

Japan Science and Technology Agency (JST)
Adopting Sustainable Partnerships for Innovative Research Ecosystem (ASPIRE)

**ASPIRE FOR RISING SCIENTISTS
CALL FOR PROPOSALS**

I. Aims and Scope

The ASPIRE (Adopting Sustainable Partnerships for Innovative Research Ecosystem) program is an initiative by the Japan Science and Technology Agency (JST) to develop and strengthen Japan's scientific and technological capabilities through supporting international joint research in scientific and technological fields of strategic priority, while simultaneously promoting researcher mobility in the Japanese research community by connecting top researchers from Japan and other leading countries and regions in scientific research.

As a part of ASPIRE, this call welcomes proposals in a variety of research fields that will contribute to cultivating internationally leading researchers and their integration in leading international researcher networks.

Among the ASPIRE programs, the ASPIRE FOR RISING SCIENTISTS program provides support for promising Japan-based researchers who are expected to become leaders in the international research community in the future. To achieve this, the RISING SCIENTISTS program is seeking proposals for international joint research projects that will enable these researchers to acquire the knowledge, technology and networks through advanced academic degrees or through taking up positions at research institutions in advanced science and technology countries.

Support will be provided to research teams that conduct collaborative research with researchers in the applicable fields and partner countries and regions (hereinafter referred to as partner country) of this call. Each research team must include at least a researcher who will travel to the partner country to conduct research (outgoing researcher). The outgoing researcher should conduct research activities in the partner country for about one year, while at the same time the Japan-based research team should also host one or several researchers from the partner country/countries in a reciprocal manner.

*Please follow the Call for Proposals and the Application Guidelines when applying.

II. Call Details

Proposals are welcome from Japan-based researchers intending to conduct collaborative research with researchers from partner country. To be eligible for this call, counterpart researchers in partner country need to be currently receiving or expecting to receive support for their research from eligible funding agencies and research institutions (hereinafter referred to as FAs).

1. Applicable Fields of Research

AI and Information

AI and information research for the realization of Society 5.0** based on the principles of "human understanding and respect," "diversity" and "sustainability"

Biotechnology

Biotechnology research related to promoting the bioeconomy and sustainable agriculture, as well as reduced negative impact on the environment.

Energy

Energy research for carbon neutrality

Materials

Materials research that contributes to a carbon neutral society and circular economy

Quantum

Research related to quantum computers and quantum technology in general, including on quantum materials with innovative functionality, which contributes to the realization of a productivity revolution.

Semiconductors

Semiconductor research related to promoting the semiconductor industrial sector.

Telecommunications

Research on telecommunications technology that contributes to the development of a next-generation infrastructure for a digital society.

*For your reference, examples of research in each field are shown in Appendix 1 at the end of this document, but we are looking for high-quality proposals regardless of the examples.

** A human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space.

2. Partner Research Team

(1) Partner Countries and Regions

United States, European Union, Italy, Austria, Netherlands, Sweden, Spain, Czech Republic, Denmark, Germany, Finland, France, Belgium, Poland, Portugal, United Kingdom, Switzerland, Norway, Canada, Australia

*Partner Countries and regions (hereinafter referred to as partner country) may be updated without notice. Please check the ASPIRE website for the latest information.

<https://www.jst.go.jp/inter/aspire/en/index.html>

(2) Partner Researcher Eligibility

Partner researcher needs to meet either criteria (i) or (ii):

- (i) already be receiving research support from FAs in their country; or
- (ii) are currently applying for research support from FAs in their country, with the outcome known by no later than the end of August 2023.

Note: If the partner researcher is ultimately unsuccessful in receiving research support, the Japan-side application

will be deemed ineligible.

*Partial list of eligible FAs

United States	National Science Foundation (NSF) United States Department of Energy (DOE)
Germany	Deutsche Forschungsgemeinschaft (DFG) German Ministry of Education and Research (BMBF) / DLR Project Management Agency (DLR-PT)
France	National Centre for Scientific Research (CNRS)
United Kingdom	UK Research and Innovation (UKRI)
Canada	National Research Council Canada (NRC)

*The above is only a partial list. Contact JST by e-mail (aspirers@jst.go.jp) to confirm the eligibility of partner researchers supported by FAs not included in the list above.

Collaborative research with researchers in multiple countries and region specified above is also eligible for support. In such cases, all Principal Investigators of each partner country must meet the above conditions.

Note: Prior to submitting an application, the Japanese-side researcher must reach out to a potential partner researcher who is receiving or expecting to receive support from FAs to confirm to collaborate. If the proposed partner researcher is not receiving research support from eligible FAs, or is later rejected for support, the application will not be considered.

