

Challenge Call - Stacking the Odds towards a Cure

Call for Applications

Summary

On 1 November 2017 Arthritis Research UK and Arthritis Care joined together to fulfil their shared ambition of supporting people with arthritis to live full and active lives. Together, we can expand our research programme, develop treatments and aspire to a cure for people living with arthritis. Arthritis Research UK has funded over £250 million of musculoskeletal research over the last decade, supporting excellent teams and leaders across the UK. Our new phase of investment represents our commitment to push new boundaries of discovery and translational research. Here, in our second round of the Stacking the Odds towards a Cure Challenge, we invite applications for research proposals that focus on our [purpose to develop a cure for arthritis](#).

Through this call, we seek to fund ambitious research that will move us further and faster on the pathway to developing a cure and more effective treatments for people with arthritis. We are inviting applications which span the translational pathway from discovery and pre-clinical research, through to early stage trials, first-in-man studies and larger scale clinical trials. Applications are encouraged in areas which address significant unmet need defined in priorities in musculoskeletal disease (signposted below). Key will be the **level of ambition** expressed; applicants must clearly demonstrate how their proposal will make a step-change on the journey towards a cure and more effective treatments.

Importantly, this second round seeks applications to our [Disease](#) and [Treatment](#) subcommittees. We expect to fund a range of award sizes across discovery, experimental medicine and clinical research. Awards are available for up to 60 months, within a funding range of £50,000-£1,500,000. We would encourage applicants to give consideration as to how to strategically utilise the full range of funding available. While this call is open to all applicants, we remain keen to encourage new investigators to apply for our funding.

Longer term, larger value clinical trials are eligible for submission to the Treatment subcommittee within this call. Applications for large scale awards of a programmatic nature may be submitted to either subcommittee, depending on the focus of the proposal being more pre-clinical (*Disease subcommittee*) versus clinical research (*Treatment Subcommittee*). Such bids should be led by established groups with substantial research track records and demonstrate the potential to build on and undertake high quality, internationally competitive research.

Outline applications are invited by the deadline of 8 August 2018. If chosen to progress, full applications will be required to be submitted by 9 January 2019. Full applications will be

reviewed by the Disease and Treatment subcommittees in May 2019, with outcomes shared early June 2019.

Background

An estimated 17.8 million people live with a musculoskeletal condition in the UK, the pain and disability caused by these conditions results in a substantial loss in quality of life¹. Our vision is a future free from arthritis. To achieve this, we need to be ambitious and aim for a cure and more effective treatments.

The charity continues to gather insight from people with arthritis, our patient insight has shown us that it is difficult to find a universal definition for a cure. A cure means different things to different people, and our insight tells us that it is important to achieve an impact on a given condition that is meaningful for the individual patient.

In April 2018 we brought together Patient Insight Partners, clinical and academic experts and representatives from other UK funding organisations to explore the nature of a cure within the context of different relevant musculoskeletal conditions and patients' lived experience. Attendees were asked to consider and build on existing research prioritisation exercises including; the European League Against Rheumatism [RheumaMap](#), [previous Arthritis Research UK Clinical Study Group priorities](#) and [James Lind Priority Setting Partnerships](#)². The report of this workshop can be found [here](#).

Although the term 'cure', and as such the challenge call, are open to interpretation, it remains clear is that we must be aspirational in our goal of moving towards a cure and that the best way to achieve this is through brave and ambitious research. Therefore, we ask applicants to give due consideration when presenting how their proposals will move us significantly and meaningfully towards this aim; demonstrably engaging and considering the perspectives of people with arthritis as they do so.

Scope

Through applications to either our [Disease](#) or [Treatment](#) subcommittees, we expect to fund a range of award sizes across discovery, experimental medicine and clinical research. By means of this call, we seek to fund ambitious research that will move us further and faster along the translational pathway to developing a cure and more effective treatments. Recognising the journey to a cure may be quite different for each condition that we fund, it will be important in the application that you define the significant unmet need you are responding to, how this unmet need was identified and show how your proposed research will move us significantly towards impacting the condition and making a difference to patients. In the course of the workshop held to support this call, experts proposed that the term cure could include;

- 'Drug-free wellness' – but we know remission without medication is difficult to achieve in many musculoskeletal conditions.

