FY2023

Adopting Sustainable Partnerships for Innovative Research Ecosystem (ASPIRE)

(1st Call for Proposals)

English Summary of Application Guidelines

June 2023

Division of Research Programs
Department of International Strategy
Japan Agency for Medical Research and Development (AMED)

Chapter 1. Program Outline

1.1 Program Outline

1.1.1 Program Objectives

ASPIRE (Adopting Sustainable Partnerships for Innovative Research Ecosystem) aims to provide sufficient funds for large-scale collaborative joint research projects in cutting-edge fields, to be conducted at the initiative of the Japanese government in collaboration with advanced countries with high standards of science and technology. Through international research collaboration supported by this program, Japanese researchers will participate in the worldwide scientific top tier. The exchange of excellent researchers between Japan and partner countries will also be strengthened. These researchers are expected to be leaders in the next generation. This will promote international talent mobility and circulation, and contribute to long-term collaborative networks.

1.1.2 Call Scheme

In this alignment call, AMED will accept research proposals from Japan-based research teams, which plan to collaborate with top foreign researchers. These researchers should already be receiving substantial research funding or are expected to receive such funding from their respective national or regional funding agencies (FA), whether public or private.

- Principal Investigators (PIs) affiliated with Japanese research institutions should submit their research proposals to AMED. The research proposal must include details of collaborative research and plans for personal exchange with foreign researcher(s) supported by our partner FA. Refer to Chapter 3.2.2 for more details. Co-investigators from foreign institutions are not required to submit proposals to the partner FAs but please refer to Table 3.2 for notes from the partner FAs.
- AMED will establish its own evaluation committee to review applications and decide on proposal selection.
- AMED will support researchers affiliated with Japanese research institutions and their research.
- AMED can support travel to Japan and research expenses within the Japan team for collaborating researchers supported by partner FAs.

Chapter 2. Application Requirements

2.1 Eligible Applicants

Eligible applicants for this program are PIs who are affiliated with a research institution in Japan for the duration of the research period. They will be responsible for conducting the research and producing the results related to the research proposal for which they have applied.

A researcher who does not belong to a specific research institute in Japan or who belongs to a research institute outside Japan may also apply as a PI. However, he/she must belong to a research institute in Japan by the date of the contract conclusion or February 1, 2024, and must be able to conduct the research for the entire research period.

2.2 Requirements about co-Investigators from Foreign Institutions

Co-investigators from foreign institutions need to meet either criteria i) or ii):

i) currently receiving research support from our partner FA in their country; or

ii) are currently applying for research support from our partner FA in their country, with results known by no later than the end of August 2023.

The list of eligible partner FAs is listed in Table 3.2 and also on our website*. The list will be updated on our website at any time. If you wish to collaborate with a researcher who receives support from FAs in advanced countries other than the agencies on the list, please contact amed-aspire“AT”amed.go.jp（Replace “AT” with @) in advance. Note that AMED may or may not be able to provide support through this program depending on the FA in question.

* https://www.amed.go.jp/en/news/program/0301B_00028.html

Chapter 3. Grant Information

3.1 Scale of Funding Scale, Period, etc.

Table 3.1

Research type	Research Area	Project size (excluding indirect costs)	Research Period	Expected number of projects to be selected
ASPIRE-A	Cellular Structure and Function Complex Systems of Living Organisms Human Life Stages	Up to total 380 million yen per project*1 (for 5-year research)	FY2023 to FY2028 (Max. 5 years)	0 – 3 project(s)
ASPIRE-B	Cellular Structure and Function Complex Systems of Living Organisms Human Life Stages	Up to total 115 million yen per project*1 (for 5-year research)	FY2023 to FY2028 (3 - 5 years)	0 – 4 project(s)

*1: Total budget for the entire research period

3.1.1 Budget Scale

Table 3.1 shows the total amount of funding per project. Please note that 50% or more of the total direct cost should be used to build/strengthen global networks and to promote international exchange. Please refer to Chapter 3.1.3 for more details. For details on research type and research area, please refer to Chapter 3.2.

3.1.2 Research Period

Researchers will receive funding support for up to 5 years for either type of research. This enables researchers to conduct research and exchanges in the counterpart institution over the medium to long term.

3.1.3 Expenditure Items

(A) Research Expenses (Direct Expenses)

It covers travel expenses, personnel expenses including honorarium, material costs and other costs necessary to carry out the research and development (such as paper submission fees and other research results presentation costs, equipment rental costs, transportation costs, etc.). Refer to Chapter 5 for more details

(B) Indirect Expenses

Expenses necessary for the management by the research institution, associated with the implementation of the contracted research. Refer to Chapter 5 for more details.

