Interstellar Initiative
Aligning Young Stars of Science to Tackle the World's Most Critical Medical Challenges

**Presented by The Japan Agency for Medical Research and Development and
The New York Academy of Sciences**

Event description:

Collaboration is key to truly innovative scientific discoveries and advancement. There is a critical need to support the intersection of ideas across international boundaries and disciplines, in particular among early career scientists. The *Interstellar Initiative* — presented jointly by the **Japan Agency for Medical Research and Development** and the **New York Academy of Sciences** — recognizes the world's most promising Early Career Investigators (ECIs) from around the world and connects them with peers, in related but distinct disciplines, providing a platform for them to develop a solution to a major research question. Their efforts are guided by Mentors who are established scientists at the peak of their respective disciplines. This is a remarkable opportunity for Early Career Investigators to: (i) receive expert guidance from leading senior scientists on the preparation of a compelling research proposal; (ii) network with exceptional researchers from around the world; and (iii) build international research collaborations.

Applications are invited from Early Career Investigators (ECIs) who have backgrounds in four broad categories: [1] <u>**Life Sciences**</u> (e.g., biomedical scientists); **[2]** <u>**Clinical Research**</u> (e.g., physician scientists and others with translational interests); **[3]** <u>**Physical Science**</u>**s** (e.g., physicists, chemists, and mathematicians); and **[4]** <u>**Technology**</u> (e.g., engineers, computer scientists).The 2018 *Interstellar Initiative* will address challenges in the interest areas of **Cancer** and **Neuroscience**, and include a special focus on **Artificial Intelligence (AI)** applications in medicine. AI has shown great potential to revolutionize healthcare — allowing analysis of ever-larger data sets, assisting in diagnostics, suggesting treatment protocols, facilitating drug development, and personalizing medicine. In the categories of Physical Scientists and Technologists, we invite applications from physicists, chemists, engineers, and data scientists, among others, with ties to biomedical sciences or interest in applying their work to this area. Previous experience in Cancer or Neuroscience research is not required.

Individuals accepted into the Interstellar Initiative will participate in a two-day workshop at the New York Academy of Sciences from June 22 – 23, 2018, where they will be grouped within teams of three and asked to develop a research proposal, guided by Mentors. All teams will include one member from Japan. Early Career Investigators will be expected to present the proposals developed within their teams at the conference. Top teams will be recognized with a non-monetary award at the close of the event. All teams will receive modest funding from AMED through the Japanese team member's institution, to further enhance these proposals, leading up to a second workshop, on **January 31 – February 1, 2019**. Proposals will be further refined at this second workshop and prepared for submission to international funding agencies.

Important Dates

- *March 2018*: The application period opens.
- *April 2, 2018, 11:59 PM EDT (April 3, 2018, 12:59 PM JST):* The application period closes.
- *May 2018*: Investigators selected to participate in the *Interstellar Initiative* are notified.
- *June 22 – 23, 2018*: *Interstellar Initiative* conference convenes in New York City.
- *June 2018 – January 2019*: Teams continue to develop their research proposals.
- *January 31 – February 1, 2019*: Follow up workshop convenes in New York City

Questions

- For more information about the workshop and application, please visit www.nyas.org/Interstellar2018. Please email interstellar@nyas.org with any questions.

Call for Applications:

The application portal will open in early **March 2018**. The application includes a request for a short proposal as outlined below. In addition to application to the portal, applicants in Japan should submit their application to e-Rad portal (https://www.e-rad.go.jp/en/) as well.

Eligibility

Applications are invited from Early Career Investigators (ECIs) who have backgrounds in four broad categories: [1] Life Sciences (e.g., biomedical scientists); **[2] Clinical Research** (e.g., physician scientists and others with translational interests); **[3] Physical Sciences** (e.g., physicists, chemists, and mathematicians); and **[4] Technology** (e.g., engineers, computer scientists). Special consideration will be given to proposals in the field of Artificial Intelligence (AI).

Early Career Investigator applicants must:

- Hold a doctoral degree or equivalent (PhD, DPhil, MD, DDS, DVM, etc.)
- Have obtained their last doctoral degree within the past 10 years (January 2008 or later)
- Have been engaged in active research for 10 years or less since obtaining their doctoral degree or equivalent
- Hold an independent, tenure-track or equivalent faculty position at a university, private research institution, academic medical center, or national government laboratory

Note: Exceptions to these requirements may be made on a case-by-case basis at the discretion of the organizers. If you have questions about your eligibility, please contact interstellar@nyas.org.

Proposal Guidelines

Early Career Investigators must prepare a proposal that addresses the following:

- Identify a critical research question in your chosen interest area (cancer or neuroscience), highlighting its significance and your hypothesis, and propose a research plan including for how your expertise can address this question.

Proposals may not exceed 1000 words in length, must be in English, and must address the evaluation criteria outlined below. A supplementary figure may be included but is not required.

Evaluation Criteria

Applicants will be evaluated according to the following criteria:

- ***Clarity***: There is a clear, well defined question. The aims are structured so that they answer a specific question
- ***Scope:*** The extent to which the proposed research question represents a challenge impacting the entire field, and not solely the interests of the applicant.
- ***Quality:*** The extent to which the proposed research question is defended, and the research solution is valid and scientifically rigorous.
- ***Impact:*** The extent to which the proposed research solution may influence the field.

- **Novelty:** The extent to which the proposed research solution challenges existing paradigms and employs new methodologies or concepts.
- **Promise:** Future prospects in the field and potential for further significant contributions to science.

The proposal should address the above and include a few sentences defining the methodology, why the proposal is unique or different from existing research, and what will be known once there is an answer from the proposed experiments

Travel and Accommodation

Breakfast and lunch will be provided for the duration of the workshops. For each workshop, eligible participants will receive:

- A 3-night stay at an Academy partner hotel.
- A $150 travel stipend for their transportation to and from airports and train stations.
- Reimbursement up to the maximum limits outlined below for economy class air travel (or train/car travel) and travel insurance.

Airfare, Trainfare, or Car Mileage/Parking Maximum Reimbursement Totals
(includes travel insurance)

- From East Coast USA to New York City: Up to USD $525.00
- From Middle USA to New York City: Up to USD $740.00
- From West Coast USA to NYC: Up to USD $1,050.00
- From Canada, Central/South America, Europe to NYC: Up to USD $1,275.00
- From Africa, Asia (non-Japan), Africa, Australia, Middle East to NYC: Up to USD $2,600.00
- From Japan to NYC: Up to USD $2,600.00

Please note that according to the Academy's travel policy, participation in this conference does not include travel reimbursements or accommodation for individuals who are local to metro New York City or from industry.