Therefore, other interpretations include;

- a situation of control on treatment - without pain or fatigue
- a metaphor for meaningful clinical impact
- achieving a 'patient acceptable state', i.e., a substantial and persisting clinical improvement in their condition



- secondary prevention; i.e., stopping or reducing progression, or stopping or reducing persistence, of musculoskeletal conditions

We use the term 'arthritis' in its broadest possible sense, to include all associated musculoskeletal conditions affecting joints, bones and muscles (including back pain), along with autoimmune diseases such as lupus and other rarer forms of arthritis. Further information on conditions that are within scope can be found at [here](#).

Proposals could include;

- cross-musculoskeletal disease applications
- cross-(non-musculoskeletal) disease research that informs our understanding of musculoskeletal conditions
- single disease focused studies
- fundamental pathways of disease pathology, molecular and cellular mechanisms
- applications that consider the full life course
- forwards and reverse translational studies utilising knowledge gained in *in vitro* and *in vivo* models of disease and human subjects.

Applicants are reminded and encouraged to use existing research prioritisation exercises to inform the scope of their applications (including but not limited to [RheumaMap](#), [previous Arthritis Research UK Clinical Study Group priorities](#) and [James Lind Priority Setting Partnerships](#)).

Although proposals may be anywhere on the translational pathways of research (from discovery, experimental medicine and pre-clinical research, through to early stage trials, first-in-man studies and larger scale clinical studies), **applicants should state where their hypothesis sits on the pathway and its anticipated trajectory within the timescale of the grant.**

We recognise that to stack the odds toward finding a cure and effective treatments, there is a compelling need to fund higher risk research with the potential to return greater patient impact. We additionally hope to see collaborative configurations bringing existing groups and different disciplines together and applications from researchers new to the field of musculoskeletal diseases.

Proposals aimed at health services research are ineligible and should be directed to the [Pushing Frontiers in Health Research call](#).

Proposals seeking a cure to painful conditions, such as fibromyalgia, back pain or complex regional pain syndrome will be accepted to this call. Proposals focussed on mechanisms of musculoskeletal pain, which are not directly aimed at halting disease progression or persistence, will not be accepted in this call and should continue to be submitted to our Pain Challenge (opening next in December 2018).

Proposals that include observational data and sample collection should reference [our policy](#) before starting an application.

Please contact the charity's research team for further advice at research@arthritisresearchuk.org if you are unsure which call to submit to.

Above all, we are looking for a level of ambition with a clearly articulated context to the condition being studied, supported by an accessible and well written justification as to how the work will progress the field of study towards a cure.



Application and assessment process

Since applications are invited to our [Disease](#) and [Treatment](#) subcommittees, applicants should review the remit of each of these committees prior to deciding which committee to submit their application³. Applications which span the domains of more than one subcommittee should be submitted to the subcommittee which best fits the predominant focus of the research. Please contact the Research team for further advice on research@arthritisresearchuk.org if you are unsure which subcommittee to submit to.

Who can apply and what you can apply for

Awards are available for up to 60 months, within the region of £50,000 to £1,500,000, and we are keen to fund across this full range. We would therefore encourage applicants to consider this when formulating their proposals for submission and how best to use the appropriate level of funding for the scale of research being undertaken and the question being asked.

Applications for small to medium awards and trials should seek to answer a single question, or a small group of related objectives. The flexible funding range has been designed to enable applicants to apply for the smaller pump priming funds, that could generate proof of concept data to support future proposals to much larger programmatic levels of funding. In the course of previous funding rounds, the charity's subcommittees have observed that some larger studies have been presented lacking appropriate pilot or preliminary data. We would encourage applicants to consider carefully the scale of funding being applied for, and whether appropriate early stage data has been included or designed into the proposal by means of a milestone-approach.

