

Quick Reference

Please note that you must read the full Call document for guidance before submitting your proposal

EPSRC: Interdisciplinary Research Collaboration (IRC) in Targeted Therapeutic Delivery Technologies

Call type: Invitation for invited full proposals

Full proposal closing date: 16.00, 13 March 2018

Funding Available: £10M is available to support one IRC.

How to apply: Two stage call with a mandatory outline and invited full proposal stage.

Assessment Process: Following the outline stage of the call, selected proposals have been invited to submit a full proposal; this will be assessed by postal peer review and then an expert interview panel.

Key Dates:

Activity	Date
Deadline for Outline Proposals	2 November 2017
Outline Expert Panel	12 December 2017
Deadline for Full Proposals	13 March 2018
Full Proposal Postal Peer Review	April – June 2018
Full Proposal Expert Interview Panel	Mid July 2018

Additional information: Only applicants who were successful at the outline stage can apply to this call. An institutional letter of support is required from the Pro-VC of each institution involved. Only one application form should be submitted per bid. This document focuses on the requirements of the second stage of the call, which is only open for invited applications post the outline panel.

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Engineering and Physical Sciences
Research Council

EPSRC: Interdisciplinary Research Collaboration (IRC) in Targeted Therapeutic Delivery Technologies

Call type: Invitation for invited full proposals

Closing date: 13th March

Related themes: All themes

Summary

Only applicants who were successful at the outline stage can apply to this call.

Proposals are invited for a large-scale interdisciplinary research collaboration (IRC) to address research challenges in targeted therapeutic delivery technologies (within Healthcare) through a critical mass approach.

A budget of **up to** £10 million is available to support one IRC for 5-7 years. This includes using 10% of the total grant value for drawing in expertise from outside the initial collaborations (both academic and other stakeholders).

An institution may only lead on one bid, but may be a partner in more than one.

Each bid is expected to consist of one lead institution, with a small number of collaborative institutions that bring together world leading research expertise in the disciplines required to deliver the breadth of research proposed. Single institution bids may be considered only where the applicant is able to clearly demonstrate all the relevant expertise is present within their institution. In addition, bids are expected to have a user-engagement strategy and the IRC will be expected to use the Partnership Resource funding (please see the Funding Available section for further information) to bring in new partners over the lifetime of the award.

Only one application form should be submitted per bid.

Please see <https://www.epsrc.ac.uk/files/funding/calls/2017/irccttd/> for full background and scope of call information. This document will only focus on the requirements for the invited proposals for the second stage of the call, post outline.

Funding available

A maximum of **£10 million** at 80% FEC is available for this call. EPSRC expects to fund one IRC. The IRC will last 5-7 years, and a midterm review will be

undertaken. EPSRC reserves the right to return or reject full proposals without reference to peer review if the total resource requested exceeds £10million.

Applicants are asked to ensure that 10% of their total grant value is dedicated Partnership Resource funding for engagement with partners outside the scope of the initial collaboration. Applicants should have a clear plan of the mechanisms they use to identify where the funding goes.

The Partnership Resource funding could be used for some or all of the following activities:

- Working with new academic partners;
- Pump priming activities;
- Workshop to encourage new collaborations;
- Match funding for projects with partners outside of EPSRC's remit, or those further down the translational pathway.

Core Activity of the Interdisciplinary Research Collaborations

Core activities should include:

- Transformative, challenge driven research in the engineering and physical sciences remit;
- Strong engagement with both industry and end-users (such as clinicians, charities etc.);
- Appropriate engagement across the breadth of research disciplines necessary to address the research challenge effectively;
- Public Engagement appropriate to research proposed;
- Engaging in networking and community building, as a leading player within EPSRC's Healthcare Technologies portfolio;
- Addressing the issue of long-term sustainability. The award will be for a period of 5 years, after which the IRC will be expected to sustain the momentum through alternative sources of funding;
- The IRC will be expected to actively develop and promote the careers of its team members, both named investigators and research assistants.

