

Medical Technologies Proof of Concept Call

1. Introduction

An ageing population coupled with the inability to work due to disability or chronic illness is putting considerable strain on NHS and welfare budgets respectively. Government statistics at February 2015 revealed that a total of 2.53 million people had claimed incapacity benefits¹ and in that period 624,000 were for musculoskeletal (MSK) conditions², the cost of which for the period of 2014-2015 was forecasted at £13.4 billion³. It is estimated that 30.6 million working days are lost on an annual basis due to sickness absence caused by a musculoskeletal conditions⁴.

At £5 billion, musculoskeletal conditions account for the fourth largest NHS budget⁵; however these conditions may have subsequent health effects such as: depression, post-operative complications etc thus placing further burden on healthcare systems.

Reports by the Milken Institute and the Work foundation^{6, 7} highlight the need and importance of medical technologies to address the challenges of early and preventative interventions, disease management and treatments/cure.

Arthritis Research UK is seeking to support innovation and translation in medical technologies to address MSK conditions, with particular emphasis on developments with clearly defined commercialisation routes. This is the second translational medical technologies call in partnership with the Medical Technologies Innovation Knowledge Centre (IKC).

2. Funding scope

In this new initiative we seek to fund projects that develop:

- Medical devices
- Orthotics
- Implantable therapeutic delivery
- Imaging.

Funding is intended to support Proof of Concept projects to advance technologies through TRLs 3 and 4, leading to investment and product development by industry at TRL 5 and beyond, thereby reducing the risk for future investment or license to a third party. Grants of up to £100,000 will be awarded to successful applicants who can demonstrate a clear commercial solution to an MSK clinical need. This call will not fund basic research projects. It is expected that projects will have been developed to a stage where further validation of the technical, market or commercial concept is required to attract further commercial investment. This funding aims to enable technologies to show proof of concept and reach technology readiness level (TRL) 5 by the end of the project funding.

Successful project proposals will be able to demonstrate from the outset that they have a well-defined and achievable end point with a clear commercial objective and show how they will

identify, address and remove technical uncertainty and risk. Industry involvement is strongly encouraged.

A total budget of £500k has been allocated to develop exciting innovations from research findings to a commercially viable product and or service to help improve the lives of those living with MSK conditions.

Access to the grant funding is via a two stage process and applications should only be made on approved Arthritis Research UK application forms. There is no requirement that projects have previously received Arthritis Research UK funding. This call is seeking high quality well defined proposals that require demonstrating proof of concept with the aim of developing a commercially viable product. Proposals demonstrating positive industry support or collaboration with well-defined clinical needs and clinical engagement are strongly encouraged.

3. Background

About Arthritis Research UK

Arthritis Research UK is the leading authority on arthritis in the UK, conducting scientific and medical research into all types of arthritis and related musculoskeletal conditions. It is the UK's fourth largest medical research charity and the only charity solely committed to funding high quality research into the cause, treatment and cure of arthritis.

About Medical Technologies IKC

Based at the University of Leeds in the UK, the Medical Technologies IKC is an Innovation and Knowledge Centre funded in its second phase by the Engineering and Physical Science Research Council.

Medical Technologies IKC delivers innovation right across the medical technology spectrum - from implantable devices through to regenerative therapies, with a specific focus on regenerative devices. The centre focuses on technologies that have viable and feasible routes to commercialisation and supports these through an approach that reduces late failure and cost.

4. Application process

How to apply

Arthritis Research UK normal eligibility rules apply. The application will be led by a single university, hospital or recognised academic research institute based in the UK. Please note applicants are not restricted to current Arthritis Research UK grant holders.

The application procedure is a two stage process. The first stage will require applicants to submit a completed Expression of Interest form. These submissions will be reviewed by an expert panel and successful applicants will be invited to submit a full application proposal.

Expression of Interest applications should be submitted by **5pm 13th June 2016** and sent to **medtech@leeds.ac.uk**.

