



AMED-A*STAR Joint Funding
“Tackling and Conquering Cancer Complexity”
Call for Collaborative Proposals (Deadline for applications: July 20 (Thu) 2023)

I. General Description

I-1. Joint Funding of Japan-Singapore Collaborative Research

Based on the Memorandum of Cooperation (MOC) dated March 16th, 2016, Japan Agency for Medical Research and Development (hereinafter referred to as “AMED”) and the Agency for Science, Technology and Research, Singapore (hereinafter referred to as “A*STAR”) have expressed the desire to strengthen R&D cooperation between scientists in Japan and Singapore in biomedical scientific research. The AMED-A*STAR joint call is therefore being launched to take the AMED-A*STAR engagement to a deeper level. For this call, “**Cancer Complexity**” was selected as the specific research area.

I-2. Aim of This Call and Research Field

The aims of this call is to strengthen research collaborations between Japan and Singapore within the field of “**Tackling and Conquering Cancer Complexity**”.

With regard to “Cancer Complexity”, recent studies have revealed that tumor tissues are composed of heterogeneous and highly diverse cell populations. It is important to understand cancer as a complex biological system through more detailed and multi-dimensional analysis of the pleiotropic interactions between cells promoting and maintaining tumor growth.

Taking advantage of existing strengths, such as basic cancer biology in Japan and computational science in Singapore, key challenges in the area of cancer translational and basic research should be addressed. Examples of key challenges are:

- Elucidating the roles of RNA and RNA-sensing pathways in tumor progression and immunity
- Mapping field cancerisation to define mutual influences among cancer and other cell types
- Harnessing AI to integrate and mine big data of single-cell and spatial omics for precision diagnosis and therapy
- Biological and computational view of cancer evolution and adaptation.

This is operated under the Strategic International Collaborative Research Program (SICORP) between AMED and A*STAR.



To accomplish the R&D objectives mutually agreed upon by both countries, AMED will assign a Program Supervisor (PS) and Program Officer (PO), who play key roles in the evaluation process and management of projects on the Japanese side.

I-3. Prospective Applicants

AMED and A*STAR invite researchers based in Japan and Singapore to submit proposals for this call pertaining to the research area of **"Tackling and Conquering Cancer Complexity"**. This call for collaborative proposals will require a set of applicants (co-applicants) who will serve as co-Principal Investigators (PI) based in Japan and Singapore to work in partnership on research projects. Japan-based applicants will be funded by AMED, while Singapore-based applicants will be funded by A*STAR. Eligibility to apply will be determined by the following national eligibility rules.

Eligibility for Japan-based co-applicants:

The Japan-based co-applicants must be affiliated with a domestic Japanese research institution, and conduct research there. Domestic research institutions on the Japanese side include universities, independent administrative institutions, national/public testing and research institutions, specially authorised corporations, public-service corporations and enterprises, etc. that must satisfy predetermined requirements specified by the Ministry of Education, Culture, Sports, Science and Technology in Japan.

· Any individual who satisfies any of the following conditions is also eligible to apply as Japan-based Principal Investigator.

- i) A researcher holding citizenship other than Japanese who belongs to a Japanese domestic research institution.
- ii) A researcher who is not currently affiliated with a particular research institution, but who will be affiliated with a Japanese domestic research institution and able to conduct research there if selected as Japan-based Principal Investigator.
- iii) A Japanese researcher currently residing overseas who will be affiliated with a Japanese domestic research institution and able to conduct research there if selected as Japan-based Principal Investigator.

· The Japan-based Principal Investigator must be able to take responsibility for the duties of the entire project for the full duration of the joint research project.



- Japan-based researchers from industry are eligible to participate in the joint research project in the Japan-based Team.

Eligibility for Singapore-based co-applicants:

1. Singapore-based co-applicants must be an independent researcher from public sector research performers, namely the Institutes of Higher Learning (universities and polytechnics), A*STAR Research Institutes, as well as other non-defence-related public sector agencies (e.g., Ministries, Statutory Boards).
2. Singapore-based co-applicants must hold a primary appointment of at least 75% in a local publicly funded institution and salaried by the institution.
3. Early-stage investigators who completed his/her doctorate in the last 7 years are strongly encouraged to apply.

II. Financial Support

Depending on the number of proposals submitted, it is anticipated that up to three (3) bilateral research projects will be funded by this Call.

II-1. Support by AMED and A*STAR

In this collaborative call, AMED and A*STAR will fund up to three proposals, each at a total budget of no more than 23.07 million yen (Direct Expenses) from AMED and no more than SGD\$250,000 from A*STAR for the entire project duration. AMED will provide support for the researchers based in Japan, and A*STAR will support the researchers based in Singapore. The duration of a collaborative research project shall be no longer than three years (thirty-six (36) months) in total from the start date.

II-2. AMED

II-2.1. Budget for Collaborative Research Projects

The total budget for each project proposed by Japan-based co-applicants over a full three (3)-year period (i.e. thirty-six (36) months) should not exceed twenty-three point zero seven (23.07) million yen in principle excluding overhead expenses. The planned budget for research projects may vary each year, depending on the planned activities specific to each project.