Equality, Diversity and Inclusion

The long term strength of the UK research base depends on harnessing all the available talent and the Research Councils have together developed the ambitious RCUK Equality, Diversity and Inclusion Action Plan

<http://www.rcuk.ac.uk/funding/diversity/>

In line with the RCUK Diversity Principles, EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice. We are committed to supporting the research community in the diverse ways a research career can be built with our investments. This includes career breaks, support for

people with caring responsibilities, flexible working and alternative working patterns. With this in mind, we welcome applications from academics who job share, have a part-time contract, need flexible working arrangements or those currently committed to other longer, large existing grants. Please see our Equality and Diversity webpages

<https://www.epsrc.ac.uk/funding/equalitydiversity/> for further information.

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 between £10,000 and £400,000 can be included on proposals if the equipment is essential to the proposed research and if no appropriate alternative provision can be accessed. Research organisations will be expected to make a contribution to the cost.

Additional justification of the requirement for individual items of equipment between £10,000 and £400,000, and details of the proposed contribution to the cost of the equipment, must be provided in the justification of resources. For any items or combined assets with a value above the OJEU (Official Journal of the European Communities) limit a two-page Equipment Business Case must also be included in the proposal documentation. Guidance on how to prepare an Equipment Business Case can be found on the following webpage:

<https://www.epsrc.ac.uk/research/facilities/equipment/process/researchgrants/>

Unlike standard grant assessments any requests for equipment in excess of £400k will not be assessed by the Strategic Equipment Panel and requests should be included within the call proposal itself. EPSRC will fund any such requests for equipment at 50% FEC up to the value of £400k and at up to 100% FEC for any outstanding value in excess of £400k. Host institutions must provide capital support of at least £200k and may choose to make a larger contribution as part of their wider support for the proposal.

Any items of equipment with a value in excess of £138,000 that are funded on research grants will need to be reported on annually as part of the University's Equipment Account Annual Reports. This will be communicated via an additional grant condition on the research grant.

For more information on equipment funding, please see:

<http://www.epsrc.ac.uk/research/facilities/equipment/>

Eligibility

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:

<https://www.epsrc.ac.uk/funding/howtoapply/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

Submitting a Full Proposal

Applicants must have been successful at the outline stage in order to submit an application to the full proposal stage.

Please note the EPSRC reserves the right to reject a full proposal where the resources are substantially different from those indicated in the outline proposal ($\pm 10\%$, unless written prior approval from EPSRC has been obtained).

The proposal should be submitted 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 '[IRC: Targeted Therapeutic Delivery 2018]' call.

Proposals must be submitted on a single Je-S proposal form

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. **The deadline for EPSRC receipt of your application is 16:00 on 13 March 2018.** 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>) which should be consulted when preparing all proposals.

Guidance on writing an application

Your proposal should consist of the application (Je-S) form, a 12-page case for support, 3-page pathway to impact plan, an optional 2-page infrastructure strategy plan, a 2-page CV of the proposed Director, a 2-page justification of resources, a 2-page work-plan, project partners letters of support and a host organisation statement from each of the HEIs involved in the bid.

1. Case for Support (12 pages)

The 12-page case for support should include the following headings:

Track Record

- Provide evidence the research team has the capability and capacity to address the identified research needs.

Vision and Rationale for the IRC

- Explain succinctly the overall vision and rationale for the EPSRC Healthcare Technologies IRC;
- Explain how this vision will achieve the aims of the EPSRC Healthcare Technologies IRC as detailed on pages 5 and 6 of this document;
- Describe how the proposed EPSRC Healthcare Technologies IRC complements not only other activities within the universities, but also those within the existing UK and international landscape;

National Importance

- A section in the case for support should describe the national importance of the research programme and how it aligns to the Healthcare Technologies Theme strategy and portfolio.

Leadership Quality of the Director

- In addition to the information provided in the CV, please provide evidence that the Director has the necessary skills and competencies to drive the vision of the EPSRC Healthcare Technologies IRC.

Health Impact

- Applicants should demonstrate how a consideration of approaches to maximise impact will be embedded in their proposed programme of work. Clearly articulate the importance of the proposed work and how the technologies under development will offer significant added value over current or alternative solutions.

Proposed programme

- Describe briefly the programme of research, networking and knowledge exchange activities the IRC would engage in and explain how these would advance targeted therapeutic delivery technologies in the UK;
- Provide an overview of how the IRC will address the key research challenges in targeted therapeutic delivery technologies, and how the collaborators provide complementary expertise to realise these challenges;
- Scientific details should be provided describing the methodology for the initial projects and include sufficient detail to allow peer review to assess the quality and ambition of the research;
- Describe how the IRC will progress the programme of research.