If you have any questions regarding the application process, please contact either **Sarah Odoi** (s.odoi@arthritisresearchuk.org) or **Graeme Howling** (g.howling@leeds.ac.uk).

Full application: guidance on finances

Grants of up to **£100,000** will be awarded. Requested costs must be fully justified and appropriate for the project.

Salaries

Requested salary costs should be based on a recognised pay model or the host institution's local salary scale, including London weighting if appropriate. We must be advised of the pay model used and, where a local pay model is to be applied, a copy of the appropriate scale must be sent with the application. Annual increments must be included which should be based on the host institution's own salary scale, including London weighting if appropriate.

London Weighting allowance will be payable at the rate appropriate to each host institution. Inflationary salary increases for funding in future years must be included in the costs requested. A compound allowance should be factored into the costing for this purpose. The percentage used to calculate the compound inflationary allowance must be the same as the most recent pay award agreed by the institution for the grade on which the individual is to be employed.

Any applicant on a grant proposal wishing to apply for his/her own salary must submit the application jointly with a tenured senior member (preferably the head) of the department in which he/she proposes to work.

Consumables

List all research consumables requested and provide a full justification for each.

Equipment

Applications for items of equipment greater than £5000 must include a written estimate.

Animals

Arthritis Research UK are committed to the principles of reduction, replacement and refinement in animal studies. State the species and number of animals to be used and any costs incurred. A full justification for their use must be provided in 'project details'.

Full Economic Costing

In line with other UK medical research charities, Arthritis Research UK does not provide funds for administrative costs or 'overheads'.

Eligibility criteria

This call is open to university, hospital or recognised academic research institute based in the UK and is not restricted to current Arthritis Research UK grant holders.

This call is not directed to industry partners. However, bids from University Partners which demonstrate evidence of an industry-defined market need and projects with industry partner contribution are encouraged.

Projects must be able to demonstrate:

1. Fit with the funding scope outlined above.
2. Clear achievable project outputs with a well-defined product concept that has defined commercial application.
3. Clear demonstration of how technical uncertainty and risk will be identified, addressed and removed.
4. The technology under development will have attained Technology Readiness Level (TRL) 5 by the end of the project funding.
5. Clear benefit in harnessing the research and development strengths of the University Partner(s) and, where possible, partnership with NHS hospital trusts.
6. Leadership by an academic with a good track record in the selected technology.

7. Direct industrial contribution and/or company interest.
8. Clinical need and/or benefit.
9. Confidence that the Translational Medical Technologies Development funding can add value.

Management of the project

Successful project(s) will be managed by Arthritis Research UK and Medical Technologies IKC to ensure successful project delivery. Project teams will be expected to provide monthly project update reports to ensure milestone and deliverables and project expenditure remain on track. There will also be a requirement for quarterly project meetings with Arthritis Research UK and Medical Technologies IKC.

Call Timeline

Call Launches	12th May 2016
Expression of interest proposals submission deadline	5pm 13 th June 2016
EOI Feedback and invitations to full application	24 th June 2016
Closing date for full applications	29 th July 2016

Contacts

If you have any further question please contact:

Arthritis Research UK

Sarah Odoi

Research Translation Manager

s.odoi@arthritisresearchuk.org

Medical Technologies IKC

Graeme Howling

Technology Innovation Manager

g.howling@leeds.ac.uk

References:

1. Quarterly Benefits Summary - Great Britain Statistics to February 2015, DWP and ONS, 12th August 2015
2. Employment and Support Allowance: outcomes of work capability assessments, Great Britain, DWP 10th December 2015
3. Welfare trends report, Office for Budget Responsibility, October 2014
4. Office for National Statistics (2014), Full report: Sickness absence in the labour market, February 2014
5. Department of Health (2011), England level programme budgeting data 2010-11
6. HEALTHY SAVINGS, Medical Technology and the Economic Burden of Disease. A Chatterjee *et al* July 2014
7. Adding Value: The Economic and Societal Benefits of Medical Technology. S Bevan *at al*, 2011