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Japan Agency for Medical Research and Development
AMED

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AN INNOVATIVE RESEARCH PROGRAMME FOR EARLY-CAREER INVESTIGATORS

A conversation with **IKUE MORI,** Program Officer and Mentor for the Interstellar Initiative, and Professor of Molecular Neurobiology, Nagoya University, Japan

Jointly organised by the Japan Agency for Medical Research and Development (AMED) and the New York Academy of Sciences (NYAS), the Interstellar Initiative is a mentorship programme that provides early-career investigators from diverse backgrounds with opportunities to interact with researchers from around the world, and develop and refine research proposals for submission to international funding agencies. The initiative encourages participants to tackle medical challenges with a focus on ageing and healthy longevity research through interdisciplinary and international collaboration.

What sets the Interstellar Initiative apart from other mentorship programmes?
The program encourages truly interdisciplinary teamwork. It centres on a series of workshops hosted by the New York Academy of Sciences, where participants are grouped in teams of three with the aim of developing a research proposal under the expert guidance of senior scientists. The teams are assembled to comprise researchers from different backgrounds, and all teams include one member from Japan. The workshops are also great fun. They enable the participants to have lively discussions about how best to pursue their projects and which role each member will play according to their area of expertise, with the ultimate goal of submitting to agencies such as the Human Frontier Science Program, the Alzheimer's Association and the National Institutes of Health.

Who is eligible to apply?
We invite applications from young investigators with backgrounds in clinical research, life sciences, physical sciences, technology and allied health, including areas such as epidemiology. These early-career researchers may have just finished a postdoc or they might be beginning to head their own lab as a principal investigator. Having the opportunity to brainstorm with peers from different but complementary backgrounds at this early stage of their careers is so important in helping to broaden perspectives. From my experience as a mentor for the program, I've seen how this initiative really seems to work well in sparking collaborations between experimentalists and theoreticians.

Why are interdisciplinary approaches needed to advance medical research?
Single-investigator-led research used to be the norm in science. But it's collaborative research that now contributes most to scientific advancement. The most impressive collaborative research is frequently both multinational and interdisciplinary. Despite this, there remains a need to further support the intersection of ideas. That's precisely what this initiative can help trigger, by systematically promoting interdisciplinary projects.

For example, mathematical modelling is becoming increasingly important for advancing medical research. Life scientists need to work with theoreticians to make sense of the huge amount of data that can now be generated. The programme has also included engineers and computer scientists, who can bring so many important skills to the table, such as artificial intelligence (AI) and robotics. Those are the kinds of collaborations the initiative is encouraging.

WHETHER YOU ARE STUDYING YEAST, NEMATODE, FRUIT FLY, MOUSE OR HUMAN CELLS, ALL OF LIFE SCIENCE IS RELATED TO AGEING.

Why the focus on healthy longevity research?
Many countries are already beginning to grapple with the challenges posed by rapidly ageing societies. This trend is particularly pronounced in Japan, where the proportion of people aged 50 or older is projected to be close to 60 percent by 2040. We need to develop ways to ensure that ageing populations can lead healthy lives. That's why we recognised healthy longevity as a pertinent theme for this initiative. The field of healthy longevity encompasses a wide range of research, from the cellular or subcellular level right up to the patient level. We've had participants who have chosen to focus on mitochondria research, for example, while others are working with patients in the real world. Whether you are studying yeast, nematode, fruitfly, mouse or human cells, all of life science is related to ageing, so there's a lot of potential for healthy longevity to be tackled from many different angles.

Tell us about the upcoming round of workshops?
The call for applications for the 2021–2022 round of workshops, which starts in September, is open until 24 May 2021. The first workshop will be held virtually in September, and for those unable to travel to New York in February 2022, virtual participation will be available. My advice to applicants is to think carefully about how your research might relate to healthy longevity, even if you are working in different fields. The programme provides great opportunities for you to build networks and gain feedback from established scientists, as well as to share ideas with your teammates and discuss common issues such as how to run a lab, how to apply for grants and how to train graduate students to conduct good research. We're looking forward to receiving applications from early-career investigators from all over the world.

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SEP 10–12 2021

FEB 24–25 2022

2021–2022 Interstellar Initiative

Apply at nyas.org/InterstellarSept2021

Application deadline May 24, 2021, 11:59 PM EDT

A Unique Opportunity for Early Career Faculty/Investigators

The *Interstellar Initiative* recognizes the world's most promising early career faculty and connects them with peers to develop a solution to a major research question, under the guidance of established scientists. The aim is to foster international and interdisciplinary collaboration and thereby catalyze discovery.

The 2021-2022 series of workshops will address challenges in **Healthy Longevity**. Applications are invited from Early Career Faculty who have backgrounds in five broad categories:

1. Clinical Research
2. Life Sciences
3. Physical Sciences
4. Technology
5. Allied Health

Application Guidelines and Instructions

nyas.org/InterstellarSept2021

Please email interstellar@nyas.org with additional questions.

**Applicants will have the option to participate virtually*

Application Deadline May 24, 2021

Presented By

The New York Academy of Sciences

AMED Japan Agency for Medical Research and Development

"I am really grateful to have met my team members. We developed plenty of great ideas and continue working closely together. It would not have happened without this workshop."

Interstellar Initiative 2018-19 participant

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