Investigator and PDRA Development

- Describe how the critical mass of an IRC will be used to develop the careers of PDRAs employed on the collaboration, along with any PhD students aligned to the IRC;
- Consideration should be given to:
 - Development of PDRA and PhD cohorts
 - Peer support networks

- Enabling PDRAs to prepare themselves for a range of future careers e.g. innovation training, science communication, independent research careers
- Discipline hopping for PDRAs and investigators
- Building networks

Partnership Resource

- 10% of the total grant value must be dedicated as Partnership Resource funding;
- An overview of what the partnership resource funding will be used for, including any immediate plans and future ideas for the funding should be included.

User Engagement

- Briefly explain what form the engagement will take;
- Describe briefly what steps will be taken to ensure that outputs of the research are made available to (and adopted by) potential users;
- Identify suitable metrics for determining the success of the strategy in delivering value to users.

Management

- Explain how the centre will be managed and the management structures that will be required;
- Brief details about the advice streams that will be put in place to provide guidance for the strategic development of the IRC.

2. A Pathways to Impact plan (3 pages)

- A 3 page document in which applicants should present a coherent strategy for accelerating and maximising the impact of the proposed research, with a particular focus on the activities that will be undertaken to address barriers that might prevent impact(s) from arising;
- In contrast to the Case for Support this document should focus on the specific methodologies and strategies that will be employed to enhance the impact of the proposal and to outline the resources that will be requested (or otherwise acquired) in order to achieve this;
- Applicants should demonstrate an understanding of the future development pathway for their proposed research and show that they have considered the likely next steps for the outcomes of their research. They should consider how they will obtain any data or evidence they will need, or other appropriate measures they will take, to sufficiently de-risk the technology to the point that it will be a suitable prospect for support from translational funding entities.

3. CV of the Director (2 pages)

- A 2-page document which demonstrates that the Director has an appropriate track record in managing large complex research grants and of collaborating with other institutions and users;
- The CV should be uploaded to Je-S as "CV attachment".

4. Justification of Resources (2 pages)

- This is a 2-page document which should cover two main aspects:
 - Justification of the resources requested for the research programme and Pathways to Impact;
 - Justification for what the partnership resource funding will be used for;
 - The Justification for Resources should be uploaded to Je-S as per standard research grant applications.

5. Work plan (2 pages)

- A full detailed 5-7 year plan is not required as it is accepted that a detailed research plan for the latter years is not known and will depend upon research results from not only the IRC, but from other research groups nationally and internationally;
- It is expected however, that sufficient detail for the initial two years is given in order for peer review to have confidence that there is a structured approach. A review early into the second year will ensure that the programme for the latter part of the funding period is appropriate;
- An indication of milestones and decision points for the final 3 years should be outlined to demonstrate the shaping of the research programme;
- The work plan should be uploaded to Je-S as per standard research grant applications.

6. Host Organisation Statements

- The letters should be uploaded to Je-S as "Host Organisation Statement";
- Letters must be on headed paper, dated and signed within 6 months of the proposal submission date;
- Letters are required from all the universities involved in the bid and should be signed by the Pro-VC for Research, or equivalent. They should articulate:
 - How the IRC will align with the University's research strategy;
 - What commitment, direct or in-kind, the university will be contributing;
 - What support will be given to the IRC Director?

7. Project Partners Letters of Support

- Letters of support are required from all project partners (this includes industry, clinical and other stakeholders) involved in the bid and listed on the Je-S form. They should:
 - Confirm their rationale for support for the IRC, and detail their involvement with the (relevant) institution(s) to date;
 - Outline their involvement during the lifetime of the IRC; - Confirm their contributions of cash and in-kind support;
 - Indicate any willingness to increase this amount during the lifetime of the grant.
- Letters must be on headed paper, dated and signed within 6 months of the proposal submission date;
- Letters of support should be uploaded to Je-S as "Project Partner Letter of Support".

