

MRC-AMED Regenerative Medicine and Stem Cell Research Initiative

MRC-AMED CALL TEXT

The MRC and the Japan Agency for Medical Research and Development (AMED) are pleased to invite proposals to the UK-Japan Regenerative Medicine and Stem Cell Research Initiative.

This initiative will provide funding for approximately eight collaborative research projects that build upon fundamental insights and initial early-stage discoveries, to advance regenerative approaches towards clinical use in the future and to utilise stem cells as medical research tools.

In total MRC will make up to £5 million available in support of the UK components; with matched equivalent resource provided by AMED in support of the Japanese components.

Background

The UK and Japan are world leaders in stem cell and regenerative medicine research. Past pioneering work in our countries has had a transformative impact and has revolutionised the potential for innovative approaches to medicine.

In order to advance towards patient benefit in Japan, the UK and internationally, it is timely for our research leaders to work together to further understand critical regenerative processes in human health and disease, develop tools and technologies, obtain further proof of concept data, and ultimately be moving towards translation into the clinic. Both countries are working towards the same therapeutic goals, and it is clear that significant momentum could be achieved by linking research teams in the area of preclinical development such that learnings and technologies can be shared for mutual benefit. Given that the UK and Japan have aligned regulatory environments that are strict but permissive, our countries are well positioned to attract future commercial interest and progress well designed and tested novel therapies.

Regenerative medicine is an interdisciplinary research field that seeks to develop the science and tools to help repair or replace damaged or diseased human tissue. As a form of 'advanced therapy' regenerative medicine has the potential to address a number of currently incurable degenerative conditions and is poised to revolutionise medical treatment in the 21st century.

All regenerative medicine strategies depend upon harnessing, stimulating or guiding our naturally occurring developmental or repair processes, and could involve transplantation of cells, stimulation of the body's own repair processes, or the use of cells as delivery vehicles for therapeutic agents. Stem cells have various potential in medical applications such as pathological elucidation and novel drug development, etc, thus it is important to utilise stem cells broadly in medical research.

MRC

MRC will support this activity under the umbrella of the Fund for International Collaboration (FIC). FIC aims to enhance the UK's excellence in research and innovation through global engagement. It focuses on bilateral and multilateral partnerships with global research and development (R&D) leaders and is administered by UK Research and Innovation (UKRI).

AMED

AMED will support the Japanese components of the collaborative projects through "The Program for Technological Innovation of Regenerative Medicine". This program implements objective-achievement-type basic research, based on original ideas that advance the development of the field of stem cells and regenerative medicine. The main purpose of this program is to develop seeds of next-generation innovative medicine; therefore, emphasis is on research that will be of high international competitiveness, research based on innovative and creative ideas, and research that contributes to technological innovation.

Aim

Through the UK-Japan Regenerative Medicine and Stem Cell Research Initiative, MRC and AMED aim to:

- Support world-leading collaborative research teams focused on building upon fundamental insights and initial early-stage discoveries, to advance regenerative approaches towards clinical use in the future and to utilise stem cells as medical research tools.
- enhance existing partnerships and develop new partnerships between the UK and Japan in the area of Regenerative Medicine and Stem Cell Research.
- strengthen the strategic relationship between the UK and Japan.

Objectives and scope

The objective is to deliver research funding for internationally competitive and innovative collaborations between researchers from Japan and the UK in the fields of stem cell research and regenerative medicine.

This initiative will support research projects that build upon fundamental insights and initial early-stage discoveries, to advance regenerative approaches towards clinical use in the future and to utilize stem cells as medical research tools.

Support will be available for research that underpins the development of regenerative medicine therapeutic strategies, including by developing scientific knowledge, tools and technologies with the overall goal of progressing regenerative medicine therapies further along the development pipeline.

Applications are particularly welcome for projects focusing on:

- Human cell engineering, gene editing and cellular reprogramming approaches where a clear future therapeutic goal has been identified
- Investigations into modulation of the human tissue niche, or improving understanding of the niche; this may include for example establishing mechanisms for differentiation in transplanted stem cells or understanding immunological barriers
- Improving efficacy of engraftment and regeneration of transplanted cells
- Developing tools, technologies and methods to enable translational regenerative medicine research including, but not limited to, in-vivo cell imaging approaches or high throughput screening techniques
- Creating novel in-vitro models utilising stem cells which could be used for robust predictive safety testing or as drug screening models

Alternative project outcomes such as therapeutic candidates, medical devices and diagnostic agents may also be supported by this call.

The funders encourage the participation of early career researchers within the collaborative research teams in order to stimulate a future generation of UK-Japanese collaborations in this important area.

For further information, UK applicants should contact: international@mrcc.ukri.org

For further information, Japanese applicants should contact: rminnov@amed.go.jp

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