3. Japan-side Research Team

(1) Requirements

- Researchers who belong to a research institution (universities, independent administrative institutions, public experimental research institutions, public-interest corporations, and companies in Japan) in Japan and conduct research at that institution, as well as research teams composed of such researchers, are eligible to apply for this Call for Proposals.
- Researchers and research institutions applying for this Call for Proposals must register with the "Cross-Ministerial Research and Development Management System (e-Rad) " prior to applying.

<https://www.e-rad.go.jp/en/>

(2) Team Organization

The team should consist of the following members, led by a Principal Investigator. The team should also include researcher who will travel to the partner country (outgoing researcher). A commissioned research contract is concluded between JST and each of the PI and Co-PIs research institutions.

- Principal Investigator (PI)
The PI is a researcher who is directly supported by JST, represents the overall research team in Japan and is responsible for directing the research project as a whole. The PI must be affiliated with a university or research

institution in Japan.

- **Co-Principal Investigator (Co-PI)**

The Co-PI is a researcher who is directly supported by JST and collaborates with the PI in conducting the research project. The Co-PI must be affiliated with university or research institution in Japan. A Co-PI does not necessarily need to be included in the Japan-side research team.

- **Research participants**

Researchers, technicians, research assistants, students, etc. who will participate in the research project under the direction of the PI or Co-PIs but are not directly supported by JST.

- **Outgoing Researchers**

In principle, the outgoing researcher should fall under either (i) or (ii) below. There is no limit to the number of outgoing researcher and the outgoing researcher can serve as the PI of the project.

(i) Students enrolled in an advanced degree course (i.e. master's or doctoral course)

(ii) Researchers who are conducting research activities at universities, public research institutions, etc. and have been working for less than 15 years after obtaining their final degrees.

Researchers who are enrolled in a master's course, doctoral course or are postdoctoral researchers after completing a doctoral course during the research period should confirm that there are no obstacles to use research funds within the institution and obtain prior approval from the applicant and the research institution to which he/she belongs.

4. Number of Projects

Approx. 30 projects in total across all fields of research will be funded.

III. Program Information

1. Scale of Funding

The maximum total direct cost per proposal for the entire support period is 69 million yen (90 million yen when including indirect costs, which account for 30% of the total direct cost).

At least 70% of the total direct cost should be allocated to promoting international researcher mobility and circulation by fostering future generations of researchers and building the foundation for sustainable participation and collaboration in the international research community.

2. Research Period

Approximately 3 years from February 2024 to the end of March 2027 for JST-supported researchers.

3. Eligible Costs

(1) Eligible Direct Costs

Eligible direct costs are those which is directly necessary for accomplishing the research, indicated below.

a. Travel Expenses

Travel expenses for the outgoing researcher and for research participants described in the research plan.

b. Personnel costs

Personnel expenses for research participants described in the research plan (PI and Co-PI personnel expenses and teaching buyout policy may apply).

c. Facilities, Equipment and Consumables

Costs of research equipment, purchase of books, reagents, materials and consumables, etc.

d. Miscellaneous

Necessary costs for the research and development (cost for organizing and hosting events for research dissemination, equipment leasing costs, transportation costs for equipment used for the research project).

In addition to the expenditure of travel, accommodation, and research expenses for Japan-side research team, travel, accommodation, research expenses and salary for researchers invited from the partner country may be covered.

The personnel expenses of the staff members who coordinate the researcher's travel and personnel-related procedures for invited researcher may be also subject to coverage.

(2) Eligible Indirect Costs

Indirect costs refer to funds which go directly to the research institution for administrative overhead costs.

(3) Points of Caution

At least 70% of the total direct expenses must be used for the purpose of fostering early-career researchers who are expected to become the next generation of top researchers by building and expanding international networks that will lead to the advanced research and development, promoting researchers' mobility between Japan and the partner country, and providing them opportunities for top-level international research collaboration.

This includes the cost of holding workshops to strengthen connections among researchers, travel expenses for early career researchers to the partner country and expenses incurred after the trip, and personnel expenses for staff to coordinate the researcher's travel and personnel-related procedures for invited researcher.

Please note that employment, purchase of equipment, etc. purely for the purpose of conducting research should not be counted as a part of the 70%.

IV Application Procedure

1. Proposal and Review Schedule

The schedule for the submission and evaluation of research proposals for FY2023 is as indicated in the table below and is subject to change. Interviews will be held for those applicants who pass the document review, the date and time of which will be communicated to applicants on an individual basis.

