FY2024

BOOST: Broadening Opportunities for Outstanding young researchers and doctoral students in Strategic areas

Fostering Researchers in Emerging AI Program (Support for Young Researchers)

Call for Research Proposals

[Application Guidelines]

Application Call Period

Wednesday, May 29th ~ 12:00 (Noon, Japan Time) Wednesday, July 31st, 2024

Note: This translation is provided as a reference material. If there is any discrepancy between this translated version and the original Japanese version, the original Japanese version prevails.

Department of Disruptive Research

Japan Science and Technology Agency

May 2024

Introduction: Overview of the Call for Research Application

(1) Call for Research Applications and Selection Schedule

The schedule for the call for applications and selection of research applications for FY2024 is as follows.

The call for research applications will be conducted via the Cross-ministerial R&D Management System (e-Rad). Those applications which have not completed the application process by the specified deadline will not be accepted for any reason.

Please note that, for the FY2024 call, only one application will be accepted per applicant regardless of the affiliated institution at the time of the application (if multiple applications are received, all research proposals will be rejected).

For details, please read and understand the section "2.6.1 Requirements for Applicants" Limitations on the Number of Applications " before applying.

Call for research application start	**Wednesday, May 29th, 2024**
Application deadline (Deadline date and time for the submission of applications via the Cross-ministerial R&D Management System [e-Rad])	**Wednesday, July 31st, 2024 12:00 (Noon, Japan Time) <Strictly enforced>**
Document screening period	August ~ September 2024
Notification for interviewees	September ~ Middle October 2024
Interview screening period	October 2024
Notification/Announcement of selected projects	Sequential notification and announcement in November 2024 or later
Research start	Sequential start from January 2025 or later

* The double underlined dates have been confirmed, but all other dates are tentative. They are subject to change in the future.

* The selection schedule and contact details will be announced on the Call for Research Applications website as soon as they are determined.
https://www.jst.go.jp/program/boost/yr/call/index.html (Japanese only)

Those selected for interview screening will be notified by email during the "Notification to Interviewees" period and asked to prepare interview materials (No written correspondence will be sent. The notification will be sent to the email address registered on the e-Rad registration page at the time of proposal. Make sure to set it as ready to receive). If there is any change in the e-mail address registered on the e-Rad registration screen due to a change of institutional affiliation, etc., please contact boost-yr-inquiry@jst.go.jp as soon as possible. Please note that those applicants who are likely to be selected as a result of the interview screening may be contacted by JST (by phone or e-mail) to confirm whether or not the Collaborative Research Agreement can be completed in November 2024 or later.

(2) Submission of Research Proposal

Please download the documents needed for research application including application form from the “Call for Research Proposals” website. Research proposal applications are processed by the e-Rad system (https://www.e-rad.go.jp/en/) (Chapter 5 Submission via the Cross-ministerial R&D Management System (e-Rad)). Some items on the e-Rad registration system are unique to this Program; therefore, make sure to read the instructions carefully. If you fail to follow the instructions correctly, your registration will not be processed during screening.

As the application deadline approaches, heavy demands on the e-Rad system could slow down the application processing speed and even cause the application deadline to be missed. Please give yourself enough time to complete submission of proposal. Withdrawal of the application is strictly prohibited after the deadline. JST will not accept proposals, which the application process have not been completed in the e-Rad system by deadline for any reason. Please note that JST may give direction on the “Call for Research Proposals” website in case such as cause of e-Rad system trouble which untenable to submit the application during the application call period.

The name and affiliation of applicant in the e-Rad system and those given in research proposal should be matched (In case it differs, that of the research proposal will be considered as official). The application of a research proposal is not received by the e-rad system if it contains serious defects, which make the review of proposal difficult, including the lack of application form 1 (cover sheet of research proposal), serious character corruptions, and omissions of important items of the application forms.

JST is not responsible for any defects in the application forms of a research proposal, which may be caused by any reasons before submission deadline, regardless of its status of receival. JST askes, therefore, all research proposal applicants to understand that we will not require them to make any revisions of their research proposals, obtaining their consents on correction in advance, before research proposal submission deadline. In the case that the schedule for the call for applications changes, its details of the change will be announced on the Call for Research Applications website. Please refer to this Call for Proposals, the Call for Proposals webpage, and the attached "How to Apply via the Cross-ministerial R&D Management System (e-Rad)" of this application guideline regarding submission of research proposal and items to be considered in application.

・Call for Research Applications Website: https://www.jst.go.jp/program/boost/yr/call/index.html (Japanese only)

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Chapter 1. Call for Research Applications

1.1 Fostering Researchers in Emerging AI Program (Support for Young Researchers)

This project corresponds to a program in the Competitive Research Fund.

