Sensing & Imaging for Diagnosis of Dementias (SIDD)

[UPDATED: 7 MARCH 2014]

Call type: Invitation for proposals
Call Announcement: 11 Dec 2013
[Je-S open for applications from: 16 Dec 2013 onwards]
Intent to submit required by: 16:00, 17 Feb 2014
Closing date: 16:00, 1 April 14,

Related themes: Engineering, Physical sciences

Summary
This call will support fundamental research in sensing & imaging targeted specifically at the diagnosis of Dementias and the quantitative measurement of disease progression. Up to five million pounds is available for this call.

This call is for full proposals to support research projects led by an academic at an eligible institution (see "Eligibility” criteria). Applications are expected to be grounded in clinical need, but tackle the specific research challenges at the level of fundamental science. All applications must demonstrate a mechanism to secure clinical advice and input to the project in order to ensure clinical relevance of the research.

Anyone intending to submit a proposal to this call must register their interest by email by 16:00, 17 February 2014 (see “How To Apply” section for detail). Applicants that do not register their intent to submit will have their applications rejected.

Background
In March 2012, Prime Minister David Cameron launched the Dementia Challenge¹, which aims to improve the lives of people with dementia and their families. Earlier this year the Department of Health published its annual report² on progress announcing diagnosis as a priority, and setting out its ambition for

¹ http://dementiachallenge.dh.gov.uk/about-the-challenge/
NHS England, stating, “by 2015, two thirds of people with dementia should have a diagnosis”.

Even with this focus, there is still scope for more advanced and affordable / cost effective technologies and techniques which improve our ability to firstly identify dementia type, and then also measure dementia progression.

Diagnosis of dementia remains difficult particularly in the early stages, where symptoms are mild. Other health issues such as depression can affect memory and cognition, causing dementia-like symptoms which further complicate clinical diagnosis. As a result a definite diagnosis of the cause of dementia may only be confirmed at post mortem. In a research context better presymptomatic diagnosis is of value in helping us understand and study dementias.

Our ability to actually measure the progression of dementias is inadequate and results in clinical trials being both costly and lengthy. Improved tools to quantitatively measure disease progression would be useful in clinical trials and could ultimately allow the location and course of future brain atrophy to be predicted. This would bring benefits to our understanding of dementia as a disease in a research context, for example furthering our understanding how to prevent or delay onset.

This call therefore focuses on “determining dementia sub type”, and “quantitative measurement of disease progression”, and builds upon strong UK capability in Medical Imaging, Sensors and Instrumentation. Developments in both these areas are important both in a research context, (where we seek to improve our understanding of dementia as a disease), and also in a clinical care setting (where patients will feel the benefit more directly). The Medical Research Council (MRC) is creating a UK Dementia Platform which from 2014 will provide a cohort-based research platform to address the challenges of dementias/ neurodegenerative diseases (ND). Ultimately this Platform will form the basis on which to identify and test new biomarkers as well as stratify patient groups to evaluate and develop new therapeutic approaches. EPSRC’s ambition will therefore complement this activity, as effective diagnosis and measurement of progression will enable the use of targeted therapeutic approaches as they are realised. Applicants are also asked to note the current MRC call "Enhancing UK’s Clinical Research Capabilities and Technologies" which looks to provide capital support. Of particular relevance the call highlights capital funding for dementia research and in particular enhancing facilities for imaging; high throughput phenotyping and cell modelling linked to cohort participants and associated informatics.

**Funding available**

Up to five million pounds is available for this call, and EPSRC expect to fund in the region of 3-5 projects. Applications are expected to be grounded and informed by clinical need, but tackle fundamental research challenges within the Engineering and Physical Sciences. Proposals not within the remit of EPSRC will be rejected. For any queries regarding remit please contact Nick Cook (see Contacts section).
Scope of this call

Proposals will ideally deliver non-invasive and cost effective solutions with applications making a clear contribution to one or more of the following:

- Technologies / techniques which more accurately and easily differentiate dementia sub-types. Applications which focus on prodromal, presymptomatic stages of the disease are particularly welcomed.
- Technologies / techniques which enable quantitative measurement of disease progression of dementias.

Proposals should focus on the development of novel Engineering and Physical Science aspects of:

- Imaging technologies and techniques,
- and/or Sensing and Instrumentation.

Proposals on the clinical application of the above technologies will be considered out of EPSRC remit and will be rejected. Applicants are invited to contact EPSRC if they are unsure.

