by a panel of:

- International scientific reviewers with a mix of expertise in blood biomarkers, the diagnosis pathway in the UK, working with diverse communities, and health economics.
- Lay Reviewers from Alzheimer's Society's and Alzheimer's Research UK's network.

You can find a complete list of the reviewing criteria the panel will consider in our website.

Timeline

Project application opens: May 18th

Webinar to present the project and address questions: June 8th

Project application closes: September 29th

Review panel online meeting and funding decision: October/November 2023



Application forms:

The Application form can be completed through Grant Tracker [here](#).