1.1.1 Outline of Fostering Researchers in Emerging AI Program (Support for Young Researchers)

"Broadening Opportunities for Outstanding young researchers and doctoral students in STrategic areas (BOOST)" is a project for developing highly urgent national strategies. IT promotes human resource development and cutting-edge research and development in the field. The "Fostering Researchers in Emerging AI Program (Support for Young Researchers)" (hereinafter referred to as "this program") under BOOST aims to fundamentally strengthen Japan's international competitiveness by selecting, through public invitation for applications, research projects from excellent young researchers who will be responsible for the emerging AI field, which has been designated as a field that is strategically important and urgent for the nation, and supporting their research activities. This Program designed to select research subjects from outstanding researchers through public call and provides support for research funds, etc. The program was newly established in the FY2023 supplementary budget as a project with a special and urgent purpose as described below.

1) In the field of AI, where there is fierce competition for talent internationally, national institutes, etc., which are core organizations leading national projects and have a rich research infrastructure (including research funds) in the field and information infrastructure essential for AI research, will attract outstanding young researchers from all over Japan, consolidate part of their efforts, and provide appropriate treatment,
2) This Program will also promote interdisciplinary fusion between other fields and the AI field and the mobility of human resources, and
3) Use the “cross-appointment system” which allows for more flexible setting of work hours and work environment based on cross-appointment agreements between organizations compared to the “concurrent employment system.”

This Program aims to create an environment and improve the treatment of young researchers who wish to take on the challenge of the emerging AI field, a national strategic field, so that they can freely and independently engage in research in the most suitable place, regardless of their affiliated institution, and grow. Specifically, it supports research and development conducted by young researchers at research institutions with a good research environment in the emerging AI field by using the cross-appointment system. This Program encourages researchers to take on the challenge of national strategic fields by going beyond their own high level of expertise and integrating different fields beyond that, and encourages them to belong to multiple organizations across the

industrial, academic, and government sectors, thereby promoting the mobility of human resources working in national strategic fields.

In this Program, if the cross-appointment institution is a university, etc. (a national or private university, national or public research institute, public research institute such as an independent administrative institution, or a public-interest corporation, etc., recognized by JST), the personnel expenses borne by the cross-appointment institution (hereinafter referred to as "cross-appointment personnel expenses") can be paid as direct expenses of this Program.

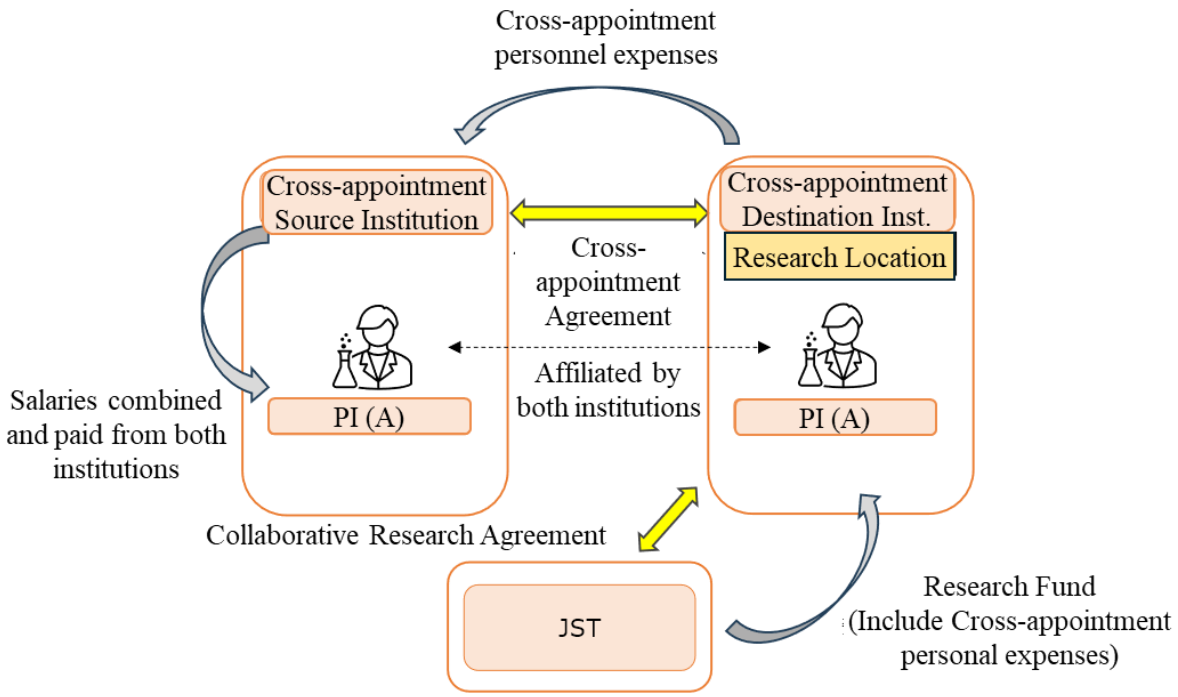
Regarding cross-appointments in this Program, please refer to "1.1.2 Cross-appointment in the Fostering Researchers in Emerging AI Program (Support for Young Researchers)" and "3.3.1 Research Expenses (Direct Expenses)" regarding the recording of cross-appointment personnel costs.