Funding for Japan-based Teams may be used for:

	Items	Standard definitions
Direct Expenses	Facilities, equipment and consumables	Costs for purchasing new equipment, supplies, trial pieces, software, books, reagents, materials and consumables.
	Travel	Expenses for travel by the Japan-based PI or research team members or by invited researchers.
	Personnel and Services	Annual salaries for a PhD student, post-doctoral fellow, or other Japan-based researchers including PI ^{*1} etc. employed for R&D objectives, and honorariums, etc. for speakers at organised symposiums, seminars, and meetings, etc.
	Other	In addition to the above, costs required to accomplish the R&D objectives. Examples: Costs related to the presentation of research results (research paper submission fees, printing costs, HP-producing costs etc.), meeting expenses, transportation costs, equipment lease expenses, equipment repair costs, printing costs, software subcontract production costs, inspection costs, equivalent expenses to consumption tax regarding non-taxed transactions, etc.
Overhead Expenses ^{*2}	Allocated in certain proportion to direct expenses (within 30%), paid by AMED as required costs for managing the research institution to implement the contracted R&D project and used by the research institution.	

*1 For more details about salaries for Japan-based PIs and buyout costs, please visit the following website: https://www.amed.go.jp/keiri/youshiki_itaku.html (in Japanese only)

*2 Provided for the contract R&D agreement between AMED and the national university corporation, inter-university research institute corporation, national institute for education policy research, independent administrative agency, government-affiliated corporation, special private lending corporation, general incorporated association, general incorporation foundation, public interest incorporated association, public interest incorporated foundation, private enterprise, private university or similar organisation, but not for researchers belonging to national institutes. Overhead expenses are also allocated in proportion to the direct expenses to the joint institution (excluding national institutes.)

II-2.2. Contract between the Japan-based Co-applicant and AMED

Support will be implemented in accordance with a contract for commissioned research which shall be entered into between AMED and the Japan-based co-applicant's Institution. The contract for commissioned research will be signed each fiscal year during the collaborative research period. Since the contract is agreed on condition that all administrative procedures related to the project in question shall be handled within the institution, the PI should consult with the department in charge at his/her institution.



II-3. A*STAR

II-3.1. Budget for Collaborative Research Projects

The total budget for each project proposed by Singapore-based co-applicants over a full three (3)-year period (i.e. thirty-six (36) months) should not exceed two hundred and fifty thousand (250,000) Singapore dollars in principle including indirect costs (Note: Indirect costs will apply to all applicants). The planned budget for research projects may vary each year, depending on the planned activities specific to each project.

II.3.2. Funded Expenses

Funding provided within this call is intended to enhance the capacity of Singapore-based applicants to collaborate with their international counterparts, these include local research costs as well as expenses for travel and/or conducting seminars/symposia.

A list of non-fundable direct cost items is provided below:

Type of Expenses	Description
Salaries of Lead PI / Investigators / Visiting Professors & researchers/ Collaborators/ general administrative supportstaff	Not allowable.
Teaching buy outs	Not allowable for the hiring of substitutes to perform the Investigators' teaching duties.
Stipend top-up for existing post-graduate scholarship holders	Not allowable.
Undergraduate stipend and tuition support	Not allowable.
Costs related to general administration and management.	Not allowable.
Costs of office or laboratory space	Not allowable.

Personal productivity tools & communication expenses	Not allowable, unless the use of mobile phones and other form of smart devices were indicated in the methodology for the Research.
Audit fees (Internal and external audit) and Legal fees	Not allowable.
Entertainment	No allowable.
Refreshment	Not allowable.
Fines and Penalties	Not allowable.
Patent Application	Not allowable. This includes patent application filing, maintenance and other related cost.
Professional Membership Fees	Not allowable.
Staff retreat and team-building activities.	Not allowable.

II-3.3. Contract between the Singapore-based Co-applicant and A*STAR

The awarded projects will be subject to the Terms and Conditions set by A*STAR. Management of the projects will be in accordance with the A*STAR Guidelines for Managing A*STAR Grants. Arrangements relating to intellectual property rights (including copyright and patent rights) and commercialisation of such intellectual property shall be in accordance with the Terms and Conditions applicable to the award as determined by A*STAR.

II-4. Contract between Researchers in Japan and Singapore

It is required that a Research Collaborative Agreement (RCA) be signed for any joint research collaboration. In the interest of encouraging meaningful collaborations, the concerned parties are requested to engage in appropriate discussions and negotiations to determine issues such as ownership of any arising intellectual properties and each party's rights and obligations under the collaboration. Reference to this joint guideline ("II-4. Contract between Researchers in Japan and Singapore") should be made within the contract drawn up by the institutions in Japan and Singapore. The RCA should be submitted to AMED and A*STAR by the respective researchers within three months of the award start date. AMED and A*STAR



reserve the right to terminate further fund disbursements if this condition is not met.