8. Infrastructure Strategy Plan (2 pages)

- This is a 2-page document and only needs to be included if resources for equipment over £10K are needed;
- Articulate your infrastructure strategy. This should include:
 - Description, Cost, Support and Contribution: A list in a table of all items of equipment requested, indicating the level of contribution from the universities and project partners and how much you would be requesting from EPSRC;
 - Strategic Case: An explanation of why the requested equipment is essential to achieve the vision of the EPSRC Centre;
 - Ensuring Maximum Value: A description of how this complements and adds value to the equipment that already exists within the proposed IRC and how this fits into the national provision;
 - Usage: Information on how the IRC would maximise the usage of the applied-for equipment and plans for the management of the equipment and access to it;
 - Support: An explanation of the strategy for long-term sustainability of the equipment after the end of the grant;
 - Alternatives: Information on alternatives that could be used to support the research programme if the equipment was not fully supported.
 - The Infrastructure Strategy Plan should be uploaded to Je-S as an "Additional Document".

Applicants should use the Ethical Information section on the Je-S form to demonstrate to peer reviewers that they have fully considered any ethical issues concerning the material they intend to use, the nature and choice, current public perceptions and attitudes towards the subject matter or research area. EPSRC will not fund a project if it believes that there are ethical concerns that have been

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overlooked or not appropriately accounted for. All relevant parts of the Ethical Information section must be completed. If the research will involve human participation or the use of animals covered by the Animals (Scientific Procedures) Act 1986 it is recommended that applicants pay particular attention to the guidance highlighted below. EPSRC reserves the right to reject applications prior to peer review if the Ethical Information sections are not completed correctly.

Further guidance on completing the Je-S form can be found at <https://je-s.rcuk.ac.uk/Handbook/pages/GuidanceonCompletingaStandardG/EthicalInformation.htm>. Other relevant guidance includes: EPSRC's policy on animal use in research (<https://www.epsrc.ac.uk/about/standards/animalresearchpolicy/>) and the Responsible Innovation Framework (<https://www.epsrc.ac.uk/research/framework/>).

Please note that on submission to EPSRC **all** non-PDF documents uploaded onto Je-S are converted to PDF, the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document.

In addition, where non-standard fonts are present, and even though the converted PDF document may look unaffected in the Je-S System, when it is imported into the Research Councils Grants System some information may be removed. We therefore recommend that where a document contains any non-standard fonts (scientific notation, diagrams etc.), the document is converted to PDF prior to attaching it to the proposal.

For advice on writing proposals see:

<https://www.epsrc.ac.uk/funding/howtoapply/preparing/>

Full Assessment Process

Full proposals will be sent to independent peer reviewers, including at least one nominated by the applicant. The expert peer reviewers' role will primarily be to comment on the quality of the proposed research. Those with sufficiently favourable reviewers' comments will be invited to respond to these comments and then rank-ordered against each other via an interview stage.

There will not be formal presentations by the applicant as part of the interview. The PI and up to two others identified on the proposal will be allowed to attend the interview and it is expected that at least one of the attendees will be a user (for example, from industry or clinic). It will be mandatory, if the PI is not the Director, that the Director attends the interview. The interview panel will rank

the proposal against the full assessment criteria, using reviewers' comments, the PI response and overall performance at interview.

Unlike standard grant assessments any requests for equipment in excess of £400k will not be assessed by the Strategic Equipment Panel and requests should be included within the call proposal itself (see Equipment section)

Full Assessment Criteria

The full assessment criteria are given below:

- **Quality of the IRC research programme;**
 - The IRC should be of international standing and demonstrate an established record of first-class research, collaboration and innovation;
 - The IRC should present a strong, multidisciplinary partnership of researchers with an international profile in the field;
 - The research vision, ambition, management and plans for longer term sustainability should be clearly articulated;
 - Extent of alignment to participating universities' strategies and any additional support and/or resources offered by the universities that would add value to EPSRC funding;
 - Appropriateness of proposed mechanism and methodology should be demonstrated.
- **National Importance of the IRC Targeted Therapeutic Delivery research programme**
 - The UK need for research activity in the area of the IRC;
 - Evidence of co-creation with end users;
 - Potential for transformative impact on the research community, society and the UK economy;
 - Alignment with EPSRC Healthcare Technologies strategy.
- **Applicants**
 - The principal investigator of the IRC is expected to take on the role of champion for Targeted Therapeutic Delivery. They should demonstrate the experience and ability to run a large multi-institution collaboration, and also provide evidence that they are able to act effectively as an advocate for the broad field of targeted therapeutic research;
 - The suitability of the proposed research team, including the balance of expertise and track record, and the capabilities of the multi-disciplinary research team to deliver the aims and objectives of the IRC.
- **Pathway to impact**

- The proposal should evidence:
 - User-engagement in research programme development;
 - Exploitation strategy and pathway to impact activities, including networking and outreach to other research and user groups and the planned use of partnership resource funding, and public engagement;
- **Resource and Management**
 - The following will be assessed:
 - Robust management and governance plans, including the level of business/user direction and support;
 - Appropriate resources requested and justified;
 - If appropriate, the business case for the equipment strategy.