(C) Expenses for building/strengthening global networks and promoting international exchange

In this call, 50% or more of the total direct cost will be used to build a global network which leads to a cutting-edge research and development, promote an international exchange, and thus provide researchers with top-level international research opportunities. It will be used for the purpose of fostering researchers, who are expected to become a top researcher representing the next generation. This cost includes holding workshops for the purpose of strengthening connections between top researchers and researchers dispatched overseas, travel expenses for researchers to the counterpart institution, expenses incurred after travel, and coordination for travel and exchanges. It also covers the personnel expenses of the coordinating staff. Please note that this does not include employment and material expenses for only the purpose of promoting research.

Please note the following points on application:

-Note 1: A researcher can apply for only one proposal as a PI. However, a researcher can apply for multiple proposals if not in the position of PIs. In such a case, the researcher needs to show that he/she will allocate appropriate efforts in each proposal to avoid unreasonable duplication and excessive concentration of research expenses.

-Note 2: An interim evaluation will be conducted in the third year of research. The research project may be suspended, reduced, or altered depending on the evaluation. In addition, an interim evaluation may be conducted if the co-investigator from foreign institution no longer receives support from the partner FA during the ASPIRE research period.

-Note 3: Applicants who apply for the ASIPRE call by the Japan Science and Technology Agency (JST) cannot apply for the AMED ASPIRE, and vice versa. Duplicate applications for AMED ASPIRE-A and ASPIRE-B will not accepted either.

-Note 4: Applicants can apply for the future joint ASPIRE call that may be open by the AMED and partner funding agencies, but some adjustments may or may not be made if both applications are selected.

3.2 Outline of this ASPIRE program

3.2.1 Research Area

(A) Cellular Structure and Function

This research area focuses on cellular structure and function. As imaging and analysis technologies have advanced, various phenomena have been observed, such as the dynamic state of organelles in cells and the liquid-liquid phase separation of proteins and nucleic acids. This research area also covers protein structure analysis and prediction using cryo-EM and AI, which can be used in drug design, for example.

(B) Complex Systems of Living Organisms

Our understanding of complex systems, including cell-to-cell and tissue-to-tissue interactions, pathogen-host interactions, and even human-human social relationships, is being enhanced by non-invasive biomedical measurement methods and AI technologies for analyzing large-scale complexity. This research area aims to clarify the mechanisms of maintenance and breakdown of biological functions caused by such interactions. As a result, new medical innovations will be developed for controlling them.

(C) Human Life Stages

In this research area, research based on life stages such as human development, maturation, and aging will be studied. It also includes research on phenomena specific to each life stage. Research using age cohorts and birth cohorts, as well as experimental animals and cultured cells that model human life stages, are also actively studied. Within this research area, aging research and healthy longevity research are particularly important issues in a super-aging society and are research themes of global interest.

3.2.2 Partner Countries and Participating Funding Agencies

There are two types of participation regarding the role of partner FAs as illustrated in Figure 1 and 2.

- Existing grant and additional grant

  If a researcher already supported by a partner FA participates in an ASPIRE-adopted project, the partner FA will provide an additional grant for international collaboration on top of their existing grant (Figure 1).

- Existing grant

  If a researcher already supported by a partner FA participates in an ASPIRE-adopted project, the researcher will conduct international collaborative research with ASPIRE using their existing grant (Figure 2).