Applications focusing on medical imaging should note that this call can support research on all imaging modalities, providing the potential contribution to dementia diagnosis and/or monitoring progression can be demonstrated with appropriate clinical input.

Development of technologies / techniques for use with all dementia types are within scope of this call, this includes Alzheimers and others such as vascular dementia, frontotemporal, Lewy Body Dementia and other rare forms.

A short set of FAQ’s is provided at the end of this document.

Applicants are informed that EPSRC held a workshop on 2 September 2013, the outputs of which have informed the scope of this call, along with input from relevant charities, and the Medical Research Council. A report of the workshop is available on EPSRC’s website: [http://www.epsrc.ac.uk/SiteCollectionDocuments/Calls/2013/EPSRCDementiaReport2013.pdf](http://www.epsrc.ac.uk/SiteCollectionDocuments/Calls/2013/EPSRCDementiaReport2013.pdf)

For more information about EPSRC’s portfolio and strategies, see our website: [http://www.epsrc.ac.uk/ourportfolio/](http://www.epsrc.ac.uk/ourportfolio/)

Equipment

Where possible, researchers are asked to make use of existing facilities and equipment, including those hosted at other universities. If equipment is needed as part of the research proposal, applicants must follow EPSRC’s rules for requesting equipment over £10,000 in value. Individual items of equipment up to the current OJEU (Official Journal of the European Union) procurement threshold can be included on research proposals submitted through this call, but research organisations will be expected to make a contribution to the cost. All requests for
single items of equipment above the current OJEU threshold will need to go through a separate process which will assess the strategic need for the equipment and how to ensure maximum usage. These proposals will be assessed through the separate Strategic Equipment peer review process which is not part of this call.

For more information on equipment funding, please see: http://www.epsrc.ac.uk/research/ourportfolio/themes/researchinfrastructure/subthemes/equipment/.

**Eligibility**

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide: http://www.epsrc.ac.uk/funding/guidance/fundingguide/

As this call is a targeted funding opportunity provided by EPSRC, higher education institutions, and some research council institutes and independent research organisations are eligible to apply. A list of eligible organisations to apply to EPSRC is provided at:

http://www.rcuk.ac.uk/funding/eligibilityforrcs/

**How to apply**

**Notify EPSRC of your intent to apply**

Anyone intending to submit a proposal to this call must register their interest by email to dementia@epsrc.ac.uk by 16:00, 17 Feb 2014. The following should be included in the email:

- Names and institutions of the principal and co-investigators
- Any non-academic project partners
- The approximate value of the funds to be requested.

Please note that this is not intended to restrict detail in the final submission as changes will be allowed, but will give us an indication of the level of interest and enable us to identify peer reviewers more quickly. **Applicants that do not register their intent to submit will have their applications rejected.**

**Submitting your application**

You should prepare and submit your proposal using the Research Councils’ Joint electronic Submission (Je-S) System (https://je-s.rcuk.ac.uk/).

When adding a new proposal, you should select:

- Council ‘EPSRC’
• Document type ‘Standard Proposal’
• Scheme ‘Standard’
• On the Project Details page you should select the ‘SIDD (Sensing & Imaging for Diagnosis of Dementias)’ call.

Note that clicking ‘submit document’ on your proposal form in Je-S initially submits the proposal to your host organisation’s administration, not to EPSRC. Please allow sufficient time for your organisation’s submission process between submitting your proposal to them and the call closing date. EPSRC must receive your application by 16:00 on 1 April 2014.

Guidance on the types of support that may be sought and advice on the completion of the research proposal forms are given on the EPSRC website (http://www.epsrc.ac.uk/funding/guidance/) which should be consulted when preparing all proposals.

**Guidance on writing application**

Applicants are required to submit the following documents:

• Je-S application form
• Case for support (including track record, national importance and description of proposed research).
• Pathways to impact
• Work plan
• Justification of the resources requested
• Statements of support from project partners
• 'Clinical Input to Project' document: (1 page allowed describing mechanism to secure clinical input to project. PLEASE UPLOAD AS AN ADDITIONAL DOCUMENT).

