

Pain challenge call – assessment May 2018



Call for Applications

Summary

Arthritis Research UK exists to prevent the onset of arthritis, develop a cure for arthritis and transform the lives of those with arthritis. Our five-year strategic focus to 2020 is to transform the quality of life for people with arthritis. The charity has funded more than £250million of musculoskeletal research over the last decade, supporting excellent teams and leaders across the UK, and our new phase of investment represents our commitment to push the boundaries of discovery and translational research. We are challenging the research community to help us achieve this and invite applications for research proposals focussed upon our ambition to resolve the issue of pain for people with arthritis.

Through this call, we seek to fund ambitious and innovative research that will have a significant impact on tackling the pain of musculoskeletal diseases, building upon and expanding previous work in the field, as well as inspiring new approaches. Funded research resulting from the call will be expected to make a significant leap forward in our understanding of musculoskeletal pain, how it is managed and how it may be prevented.

Through this call we will expect to fund a range of award sizes across discovery, clinical and applied health research, including trials. Applications will be assessed by each of our [Disease](#), [Treatment](#) and [Health](#) subcommittees. Awards are available for up to 60 months, within a funding range of £50,000-£1,500,000. We are keen to support the next generation of investigators and encourage applications for smaller awards from early career researchers. The more substantial funding is available for clinical trials and studies, and significant bodies of research, which seek to answer an interrelated set of questions on a broader front than would be feasible in a series of discrete smaller awards. Applications for larger and long term awards should be led from established groups, able to demonstrate highly competitive research track records.

Background

For many people with arthritis, pain has a substantial impact on all aspects of life, causing significant disability, morbidity and mortality. Despite recent advances in the management of arthritis and improved outcomes for joint replacement surgery, ongoing moderate and severe chronic pain remains a substantial daily problem for a large proportion of people with arthritis. This pain lasts for decades, is poorly alleviated by current treatments (many of which have ongoing side effects) and is associated with fatigue and depression. Even when the underlying disease is controlled, ongoing chronic pain remains for a significant number of people with arthritis, highlighting the complex relationship between underlying disease process and the changes within the nervous system which initiate and maintain chronic pain. By seeking to tackle this pain through new research avenues, while continuing to seek a cure for the underlying disease, we can drastically transform the lives of the millions of people living with painful musculoskeletal conditions.

Through 2015-2017 we have carefully considered our approach to musculoskeletal pain research. We have catalysed new areas of activity in our research award and fellowship schemes, via two highlight notices and our first ambitious Pain challenge call. Our 2016/17 Pain challenge focused on fundamental biomedical and discovery pain research, which sought to advance our knowledge of the basic mechanisms underlying musculoskeletal pain. Together these initiatives have led to over £6m of new funding into pain research. In addition, we re-affirmed our commitment to the Arthritis Research UK Pain Centre at the University of Nottingham with 5 years of ongoing support. Building on this activity, in May 2016 and February 2017 we held two large and successful workshops which brought together people with arthritis, healthcare professionals, researchers, other funders and organisations to identify unmet patient and research needs, gaps in our knowledge, barriers and challenges for pain research. Through these consultations we are developing an ambitious and visionary strategy for musculoskeletal pain, which will be published later in 2017. This strategy will guide our charitable and research activities through to 2020 and beyond and serve as a spotlight for other funders, highlighting the current challenges and opportunities.

Our 2017/18 Pain challenge call uses the insight gained from our workshops to launch a broad and ambitious Pain challenge, which will span all areas of our research activity. Through this new challenge call we hope to build on the recent advances made in pain research to make a significant leap forward in our understanding of musculoskeletal pain, how it is managed and how it may be prevented.

Scope of the 2017/18 Pain challenge

Through this call we seek to fund purpose-led, investigator-driven research proposals. Broadly, applications must seek to address one or more of the following:

- Advance our understanding of musculoskeletal pain.
- Prevent, diagnose or evaluate the risk of developing musculoskeletal pain.
- Develop or test new approaches to treating and managing musculoskeletal pain and associated comorbidities, fatigue and mental health.
- Evaluate existing approaches to managing musculoskeletal pain, including the provision, delivery and organisation of health and social care services.