III. Application

III-1. Application Forms

Applicants are required to submit the application forms written in English.

NOTE: Applicants in Japan and Singapore shall use the appropriate application forms issued by AMED and A*STAR. The applicants in Japan and Singapore shall work together to write their proposal and to make their application electronically as described in III-2. Submission of Application Forms.

The application shall include the following basic, common information:

- a) A project description stating how the collaboration will be conducted, with clear statements of what roles the Japan- and Singapore-based researchers will play in the project.
- b) The expected outcome(s) of the proposed project, including scientific objectives, and the project's relevance to industry and society.
- c) The ongoing activities and specific expertise of the Singapore- and Japan-based groups, which form the basis for the proposed joint project, including how the skills, technology and other resources in each group complement each other. Also, details of any existing links between the groups.
- d) The expected added value from the proposed joint project, and how this will help strengthen research collaboration between Japan and Singapore over the longer term.
- e) A description on how the proposed joint project compares against other similar activities elsewhere in the world.

III-2. Submission of Application Forms

Japan-based co-applicants should electronically submit their application forms to AMED by 17:00 (Japanese Standard Time) on July 20 (Thu) 2023, via the online application system, e-Rad (<http://www.e-rad.go.jp/index.html>).

Singapore-based co-applicants should electronically submit their application forms via iGrants by 17:00 (Singapore Standard Time) on July 20 (Thu) 2023, via <https://app.a-star.edu.sg/igrants/>



IV. Evaluation of Project Proposals

A Joint Committee consisting of experts will evaluate all proposals and make a recommendation as to which proposals should be funded. Based on this recommendation, AMED and A*STAR will jointly make a decision on which proposals to fund.

IV-1. Evaluation Criteria

The following general evaluation criteria will apply to each application:

1) Conformity with Program Aims and Designated Research Fields

The proposed activity shall conform to the aims of the program and be appropriate for the research fields designated by the program.

2) Capability of the Research Principal Investigators (PIs) and Their Teams

The research PIs in both countries shall have the insight or experience necessary for pursuing the proposed activity and the ability to manage the collaboration and achieve their project goals during this program's period of support.

Both teams must also outline their significant contributions to the proposed research and how activities are being planned to develop the career of early-stage investigators (if applicable).

3) Effectiveness and Synergy of the Collaborative Research Project

The proposed research activity shall be eminent, creative and at an internationally high level in an attempt to produce a significant impact on the development of future science and technology, or to solve global and regional shared challenges, or to create innovative technological seeds that can contribute to the creation of new industries in the future.

Moreover, proposed research activities that can be expected to leverage synergy through collaborative research with the counterpart institution will be preferred. Such synergy could be attained through, for example, the acquisition and/or application of complementary knowledge, skill and/or know-how of the counterpart researcher.

4) Validity of the Research Plan

The proposed methodology should be feasible, with well-defined milestones and KPIs. Research objectives, plan and deliverables must also be clearly described, with technical challenges properly addressed. Teams to also highlight the novelty of their approaches or methodology.

IV-2. Announcement of Funding Decision

Successful co-applicants will be notified of the final funding decision by AMED and A*STAR



by the end of November 2023.



V. Responsibilities of awarded researchers

V-1. Responsibilities

Once their proposal has been selected for funding, the co-PIs and their affiliated institutions will observe the following when carrying out the collaborative research and utilising funds provided by AMED and A*STAR.

1. Annual Progress Report

At the end of each financial year for A*STAR-funded researchers; and at the end of each fiscal year for AMED-funded researchers, the respective PI should promptly submit a progress report within two (2) months after the end of the financial year (for A*STAR-funded researchers) and within two (2) months after the end of the fiscal year (for AMED-funded researchers), and the institution with which the PI is affiliated shall promptly submit a financial report to AMED or A*STAR as appropriate.

2. Final Report

Final reports should be submitted within three (3) months after completion of the period of international collaborative research to AMED and A*STAR respectively. The report shall include a general summary (the report format will be notified in advance) compiled jointly by both the Japan- and the Singapore-based research groups.

If papers describing results of collaborative research will be published in academic journals, by societies and so on, copies of those papers must be attached to the final report.

3. Participation in a future AMED-A*STAR Joint Workshop/Seminar/Symposium

Research PIs will be encouraged to jointly present their work at the AMED-A*STAR Joint Workshop/Seminar/Symposium when applicable. Respective PIs will be notified by AMED and A*STAR when the joint event will take place. This joint event will be held either in Singapore or Japan, or online.

VI. Additional Information and Requirements for Researchers

Please see the annex sheets for such requirements:

Annex A: A*STAR Grant T&TCs

Annex B: Guidelines for Managing A*STAR Grants

日本側研究者向け補足応募注意事項 (Supplemental guidelines for Japan-based applicants)

日本側追加応募様式 (Supplemental application form for Japan-based applicants)



VII. Contact Information

Japan-based co-applicants should contact the following for further information:

KOJIMA Naoko (Dr.)

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Singapore-based co-applicants should contact the following for further information:

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