Please also submit other documents if required by EPSRC policy (e.g. CVs, Technical assessments for large facilities etc.) For further details of our requirements please see our advice on writing proposals:

http://www.epsrc.ac.uk/funding/guidance/preparing/

Please note: If the attachments are uploaded as Word documents, please be aware that once the application has been submitted to the Council/Funder, all the attachments will be converted and held as an Adobe Acrobat file (PDF). Also please note, that whilst we support a wide range, we do not support all MS Word font types. Therefore if an unsupported font type is used a different font type may be substituted which may result in changes to the layout of the document. For this reason we recommend that the documents are converted to PDF files before uploading.
Assessment

Assessment process
The standard EPSRC peer review process will be used. Proposals will be sent to independent peer reviewers, including at least one nominated by the applicant. The reviewers’ role will be to comment on the assessment criteria of the proposed research. If sufficiently positive comments are received applicants will be invited to respond to these comments. Proposals will then be ranked by a prioritisation panel using the reviewers’ comments and the PI response. EPSRC will make the final funding decision based on recommendations and advice from the panel.

Full details of this process are available at:
http://www.epsrc.ac.uk/funding/peerrev/Pages/process.aspx

Assessment criteria
Proposals will be assessed on the following criteria

- Research quality
- National importance
- Pathways to impact
- Applicant ability
- Resources and management

In addition to the above ALL applications must demonstrate a mechanism to secure clinical advice and input to their project. This will form part of the assessment criteria. Reviewers will be asked to comment on how effective the proposal is at ensuring research is informed and guided by clinical need. PI’s are invited to be creative in how this might be achieved, but must work within the constraints of the EPSRC’s policy and funding guide. For eligible individuals in split posts, (i.e. those employed and paid) by both a university and the NHS, applicants are reminded that the EPSRC can only support the university’s portion of a staff salary.

EPSRC reserves the right to reject proposals that are deemed to be outside of EPSRC remit, the remit of the call, or are not in the correct format, without reference to peer review.

Guidance

Guidance for reviewers
Information about the EPSRC peer review process and guidance for reviewers can be found at: http://www.epsrc.ac.uk/funding/peerrev/review/
Key dates

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<td>Call launch (to coincide with G8 Dementia Summit, London)</td>
<td>11 Dec 2013</td>
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<td>Call Opens for submission in JeS</td>
<td>16 Dec 2013</td>
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<td>Deadline to notify EPSRC of intent to submit</td>
<td>16:00, 17 Feb 2014</td>
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<td>Call close</td>
<td>16:00, 1 April 2014</td>
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<tr>
<td>Funding Panel</td>
<td>Expected w/c 25 August 2014</td>
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Contacts

Anyone intending to submit a proposal to this call must register their interest by email to, dementia@epsrc.ac.uk by 16:00, 17 February 2014. Please include in your email:

- Names and institutions of the principal and co-investigators
- Any non-academic project partners
- The approximate value of the funds to be requested.

Please note that this is not intended to restrict detail in the final submission as changes will be allowed, but will give us an indication of the level of interest and enable us to identify peer reviewers more quickly. Applicants that do not register their intent to submit will have their applications rejected.

For all other queries on this call please contact Nick Cook on:

nick.cook@epsrc.ac.uk  Tel: (01793) 444282
Change log

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FAQ’s

1) Is EPSRC looking to focus on any particular dementia?
   No - Applications are not expected to be directed towards any particular type of dementia, so may consider alzheimers and others, for example vascular dementia, frontotemporal, Lewy Body Dementia as well as other rarer forms.

2) Can we include studentships in our application?
   No. EPSRC only supports studentships through our Centres for Doctoral Training (CDTs), Doctoral Training Grants and Industrial Case awards. Please see here for additional information on studentships.

3) Does this call cover, for example technologies which might monitor eye movements in order to track disease progression?
   Yes, such technologies can be considered under the theme “Technologies / techniques to enable quantitative measurement of disease progression”. Development of new technologies to track disease progression e.g. through monitoring eye movements, speech patterns, movement tracking (e.g. gait), auditory processing, and others could all be within remit. However proposals must focus upon specific research challenges at the level of fundamental science; Research which takes existing technologies and applies it will be viewed as out of remit. Proposals on monitoring progression can consider technologies which might have a final use in a clinical environment (hospital, GP) or in the community (e.g. home or care home) setting.
**Additional FAQ’s [added 7 March 14]**

In response to queries from applicants please find below some additional FAQ’s to bear in mind when preparing full applications. Please do not hesitate to contact EPSRC if you have queries.

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**Project duration – Is there any guidance on project duration?**

Projects of any reasonable duration are acceptable under this call. Guidance on project duration has not been included in the call to allow a diverse range of projects to be submitted. EPSRC expects most projects to be of between 3-5 years. As always please ensure that your JoR fully justifies the duration of your project proposal and the resources requested.