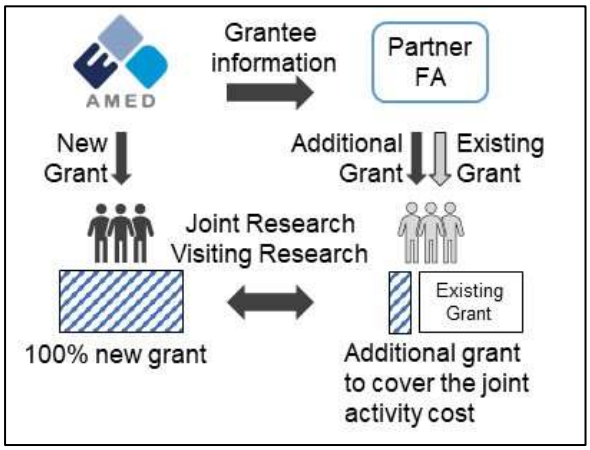

Fig. 1

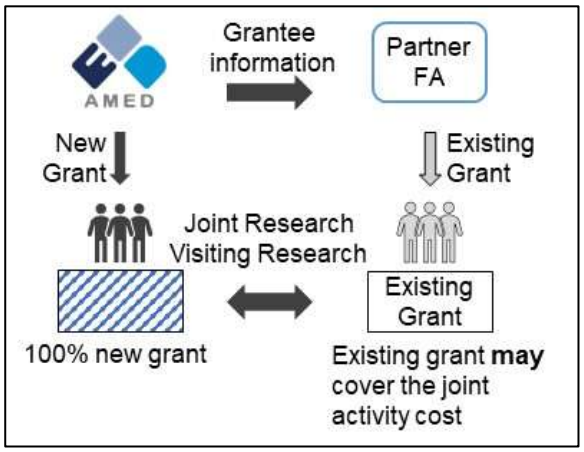

Fig. 2

The list of participating partner FAs are listed below.

Table 3.2

Country[*2]	Partner FAs	Type of Participation	Notes
Australia	National Health and Medical Research Council (NHMRC)	Existing grant	NHMRC-funded researchers interested in this opportunity should contact the NHMRC Research Help Centre help"AT"nhmrc.gov.au [*3] for further information.
Canada	Canadian Institutes of Health Research (CIHR)	Existing grant	Please contact CIHR if you have any questions or require further information.
France	French National Cancer Institute (INCa)	Existing grant	
Germany	German Research Foundation (DFG)	Existing grant	Contact point for German researchers interested in this activity: Raoul Wagner raoul.wagner"AT"dfg.de [*3]
Switzerland	Swiss National Science Foundation (SNSF)	Existing grant + chance of additional grant	Researchers funded by the SNSF who are interested in collaborating with Japanese partners under this call can contact International Cooperation SNSF (international"AT"snf.ch). [*3]

United Kingdom	Medical Research Council - UKRI (MRC)	Existing grant	Applicants do not need to contact MRC, however, if they wish to discuss the application or have queries, contact international“AT”mrc.ukri.org
	National Institute for Health and Care Research (NIHR)	Existing grant	Information about all NIHR funded awards can be found at fundingawards.nihr.ac.uk. UK researchers partnering on an application with a Japanese team should inform the NIHR by emailing international“AT”nihr.ac.uk. *3
United States of America	National Institutes of Health (NIH) / National Cancer Institute (NCI)	Existing grant	It is encouraged that NIH-awarded investigators inform their POs upon ASPIRE application.
	National Institutes of Health (NIH) / National Institute of Allergy and Infectious Diseases (NIAID)	Existing grant	It is encouraged that NIH-awarded investigators inform their POs upon ASPIRE application.
	National Science Foundation (NSF)	Existing grant	It is encouraged that NSF-awarded investigators inform their POs upon ASPIRE application.

*2: Country: Alphabetical order

*3: Replace “AT” with @

3.2.3 Researchers in counterpart team

Co-investigators from foreign institutions need to meet either criteria i) or ii):

i) already be receiving research support from an eligible funding agency in their country; or

ii) are currently applying for research support from an eligible funding agency in their country, with the outcome known by no later than the end of August 2023.

A prior agreement must be in place regarding the implementation of joint research and the acceptance of the traveling researcher between Japan and counterpart teams.

The list of eligible FAs will be updated on our website at any time. If you would like to collaborate with a researcher who receives support from a funding agency in advanced countries other than the agencies on the list, please contact amed-aspire“AT”amed.go.jp（replace “AT” with @) in advance. Please note that AMED may or may not be able to provide support through this program depending on the funding agency in question.

3.2.4 Japan-based Research Team

Japan-based researchers must be affiliated with a university, research institution, or company in Japan. The Japan-based research team consists of a PI, sub-investigator, and other research participants. It needs to include a researcher who is expected to be a next generation leading researcher.

3.2.5 Research type of the Japan-based Research Team

Applicants are expected to choose one of the two types of research defined as follows:

(A) ASPIRE-A

Large-scale research by a research group led by a top Japanese researcher, either alone or in collaboration with other researchers. Researchers, postdoctoral fellows, research assistants, students, etc., who are managed and supervised by each researcher/group, conduct research together.

(B) ASPIRE-B

Small- and medium-scale research in relatively new research area carried out by a single researcher, or a relatively small number of researchers led by a PI. The research will be conducted with researchers,

postdoctoral researchers, research assistants, students, etc. who are managed and supervised by the PI. If necessary, sub-investigators belonging to other laboratories or research institutions may be included.