More substantial funding is available for trials and significant bodies of research (programmes), which seek to answer an interrelated set of questions on a broader front than would be feasible in a series of smaller awards. Applications should pose innovative and novel approaches to meet the challenge of the initiative, providing a clear pathway to success. Applications for larger/long-term awards should be led by established groups, able to demonstrate highly internationally competitive research track records. Applications can include lead applicants and/or co-applicants with expertise relevant to this initiative, but who do not have a track record of musculoskeletal research and we expect applications to take a collaborative and multidisciplinary approach to answering research questions.

Costs for salaries, expenses, animals (where relevant) and small items of essential equipment can be requested. For further details on what you can apply for see the associated [guidance document](#).

The charity has a strong ambition to receive applications from both new as well as well as more established researchers. However, at least one of the applicants named on the proposal must have a tenured position within a UK university, hospital or recognised academic research institute. We welcome applications from early career investigators and trialists however we won't accept fellowship applications as part of this call.

Collaborations with international and industrial partners are encouraged and additional information about industrial collaborations can be found on our [website](#).

Acknowledging the complexity of running a clinical trial/study and the input required from a multidisciplinary team with relevant expertise, it is expected that every study, whilst remaining under the scientific control of the Chief Investigator (CI), will be managed by an UKCRC-registered Clinical Trial Unit (CTU) or affiliated personnel <http://www.ukcrc-ctu.org.uk/>, or be engaged in a mentorship arrangement. This applies to non-Clinical Trial



of an Investigational Medicinal Product (CTIMP) as well as CTIMP studies. CTUs should be contacted at least six months prior to submission and shown to have had an active collaborative involvement in the study design.

Further information and general guidance for applicants can be found on the 'Stacking the odds towards a cure' [webpage](#). Please read the associated guidance documentation. For any pre-clinical studies using animal models, applicants should additionally read our [policy on animal research](#).

Application stages

Disease and Treatment Subcommittees are receiving applications to this call, applicants should consider to which subcommittee they wish to apply before starting an application. Please contact the charity's research office for advice if necessary at research@arthritisresearchuk.org

There is a **two-stage** application process for all applications, regardless of funding level. At the first stage applicants are invited to submit an outline application which provides an overview of the project and funding requested. This should be submitted through [Grant Tracker](#) where the outline form is available, in versions specific to the chosen subcommittee. Applicants should select the appropriate outline form for the subcommittee they wish to submit to. The deadline for the receipt of outline applications is **16:00 on Wednesday 8 August 2018**. Submissions after 16:00 will not be accepted.

Applicants successful at the outline stage will be invited to submit a full application through [Grant Tracker](#) which will request more detailed information on the proposal. Where possible feedback will be provided, allowing an opportunity for applicants to adjust their submissions for the full application stage in line with panel comments.

Only applicants approved through the outline stage will be eligible to apply for a full application. The deadline for the receipt of full applications is **16:00 on Wednesday 9 January 2019**. Submissions after 16:00 will not be accepted.

Use of language

Assessment by people with arthritis forms a key part of the charity's review process and is integrated into all assessment stages. As such, applicants should carefully read the application form and guidance documentation to ensure that the most appropriate and accessible language is being used in each section of the form. Please use inclusive language where possible to aid review by all experts, including our Patient Insight Partners. There is an expectation that applicants demonstrate how they have involved people with arthritis in the development of the outlined work as well as how they plan to collaborate with them in the proposed research. Guidance for this can be sought from our Research Involvement team (patientinsight@arthritisresearchuk.org).

How will outline applications be assessed?

Outline applications will be assessed by our Disease or Treatment Subcommittees, supplemented with additional international and national experts where required. Where applications include research design relevant to both subcommittees, cross-committee input will be given to its assessment.