**Project funds - Is there a limit to how much funds I can apply for?**

No – You can apply for any reasonable amount of funding; there is no specified limit in the call guidelines. Applicants are asked to ensure they fully justify all funds requested, and bear in mind the total budget available for this call. As a guide EPSRC anticipates funding 4 or 5 projects, although this is subject to our available budget.

**JeS submissions - I am writing a joint proposal with another university. Do we need to submit a single JeS form with a single lead university, or can we both submit our own form?**

EPSRC would prefer a single JeS form from the lead University.

**Clinical Trials - Can I seek support for Clinical trials as part of my proposal?**

EPSRC cannot support clinical testing (on any scale). Proposals can focus on feasibility testing or proof of concept. As such we can support small scale feasibility / proof of concept testing which involves small numbers of patients.

**Clinical Advice – What is required in terms of clinical advice?**

Applications are expected to be grounded in clinical need, but tackle the specific research challenges at the level of fundamental science. All applications must demonstrate a mechanism to secure clinical advice and input to the project in order to ensure clinical relevance of the research.

PI’s are invited to be creative in how this might be achieved, but must work within the constraints of the EPSRC’s policy and funding guide. Possible approaches include having an appropriate clinician on a project...
steering board or preferably involving an eligible clinician in the project itself (i.e. an individual in a in a split post please see “Eligibility of NHS staff”).

**Eligibility of Investigators – How can I find out about eligibility of investigators and other EPSRC requirements / procedures?**

A link to EPSRC’s funding guide can be found:
http://www.epsrc.ac.uk/SiteCollectionDocuments/FundingGuide.pdf

**Eligibility of NHS staff – Can I include a colleague from the NHS as an investigator?**

Where an individual holds a split post, i.e. they are employed (and receive salary) from both a university and the NHS, they are eligible to be a PI/Co-I. However the grant holder can only claim the university portion of their salary from EPSRC.

If an individual is employed and receives their whole salary from the NHS, they cannot claim their salary from EPSRC and are only eligible to be a PI/Co-I if they have a permanent academic post at a university (for example as an Honorary lecturer). In this circumstance the full application must demonstrate support from the university and that the university will host and supply the PI with what they need for the entire duration of the grant. Additionally they will need to provide evidence that the NHS is prepared to support them to work on the project (including covering their salary). You should also note that in order to be eligible with EPSRC, the individual would also need to be Je-S registered at the supporting university.

If an individual is employed and receives their (whole) salary from the NHS, but does not hold a university post they are not eligible as an investigator. If they want to be part of a grant (but not with PI or Co-I status) there are two options:

1. Be a project partner and donate their time as in-kind support (free of charge)

2. Be a consultant on the grant and claim consultancy fees in the Other Directly Incurred Costs section. (This approach allows you to cover NHS costs, but can make the grant expensive if you require a lot of time. Therefore please bear in mind that the panel will consider if this is an appropriate use of funds, and may view this unfavourably if it adds significant cost to the grant without adding adequate value to the research).
Please note all grants awarded by EPSRC must be held by an eligible Independent research Organisation. Please see:

http://www.rcuk.ac.uk/funding/eligibilityforrcs/

**Eligibility of Overseas staff – Can overseas staff be PI’s or Co-I’s?**

No - Overseas staff are not eligible to be PI’s or Co-I’s on a grant. Please see our funding guide for eligibility requirements:

http://www.epsrc.ac.uk/SiteCollectionDocuments/FundingGuide.pdf

EPSRC can support the UK side of an international collaboration with funds requested going through a UK university – this can include having a UK employed post doc based for extended periods in overseas laboratories (with EPSRC funds covering travel subsistence & consumable costs incurred while in the partners group etc). We can also support costs to cover access to facilities overseas (if not free at point of access). Equipment funded by EPSRC can also be based in an overseas lab but would be bought and owned by the UK institution. Hosting costs for overseas researchers spending time in UK labs and costs for the PI, Co-I and post doc’s to visit overseas labs are also supported. If a particular input needed in the project fits the description of a subcontract e.g. making specialist samples, the sub contract can include a contribution to overseas salary costs (but only as part of the total cost for the “service” provided).

**Eligibility of Charities – Can I involve a charity on my grant?**

Please note all grants awarded by EPSRC must be held by an eligible Independent research Organisation. Please see:

http://www.rcuk.ac.uk/funding/eligibilityforrcs/

Charities can be involved on a grant as project partners, but individuals from the charity are not eligible as investigators. Please follow guidance for statements of support from Project Partners instructions:

http://www.epsrc.ac.uk/funding/guidance/preparing/Pages/lettersofsupport.aspx