3.2.6 Personnel Exchange and Collaborative Research Agreement (CRA)

To achieve the objectives of this program, it is required that researchers from Japan will be sent to the counterpart institution for more than 1 year term during the research period. In the case of ASPIRE-B, the PI is also allowed to stay in the counterpart country for a long period of time. Similarly, a researcher from the counterpart institution can be invited to Japan on a near-permanent basis. Workshops are required during the research period to facilitate collaboration with the research team in the counterpart institution. Intellectual property rights associated with the personnel exchange must be discussed with the counterpart research institution before the travel and must be included in the CRA.

3.3 Call and Review Timeline

The following table illustrates the planned timeline for the selection process at the time of call for applications.

Table 3.3

Call and review timeline	
Preproposal document	**Due 12:00 noon, July 11, 2023 (JST)** via e-mail
Full proposal documents	**Due 12:00 noon, August 8, 2023 (JST)** via e-Rad
Interview for applicants	Mid November, 2023 (tentative)
Notification of selection/rejection results	December, 2023 (tentative)
Start date (contracting, etc.)	Early February, 2024 (tentative)

3.4 Reviewing Proposal Documents

3.4.1 Review Method

Applications will be reviewed by the review panel members comprised of external experts appointed by AMED.

3.4.2 Review Criteria and Considerations in Reviewing Project Proposals

Proposals will be reviewed from the following perspectives.

(1) Consistency with the Purpose of the Project

Does the proposal involve high-level international joint research aimed at enhancing Japan's scientific and technological capabilities?

Is the target top international research community clearly defined and consistent with the project purpose?

Are there appropriate plans for cultivating next-generation researchers based on past successes?

(2) Scientific and Technological Significance and Superiority

Does the proposed research have originality and novelty?

Does the proposed research respond to social needs?

Does the proposed research conform to the national policy on R&D in the medical field?

Does the proposed research contribute to the advancement of research and development in the medical field?

Is the research expected to produce internationally acclaimed research results?

Is the research proposal of a high standard in the field of health and medical care, and can synergistic effects be expected through international joint research with the research team of the partner country?

(3) Relevance of the Plan

Are the goals and plans of the overall plan clear? Are the annual plans specific and feasible?

Is the division of roles between the Japanese and foreign research teams clear and feasible throughout the research period?

Is the plan for building and expanding the global network appropriate? (Are there appropriate, concrete, and feasible plans in place for the establishment, participation, and development of a targeted international top research community?)

Is the strategy for fostering the next generation of top researchers that will contribute to the promotion of international talent mobility appropriate? (Is there a plan to invite an appropriate number of researchers to travel or stay in the country in accordance with the size of the research community? (Is there a plan to invite an appropriate number of researchers to the country or region, and are the roles and duration of their stay in the country or region specified, and is there an acceptance and support system in place at the research institution?

Does the plan comply with bioethics and safety laws and regulations?

(4) Implementation System

Does the Principal Investigator have long experience in top research communities with the co-investigators from foreign institution, and have experience in human resource development of young researchers, etc.?

Is the composition of the Japanese research team organized with a view to achieving the project objectives and generating results? Does it include research participants who will be responsible for the research exchange? Are the costs appropriate? Is diversity taken into consideration?

(5) Expenses

Are the breakdown of expenses and the expenditure plan appropriate?

Do you have sufficient research resources (research funds, human and material resources, etc.) to carry out the research activities in accordance with the purpose of the public offering? (Is there a budget plan to use at least 50% of the total direct expenses for the purpose of building/strengthening global networks and to promote international exchange for the next generation top researchers?)

Is sufficient budget secured for human resource development of researchers dispatched overseas, and is an appropriate budget plan in place?

Does the project include a budget plan for accepting excellent human resources from overseas under appropriate conditions?

(6) Continuity and Collaboration

Can top-level international joint research be expected to continue after the completion of the research and development, thereby maintaining and improving Japan's scientific and technological capabilities?

Is it expected to continue and expand as an global network after the completion of the research program?

Can we expect human resource development to continue in the top research community after the completion of the research program?

Are the research exchanges and collaborations planned on an equal footing and mutually beneficial for both countries? Is the relationship between the two countries such that one side is not subordinate to the other?

(7) Overall Evaluation

The overall evaluation will be made considering (1) through (6).