Decisions made by EPSRC will be final.

Moving forward

Submissions to this call will count towards the Repeatedly Unsuccessful Applicants Policy. Further information about the policy can be found at: <https://www.epsrc.ac.uk/funding/howtoapply/basics/resubpol/rua/>

Guidance for reviewers

Postal peer reviewers will be directed to this call document when contacted to review the proposals.

Interview panels will also follow the assessment criteria in this call document.

Information about the EPSRC peer review process and guidance for reviewers can be found at:

<https://www.epsrc.ac.uk/funding/assessmentprocess/prprinciples/>

Additional grant conditions

In addition to the standard terms and conditions for grants, there will be specific grant conditions upon successful proposals, including:

- EPSRC expectations for the Director of the IRC;
- The need for EPSRC to agree the management structure, including terms of reference and membership;
- Mandatory reporting to EPSRC and EPSRC involvement throughout the grant;
- The need for the IRC to carry out a review of its activities at around 18-24 months;
- The need for a collaborative agreement between institutions;
- The need for collaborative agreements to be in place with any project partner before the specific collaboration begins;
- Within the first 6 months of the grant a personalised career plan for each early career researcher is expected;
- The abidance of publicity/branding guidelines, which include that the name of the EPSRC IRC shall be "EPSRC IRC in XXXXX";
- That 10% of the total value of the grant is dedicated partnership resource funding and must be used as such;
- Any change in using the capital expenditure from that detailed on the Je-S form will need EPSRC prior approval and, since equipment funds are ring-fenced, no transfer of funds out of that heading is permitted.

Key dates

Activity	Date
Deadline for Outline Proposals	2 November 2017
Outline Expert Panel	12 December
Deadline for Full Proposals	13 March 2018
Full Proposal Postal Peer Review	April – June 2018
Full Proposal Expert Interview Panel	Mid July 2018

*EPSRC aims to adhere to the key dates as published, however there may be exceptions where the interview meeting may have to change due to panel member availability.

Contacts

Any enquiries related to this Call should be directed to:

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Dr Iain Larmour
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Healthcare Technologies Theme
Healthcare@epsrc.ac.uk

Any queries regarding the submission of proposals through Je-S should be directed to:

The Je-S helpdesk
Email: JeSHelp@rcuk.ac.uk
Phone: 01793 444 164

Change log

Name	Date	Version	Change
Stephanie Newland	21/11/17	1	N/A

Name	Date	Version	Change

Appendices

Je-S attachments Check List

Standard:

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support	12 pages	M	Comprising of track record, vision and rationale for the IRC, national importance, leadership quality of the director, partnership resource, user engagement strategy, initial research projects, management
Pathways to Impact	3 pages	M	
Work Plan	2 page	M	
Justification for Resources	2 pages	M	
CVs	2 pages each	M	For the director, named and visiting researchers, and researcher co-investigators only.
Project Partner Letters of Support	No page limits	As Required by EPSRC	Must be included from all named project partners. Must be on headed paper, and be signed and dated within six months of the proposal submission date.
Host Organisation Statement	No page limit	M	Letters are required from all universities involved in the bid and should be signed by the Pro-VC for research.
Letters of Support	No page limits	As Required by EPSRC	In exceptional circumstances a maximum of three letters can be submitted.

Equipment Quotes	No page limits	As required by EPSRC	
Equipment Business Case	2 pages each	As required by EPSRC	Required for any items or combined assets with a value above the OJEU limit.
Proposal Cover Letter	No page limit	Optional	The cover letter can be used to highlight any important information to EPSRC. This attachment type is not seen by reviewers or panel members.

Please ensure you adhere to the above attachment requirements when submitting your proposal. Any missing, over length or unnecessary attachments may result in your proposal being rejected.