Application via e-Rad system deadline	August 17 (Thu), 2023 (noon)
Document review	Late August to early November 2023
Interview of applicants who pass the document review	November 20 (Mon), 21 (Tue), 22 (Wed), 24 (Fri), 29 (Wed), 2023
Notification of results	Early January 2024 (tentative)
Start of research	February 2024 (tentative)

* The above details are subject to change.

2. Application Documents

Applications should be prepared in accordance with the instructions in the provided application form (ASPIRE_RS_form.docx). The Confirmation Form requires a stamp of an institutional representative of the research institution. Note that in the case of a university or college, this representative is typically the president, not a department head or similar. The official seal of the institution can be omitted if this is in accordance with the organization's own rules, in which case the appropriate approval reference number should be included in its stead.

Applications should include a Letter of Intent (LoI) which indicates prior agreement from the partner researcher to conduct joint research and international researcher mobility and circulation. A sample template for the LoI is provided on the ASPIRE Call for Proposals webpage and the documents should include a statement of the partner researcher's intention to accept the researcher from the Japan-side team. Information about what research support the researcher is receiving or expecting to receive should be outlined as well.

It is possible for the outgoing researcher to visit several research institutions other than the one to which the partner researcher belongs. In this case, it is not necessary to submit a LoI for each of the institutions visited.

3. Application Submission

An application must be submitted via The Cross-Ministerial Research and Development Management System (e-Rad).

<https://www.e-rad.go.jp/en/index.html>

Call title (Japanese): 2023 年度「次世代のための ASPIRE」

Call title (English): 2023 ASPIRE FOR RISING SCIENTISTS

Deadline: 12:00 PM (noon), Thursday August 17, 2023

Proposals should be prepared well in advance, as submission through e-Rad may take time. Applications not submitted by the deadline will not be considered.

4. Results Notification

(1) Document Review Results

Interviews will be held for those applicants who pass the document review. Applicants who proceed to the interview stage will be notified of the date and time to the e-mail address which is registered on the e-Rad platform.

(2) Results Announcement

Results to all proposals will be sent by e-mail in January 2024.

5. Evaluation Criteria

Proposals will be evaluated based on the following criteria:

(1) Relevance and quality of the research content and plan

- Does the proposal adequately correspond to the purpose of the call?
- Are the proposed research activities of a high standard in the research field/area concerned?
- Are synergy effects expected from conducting international joint research as a part of this project?

(2) Quality of plans to promote international researcher mobility

- Are the research and exchange activity plans of the outgoing researcher in the partner country appropriate and detailed in a concrete manner?
- Are the plans for fostering the early career researchers appropriate and sufficiently described in detail?
- Are the plans for international and sustainable participation in the research community specific and appropriate?

(3) Appropriateness and level of detail of travel and invitation plans

- Is the role of the outgoing researcher in the partner country clear and sufficiently detailed?
- Is the research environment in the partner country sufficient for the activities of the outgoing researcher?
- Is the role of the researcher to be invited to Japan clear at the host institution?
- Is the research environment at the Japan-side host institution sufficient for the activities of the incoming researcher?
- Is the exchange plan feasible, with concrete preparations made involving sufficient coordination with the involved parties in Japan and partner country?
- Are the amount requested and use of funds based on the content of the international joint research reasonable and sufficient to effectively carry out the plan?

(4) Relevance and diversity of the research system

- Does the research team have a well-balanced composition of expertise, given the objectives of the proposal?

(5) Qualification of the PIs of the research team in Japan and in the partner country, as well as the outgoing researcher and researcher to be invited to the Japan-side host institution.

- Does the PI have sufficient qualifications, research environment, and resources (funds, human and material resources, etc.) to carry out the research activities in accordance with the proposal and purpose of this call?
- Does the background (academic background, professional background, achievements, etc.) of the outgoing researcher and researcher to be invited to the Japan-side host institution have sufficient qualifications to carry out research activities, and are they expected to contribute to promote international researcher mobility and circulation in the future?

V Points of Note

1. Restrictions on Multiple Applications to ASPIRE Programs

(1) Simultaneous applications (in the same cycle) to this ASPIRE program and the Japan Agency for Medical Research and Development (AMED) ASPIRE program are not allowed.

(2) Simultaneous applications (in the same cycle) for "ASPIRE FOR TOP SCIENTISTS" and "ASPIRE FOR TOP TEAMS" are not allowed.

(3) In principle, only one ASPIRE application per call cycle is allowed.