Chapter 4. Preparation and Submission of Proposals

4.1 Preparing Proposal Documents

4.1.1 Necessary Documents for Application

Table 4.1

No.	Mandatory or optional	Application forms	Required proposal documents	Submission deadline
1	Mandatory	Preproposal form	Preproposal Summary	12:00 noon, July 11, 2023 (Submission via email)
2	Mandatory	Annex 1	Letter of Intent	
3	Mandatory	Full proposal form 1	Full Proposal	12:00 noon, August 8, 2023 (Submission via e-Rad)
4	Mandatory	Supplement 1	Graphical Abstract	
5	Mandatory	Supplement 2	Overall schedule	
6	Mandatory	Supplement 3	Implementation system	
7	Mandatory	Supplement 4	Exchange Plan	
8	Mandatory	Supplement 5	Compliance Agreement*	
9	Mandatory	Supplement 6	Export Control Checklist	
10	If applicable	Human Whole Genome Sequence Analysis Protocol form	If human WGS analysis is conducted.	

* Obtain a compliance agreement form signed by the head of the research institution with which you plan to enter into a contract research agreement at the time of adoption.

4.1.2 Application Forms（Japanese language only）

Application forms can be downloaded from the “Calls for Applications” page on the AMED website:

https://www.amed.go.jp/en/news/program/0301B_00028.html

4.2 How to Submit Proposal Documents

Submit proposal documents via e-Rad by the deadline. It should be noted that web access increases shortly before the deadline and errors sometimes occur, so allow yourself plenty of time for submission. Applications will not be accepted if the proposal documents are not submitted by the deadline. In order to amend proposal documents that have already been submitted, you need to carry out “Retrieval” procedures during the acceptance period and then re-submit the amended documents before the application deadline. (For details regarding retrieval procedures, please refer to the Manuals for Researchers, which can be found at the e-Rad portal site (https://www.e-

rad.go.jp/en/manual/for_researcher.html)) Please note that submitted proposal documents cannot be replaced after the application deadline.

Chapter 5. Contract Agreements

5.1 Scope and Payment of Contracted Funds

5.1.1 Scope of Contracted Research Funds

In accordance with the governmental rules, items of expenditure have been set as follows for this program. For details, please refer to the AMED's "Administration Manual for Contracted Research Agreement."[1]

Table 5.1

	Main item	Definition
Direct costs	Costs of goods (equipment/supplies)	Research facilities/equipment/prototypes, software (ready-made goods), book purchasing costs, purchasing costs for reagents/materials/consumables for use in research
	Travel costs	Travel costs of research participants, travel costs for invited participants such as external experts
	Personnel costs/ services costs	Personnel costs: personnel costs for researchers, etc., employed to conduct the relevant contracted research (including personnel costs for PIs and Sub-Investigators[2]) Service costs: expenditure for services such as lecture requests, guidance/advice, test subjects, interpretation/translation, and unskilled labor.
	Other	Costs for implementing the relevant contracted research other than the above. Examples: Research accomplishments publication costs (academic paper contribution costs, academic paper offprint costs, website production costs, etc.), conference costs, equipment leasing costs, Equipment repair costs, printing costs, subcontract costs, licensing fee, expenses for entrusting other persons with PIs' work other than research and development ordinarily performed by PIs at their affiliated institutions (buyout expenses), [2] amount equivalent to consumption tax related to untaxed transactions, etc.
Indirect costs[3, 4]	Expenditure used by research institutions as necessary costs for managing the research institutions during implementation of the relevant research, paid at a fixed percentage of direct costs (with a 30% rule of thumb) as an allowance.	

[1] https://www.amed.go.jp/keiri/index.html (in Japanese)

[2] With regard to the requisite conditions and details of procedures in the event of disbursing personnel costs and buyout expenses for PIs and Sub-Investigators, please refer to the Administration Manuals and Forms[1] in the Program Administrative Procedures (Forms and other documents) section of the AMED website.

[3] Indirect costs are allocated when AMED concludes a contracted research agreement with a national university corporation, inter-university research institute corporation, independent administrative agencies, special corporation, general incorporated association, general incorporated foundation, public interest incorporated association, public interest incorporated foundation, private enterprise, or private university, etc. The fixed percentage will not exceed 30%. With regard to Subsidiary Institutions (excluding researchers affiliated with national facilities or other institutions) also, indirect costs are allocated in accordance with direct costs.

[4] In cases in which the indirect subsidies payment method is used with regard to researchers affiliated to a national facility or other institution (excluding the National Institute for Educational Policy Research) they become ineligible for allocation of indirect costs.

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