Outline applications will be assessed on:



- **Relevance** to the scope of the call which is to fund ambitious research that will move us further and faster on the pathway to developing a cure and more effective treatments for people with arthritis
- **Importance**, meets an unmet clinical need and is likely to lead to significant novel understanding
- Significance of the research outputs on the route to **patient benefit and impact***
- **Involvement of people with arthritis**
- Quality and appropriateness of the **research design and methodology**
- **Feasibility and ability to deliver**
- **Value for money**

** We do not necessarily expect immediate or near-term benefit for some types of research, but applicants should carefully consider how research outputs may be translated to future patient benefit.*

How will full applications be assessed?

All full applications will undergo external expert peer review. Following peer review, applications will undergo a triage stage based on reviewer feedback prior to the final committee meeting. Those applicants who are successful at this triage stage will be given a chance to respond to reviewer's comments before final assessment by the subcommittees. The criteria used to assess full applications includes:

- **Relevance** to the scope of the call which is to fund ambitious research that will move us further and faster on the pathway to developing a cure and more effective treatments for people with arthritis
- Potential for long term **impact on quality of life for people with arthritis**
- **Involvement of people with arthritis** in the proposed research
- Quality of the **research design and methodology**
- **Strength and make-up of the research team**, including multidisciplinary collaboration and proposed management arrangements
- **Applicants' track record** (or applicants' potential for smaller project awards) and ability to deliver the proposed research
- **Applicants' ability to deliver**, appropriate experience and facilities to conduct the proposed research
- **Feasibility**, the potential to deliver the stated outcomes within the timescales and budget
- **Value for money**

Applications will be assessed relative to the value of the award being requested and potential future impact. We will fund a range of award sizes and durations from the available budget for this initiative.

Award management

It is expected that all research awards will report annually via Researchfish, clinical projects will also report 6-monthly to the Progress Review Committee. During the course of the award applicants may be invited to meetings with Arthritis Research UK to discuss their research findings and/or asked to contribute written summaries.



Timelines

Deadline for outline applications	Wednesday 8 August 2018
Notification and Feedback	Late October 2018
Full Application deadline	Wednesday 9 January 2019
Notification and Feedback	June 2019

Contact details

For enquiries, please contact research@arthritisresearchuk.org

- Applications relating to the disease subcommittee (discovery and pre-clinical research) should be directed towards Dr Elizabeth Waterman.
- Applications relating to the treatment subcommittee (clinical and experimental research) should be directed towards Dr Keith Pugh.

References

1. [Arthritis Research UK's State of MSK Health Data 2018](#) - an Arthritis Research UK report which highlights the impact of seven of the most prevalent musculoskeletal conditions in the UK.

2. **MSK research prioritisation exercises:**

- [RheumaMap](#) - The European League against Rheumatism (EULAR)'s research roadmap.
- [Previous Arthritis Research UK Clinical Study Group priorities](#) - Arthritis Research UK supported seven Clinical Study Groups (CSG) to generate nationally agreed research strategies and priority questions for clinical studies and trials. We have started to evolve the CSGs into four new Research Advisory Groups that work more closely with all three subcommittees, Disease, Treatment and Health.
- [James Lind Priority Setting Partnerships](#) – an organisation which brings together clinicians, patients and carers, in Priority Setting Partnerships (PSP), to identify and prioritise the unanswered questions about treatments.

3. **Scope of Arthritis Research UK subcommittees:**

The disease subcommittee considers:

- Discovery research which provides knowledge and understanding of normal and diseased systems that underpin the cause of musculoskeletal disease and management of disease risk, prevention, diagnosis, treatment and cure.
- Pre-clinical experimental research which characterises and progresses early development of therapeutic and prophylactic interventions.

The treatment subcommittee considers:

- Clinical and experimental research to assess whether therapeutic and prophylactic interventions work and are safe under ideal or selected conditions by development and testing of interventions to manage musculoskeletal disease risk, prevention, diagnosis, treatment and cure.