We use the term 'arthritis' in its broadest sense, to include all associated musculoskeletal conditions affecting joints, bones and muscles (including back pain) and autoimmune diseases such as lupus. Further information on diseases and disorders that are within scope can be found at <http://www.arthritisresearchuk.org/research/research-funding-and-policy/our-approach-to-research-funding/scope-of-research.aspx> or <http://bit.ly/2rtFcmK>

We encourage cross-musculoskeletal disease applications, as well as single disease focused studies. Applications specific to rarer forms of arthritis and across the life course (including arthritis in children, adolescents and older adults), where understanding of pain mechanisms is lacking, are also encouraged. While applications are expected to focus on aspects of musculoskeletal pain, it is recognised that the underlying mechanisms of pain may be relevant to both musculoskeletal and non-musculoskeletal conditions. Where a strong case can be made to illustrate the relevance to people with musculoskeletal pain, we will consider applications that explore non-musculoskeletal pain.



We are particularly keen to highlight collaborative and multidisciplinary applications that meet the aims of this Pain challenge and, where possible, encourage applications with other partners, particularly with industry. Please contact the Research team if you would like to discuss this in more detail at research@arthritisresearchuk.org

Whilst the challenge is open to innovative and exciting investigator-driven pain research, we highlight particular areas of interest below, which will feature in our future strategy.

Priority Areas

- Developing a comprehensive understanding of the **integrative mechanisms** that **underlie and drive musculoskeletal pain**. Broad approaches are encouraged, which include physiological and behavioural components to consider the whole body and holistic nature of musculoskeletal pain (including **comorbidities**, **fatigue** and **mental health**).
- While there are existing useful and validated **animal and human experimental models of pain**, there is a strong recognition that further development and refinement of these models, and their outcome measures, is required to ensure they reflect the most important sensory, motor, and integrative physiological aspects of pain in patients. Novel approaches which will enhance the likelihood of success in the translation pathway (both forward and backwards translation) are therefore encouraged.
- Innovative approaches to clinical research that will underpin the testing of new interventions for musculoskeletal pain, increasing the success of translation to patient benefit. In particular, we are keen to see proposals that explore **outcome measurements** which capture the impact of pain on the individual and innovative approaches to clinical **phenotyping** and **stratification**.
- Self-management of pain is well recognised and many tools already exist, but there is an increasing emphasis on the role of **supported self-management** for musculoskeletal pain. Proposals that seek to develop, refine, test or assess approaches to supported self-management for people with musculoskeletal pain are welcomed.
- **Preventing** the development of chronic musculoskeletal pain, or the transition from acute to chronic pain, is an area we have previously highlighted and remains a priority.
- Research which assesses the provision, organisation, delivery and practical implementation of **health and social care services** and evaluates factors affecting the quality of care of people suffering from chronic musculoskeletal pain.
- The use of **novel technologies** across the spectrum of musculoskeletal pain research.



Application and assessment process

Applications are invited to our [Disease](#), [Treatment](#) and [Health](#) subcommittees and applicants should review the remit of each of these committees prior to deciding which committee to submit their application to. 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 research@arthritisresearchuk.org if you are unsure which subcommittee to submit to.

There is a '[Priorities in clinical research](#)' call for applications running concurrent with this Pain challenge call. That call seeks applications for clinical research funding in the areas defined in the final strategies put forward by our outgoing Clinical Studies Groups, these areas are not necessarily targeted on the areas of pain research defined here. Applicants should submit applications for the Priorities in clinical research round via a separate outline form. For advice regarding which call to submit a clinical study/trial to please contact the Research office research@arthritisresearchuk.org.

Who can apply and what you can apply for

We wish to encourage applications from both new and established researchers. At least one of the applicants 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 fellowship applications are not part of this call.

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.

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

Awards are available for up to 60 months, within the funding region of £50,000 to £1,500,000. We intend to fund awards of varying sizes.

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.