○ About the cross-appointment system (Ministry of Economy, Trade and Industry webpage)
https://www.meti.go.jp/policy/innovation_corp/cross_appointment.html (Japanese Only)

1.1.2 Cross-appointment in the Fostering Researchers in Emerging AI Program (Support for Young Researchers)

In this Program, research will be carried out using the cross-appointment system. In light of the aims of the Program, the total annual income from cross-appointment must be more than the annual income before the cross-appointment. Research institutions that accept cross-appointments, which serve as places of research, must be located in Japan. Cross-appointment institutions must have a system that enables favorable treatment to researchers selected under this Program.

Once a system has been developed for the organization to become a cross-appointment institution with this Program (or development has been planned), institutions that have applied to be listed on the Program's webpage for research proposal applications will be published on this page in order of application. Researchers who wish to apply for this Program, but are undecided on the cross-appointment institution that will serve as their place of research, should look at these. Research institutions that are developing a system to become a cross-appointment institution with the Program and that wish to be listed on the webpage should contact the address below to inform us of this.boost-yr-inquiry@jst.go.jp



Cross-appointments in this Program (Example)

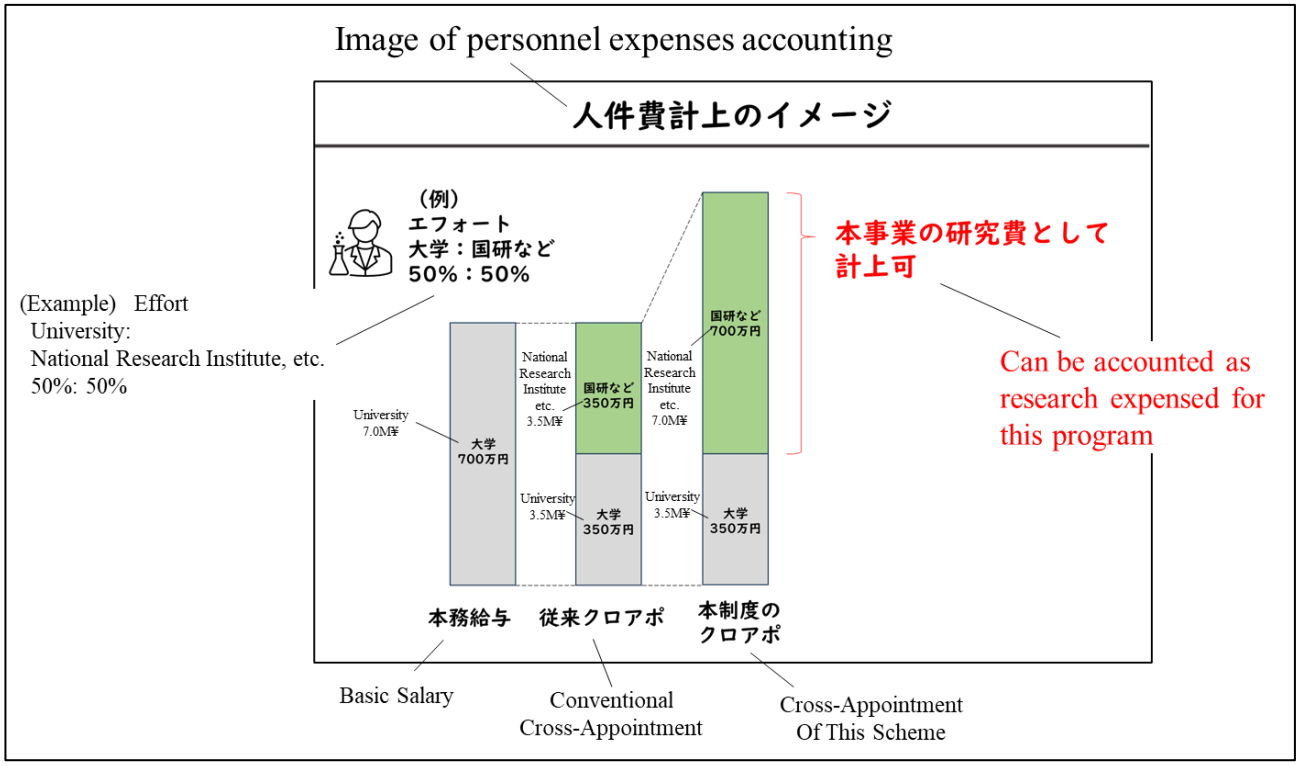


Image of salary improvement under this Program (Excerpt from the document of the Ministry of Education, Culture, Sports, Science and Technology (MEXT))

1.1.3 Management of the Fostering Researchers in Emerging AI Program (Support for Young Researchers)

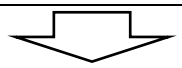
JST will appoint a Program Officer (PO) who is responsible for this Program. PO supervises the challenging research of young researchers in national strategic fields. During this process, Advisors (ADs) will be assigned to assist PO, and with their cooperation the PO will provide guidance and progress management for each researcher to contribute to maximized outcomes.

PO-led activities, such as selection, evaluations (interim evaluations, ex-post evaluations, etc.), and the investigation and approval of selected research plans (including research budget plans), will be carried out with the cooperation of ADs, external experts, and other persons. JST will make the final decision concerning any selection and evaluation results compiled by the PO.

JST will also carry out research promotion activities such as the development of research environments, PR and outreach for research, and support for patent applications.

1.1.4 The Process from Applying for the Fostering Researchers in Emerging AI Program (Support for Young Researchers) to the Start of Research

1) Research Proposal Submission
・ Research applicants submit research proposals to JST via e-Rad. When submitting a proposal, be sure to register both the main research field and the secondary research field, as these will be required for the review. (For details, please refer to "5.4 Notes specific to this Program when registering with e-Rad.") ・ It is possible to apply even if you have not decided on the cross-appointment institution at the time of your research proposal submission.



2) Document Screening
・ There will be a document screening carried out by the PO and ADs after the forms have been confirmed by JST.

3) Interview Selection