2. Safety Management Responsibilities

(1) Safety Management for Researchers

The institution to which the outgoing researcher belongs and the PI should ensure that safety measures are sufficiently taken, including at the destination. In addition to ensuring that they have overseas travel accident insurance which covers emergency transportation services, etc., in case of unexpected injuries and similar. Consideration should be given to safety management, including support for necessary vaccinations and the establishment of an emergency contact system.

(2) Travel Procedures

The research institution to which the outgoing researcher belongs should take full responsibility for travel procedures, including visa matters, arrangements and similar as necessary, for both the outgoing and incoming (visiting) researchers.

Every effort should be taken to ensure the safety of the outgoing researcher in accordance with information and guidance provided by the Ministry of Foreign Affairs, including necessary procedures such as submitting a notification of residence and registering with the Ministry of Foreign Affairs' 「たびレジ」

(<https://www.ezairyu.mofa.go.jp/index.html>).

Ministry of Foreign Affairs travel information:

<https://www.mofa.go.jp/mofaj/toko/visa/index.html>

Ministry of Foreign Affairs of Japan overseas safety Information:

<https://www.anzen.mofa.go.jp/riskmap/>

3. JST-funded Research Organization Responsibilities

(1) Research organizations will, if funded, need to conclude a commissioned research contract with JST and must follow the stipulations of this contract. Intellectual property rights such as patents derived from the research will in principle belong to the research institution, provided that the organization complies with Article 17 of the Industrial Technology Enhancement Act (Japanese equivalent of the Bayh-Dole Act) as stipulated in the research contract. Note that this does not apply to overseas partner institutions. (See Section 3.2 in Application Guidelines).

(2) If the research institution is a national or local government (including organizations under the jurisdiction of MEXT) body lacking a juridical personality such as that of a national university, it is the responsibility of the contracted research organization to carry out the necessary budgetary measures and other relevant procedures in advance of entering into the contract. In such cases, please contact JST in advance of making an application (See Section 3.4 in Application Guidelines).

(3) In conducting research, please comply with the Foreign Exchange and Foreign Trade Act (No. 228 of 1949), as well as national laws, guidelines, and notifications. (See Section 4.19 Application Guidelines).

4. Responsibilities of Principal Investigators

(1) The Japan-side PI must have completed a designated online course on research ethics. A failure to demonstrate evidence of the completion of such a course will be considered as grounds for the researcher being ineligible for receiving research support (See Section 4.1 in Application Guidelines).

(2) Annual Research Report

The PI is required to submit an annual research report promptly according to the form provided by JST. In addition, the Japanese research institution which have concluded a contract research agreement with JST is required to submit an accounting report of the support expenses to JST promptly after the end of each fiscal year.

(3) Final Research Report

The PI is required to submit a Final Research Report to JST promptly after the end of the research period for the joint research. JST will contact the PI about the form, submission deadline, etc. at an appropriate time.

(4) Post-Evaluation

A post-evaluation of the proposal will be conducted at the end of the research.

VI Inquiries

Japan Science and Technology Agency (JST)

Department of International Affairs

ASPIRE for Rising Scientists: aspirers (at) jst.go.jp

*Replace (at) with @

Applicable Fields of Research Examples for Reference

For reference, examples of research in each field are shown below, but proposals are welcome in other related areas as well.

AI and Information

AI and information research for the realization of Society 5.0* based on the principles of "human understanding and respect," "diversity" and "sustainability"

Examples: AI research and computing infrastructure, mathematical sciences, human-centered computing, etc.

Biotechnology

Biotechnology research related to promoting the bioeconomy and sustainable agriculture, as well as reduced negative impact on the environment.

Examples: N/A

Energy

Energy research for carbon neutrality

Examples: Next generation solar cells, storage batteries, hydrogen production by water electrolysis, hydrogen utilization technology (fuel cells, etc.), research related to energy conservation, etc.

Materials

Materials research that contributes to a carbon neutral society and circular economy

Examples: Fundamental research for the development of ultimate metallic/inorganic, organic/polymeric materials, and applied research, etc.

Quantum

Research related to quantum computers and quantum technology in general, including on quantum materials with innovative functionality, which contributes to the realization of a productivity revolution.

Examples: Quantum technology contributing to ultra-high-speed parallel information processing, higher-performing measurement technology, higher-performance materials, etc.

Semiconductors

Semiconductor research related to promoting the semiconductor industrial sector.

Examples: Architecture related to innovative AI chips, circuit technology, semiconductor devices, design automation technology, etc.

Telecommunications

Research on telecommunications technology that contributes to the development of a next-generation infrastructure for a digital society.

Examples: Communication research related to wireless/wired technology, devices, security, etc., interdisciplinary research in information engineering, etc.

* "A human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space."