Applications for small to medium awards and trials should seek to answer a single question, or a small group of related objectives. This may also include requests for short, small-scale exploratory funding which seeks to bring together researchers from multidisciplinary groups to develop and generate proof of concept/preliminary data for future programmes of work.

More substantial funding is available for trials and significant bodies of research, which seek to answer an interrelated set of questions on a broader front than would be feasible in a series of smaller awards. These applications should pose innovative and novel discovery, clinical and applied health approaches to meet the challenge of the initiative, whilst providing a clear pathway to success. Applications for the larger/long-term trials and research awards should be led by established groups, able to demonstrate highly competitive research track records.

Exploratory or high risk applications are expected to be proportionate in the request for support (in duration and scale).



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 Products (CTIMP) as well as CTIMP studies. CTUs should be contacted well in advance of submission and should be shown to have had an active collaborative involvement in the study design.

For more information see our general [guidance for applicants](#). Please also read the associated outline application guidance documentation for this call. For any pre-clinical studies using animal models, applicants should additionally read our [policy on animal research](#).

Application stages and how to apply

All three subcommittees are receiving applications to this Pain challenge call, applicants should consider to which subcommittee they wish to apply before starting an application. Please contact the Research office for advice if necessary research@arthritisresearchuk.org

Applications which span the domains of basic and clinical research or clinical and applied research should apply to the subcommittee which best fits the predominant focus of the research.

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 forms are available. Applications will be assessed by one of our three subcommittees, applicants should select the appropriate outline form for the subcommittee they wish to submit to: either the **Disease, Treatment** or the **Health** subcommittee. The deadline for the receipt of **outline applications** is **16:00 on Thursday 31 August 2017**. Submissions after 16:00 will not be accepted.

There is a '[Priorities in clinical research](#)' call for applications running concurrent with this Pain challenge call. Applicants should submit applications for the Priorities in clinical research round via a separate outline form. For advice regarding which call to submit a clinical study/trial to please contact the Research office research@arthritisresearchuk.org.

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 reshape 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 Thursday 4 January 2018**. Submissions after 16:00 will not be accepted.

Assessment

Applications will be assessed by either the [Disease](#), [Treatment](#) or [Health](#) subcommittee, supplemented with additional international and national experts where required.



Lay assessment by people with arthritis forms a key part of the review process and is an integral part of all assessment stages. As such, applicants should carefully read the application form and guidance documentation to ensure that the most appropriate language is being used in each section of the form. Please use inclusive language where possible to aid review by all experts. There is an expectation that applicants demonstrate how they have involved people with arthritis in the development of the outlined work. Guidance for this can be sought from our Research Involvement team at the charity Patientinsight@arthritisresearchuk.org.

How outline applications will be assessed

Outline applications will be assessed by the relevant subcommittee. The criteria used to assess outline applications include:

- Relevance to the scope of the 2017/18 Pain challenge call
- Importance, meets an unmet clinical need
- Impact: significance of the research outputs on the route to patient benefit and clinical need*
- 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 full applications will be assessed

All full applications will undergo external expert peer review. Following peer review, applications may undergo a triage stage, based on the reviewer feedback, prior to the final subcommittee meeting. Applications progressing to review by the subcommittee will be given a chance to respond to peer reviewer's comments before final assessment by the subcommittee.

The criteria used to assess full applications include:

- Relevance to the 2017/18 Pain challenge call
- Importance, meets an unmet clinical need and is likely to lead to significant novel understanding
- Impact: significance of the research outputs on the route to patient benefit and stated clinical need
- Involvement of people with arthritis
- Quality and appropriateness of the research design and methodology
- Strength and make-up of the research team, including multidisciplinary collaboration and proposed management arrangements



- 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 and duration 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 and applied research projects will report six 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 be asked to contribute to written summaries of the research in relation to our fundraising and communication activities.

Timelines

Call opened	June 2017
Deadline for outline applications	31 August 2017
Notification and feedback	October/November 2017
Full application deadline	4 January 2018
Funding decision	May 2018
Notification and feedback	June/July 2018

Contact details

For enquiries, please contact research@arthritisresearchuk.org