・ As a result of the document screening, applicants who are selected for interview selection will be notified by email and will be provided with information about the interview selection process, schedule, additional documents that need to be submitted, etc. ・ The status of coordination with the cross-appointment institution will be confirmed during the interview selection. We recommend that research applicants get in touch with their preferred cross-appointment institution before the interview selection.

4) From adoption to the start of research

- Research applicants who have been selected (selected researchers) based on the screenings will be informed of this via email, and will also be given information about the procedures for starting their research, such as a contract. After the procedures are completed, they can start their research as Research Directors (PIs: Principal Investigators).
- If you need time to coordinate a cross-appointment agreement between institutions, the start of the research may be postponed for up to one year until the preparation has been finished and research can commence in the cross-appointment institution. The selected researcher will retain their eligibility during this period. Selected researchers who make use of the postponement system can start their research as PIs when the cross-appointment, etc. conditions (conclusion of a cross-appointment agreement, realization of an appropriate salary increase through the agreement, and other conditions presented at the time of adoption) are in place, and it becomes possible to conclude a collaborative research agreement.

  * If the conditions for starting research, such as cross-appointment (conclusion of a cross-appointment agreement, realization of an appropriate salary increase through the cross-appointment, and other conditions presented at the time of selection) are not met during the postponement period and the research is not started by the last day of that, the research applicant will lose his/her eligibility as selected researcher.

    (For more details, see “3.6 System for Postponement of the Start of Research, and Interruption and Extension of Research”)

1.2 For Researchers Considering Applying or Participating in the Programs

1.2.1 Contribution to the accomplishment of sustainable development goals (SDGs)

JST to contribute to the accomplishment of SDGs!

At the "United Nations Sustainable Development Summit" held in September 2015,"Transforming our world: the 2030 Agenda for Sustainable Development" was unanimously adopted; the document was an achievement with "SDGs" at the core as a further comprehensive and new action target common to the world for the human beings, the Earth, and the welfare. The seventeen goals in the SDGs do not only indicate various problems in relation to the sustainability that is facing the humankind but also demand that those problems be solved comprehensively and in an integrated way. It is expected that scientific and technological innovation solves such social problems and that scientific evidence is provided to contribute to the formulation of excellent policies. We can say that these roles conform to "the science in the society and the science for the society", a new task of the science that was declared in "World Declaration on Science and the Use of Scientific Knowledge" (Budapest Declaration*), adopted at International Council for Science in 1999. As a core organization to promote the science and technology policies in Japan, JST promotes advanced fundamental research and works on the research and development of a problem-solving type to meet the requests from the society. SDGs are one of the worldwide objectives that can itemize all JST missions. We, in the course of the JST programs, want to collaborate with industries, academia, government agencies, and private enterprises and cooperate with researchers to realize a sustainable society.

President, Japan Science and Technology Agency (JST)

*The Budapest Declaration states that "science for knowledge", "science for peace", "science for development" and "science in society and science for society" are the responsibilities, challenges, and obligations of the science in the 21st century.

1.2.2 Promotion of Diversity

JST Promotes Diversity!

The diversity is essential requisite for promotion of scientific and technological innovations. It is possible to open a new perspective of science and technology by the collaboration and discussion with various stakeholders having different specialties and values, irrespective of gender and nationality. JST is, by promoting advances in diversity in its all activities in science and technology, undertaking possible problems of our future society, contributing to the strengthening of industrial competing power of Japan as well as to the enrichment of spiritual happiness of people. Our activities in this field accord with the "Sustainable Development Goals (SDGs)" agenda of the United Nations, in which goals relevant to diversity advancement are shown, including gender equality, contributing to efforts on our domestic problems but also to those on problems common to various countries.

Currently, the activity of woman is being positioned at the core of the Growth Strategy of the Japanese Government, being started as "the largest potential of Japan" in the strategy paper. Expending the participation of woman researchers in research projects is substantially important for advancing research and development, as they are a party of various researchers supporting science and technology innovations. JST is expecting that woman researchers would take this opportunity, positively and will apply to our research programs, actively. JST is undertaking the improvement of our "Childbirth, Child-raising, Nursing Care Support System", to constantly, based on the voice of the system users, creating environments enabling a researcher on leave to return his/her research, for example.

The call for and review of research proposals will be conducted also from a viewpoint of advancing diversity. Our dear researchers, we cordially invite you to the call for research proposals of this Program.

President, Japan Science and Technology Agency (JST)

We Are Waiting for Your Application!

JST promotes diversity based on the idea that diversity is about understanding people who think differently from you and integrating your ideas with theirs to create new value. This leads not only to solving domestics issues but also to solving issues common to the world, and we will address global social issues such as the SDGs through the promotion of diversity in cooperation with overseas institutions.

Diversity at JST is not only for women, but also four young researchers and non-Japanese researchers. To ensure that each researcher can fully demonstrate her or his abilities, we continue to provide support for childbirth, childcare, and nursing care, and we strive to maintain a balanced staffing structure for committees and other activities. Aiming to create an environment where a wide range of people can work hard together, we especially welcome applications from female researchers, who have been scarce in the past, and work to create new value.

We are sincerely waiting for your active applications, especially those form woman researchers.

Diversity Promotion Supervisor

General Manager, Diversity Promotion Office

Japan Science and Technology Agency (JST)

1.2.3 Toward the Promotion of Fair Research

Toward the Promotion of Fair Research

Recent incidents involving misconduct and dishonesty in research activities have resulted in an alarming situation that threatens the relationship of trust between science and society, and hinders the healthy development of scientific technologies. To prevent misconduct in research activities, there must be a function of autonomous self-purification in the scientific community. Each researcher must strictly adhere to strict discipline and work to create new knowledge and inventions that are useful for society, based on high moral standards that meet the expectations of society.

As a funding agency for research, the Japan Science and Technology Agency (JST) considers research misconduct to be a grave issue and makes every effort to prevent it in cooperation with relevant organizations, with the goal of regaining public trust.

1. JST believes that honesty in research activities is extremely important for Japan, which seeks to develop itself through science and technology.
2. JST supports honest and responsible research activities.
3. JST strictly condemns any misconduct in research activities.
4. JST will promote education in research ethics and reform its research funding programs in cooperation with relevant organizations, in order to prevent misconduct.

We must develop a healthy scientific culture based on social trust, so as to build a society filled with hopes and dreams for a bright future. We therefore request the continued understanding and cooperation of the research community and related institutions.

President, Japan Science and Technology Agency (JST)

Chapter 2 Call for and Selection of Applications

2.1 Overview of Research Areas Eligible for Applications

AI technology is bringing rapid change to people's intellectual work, and influencing a variety of fields including industry, R&D, education, and production. Consideration of national strategies and policies has increased quickly in countries around the world. Meanwhile, Japan's research capacities and competitiveness in the field of AI are falling behind those of other countries, and there is an urgent need to drastically strengthen support to increase innovation and industrial competitiveness in national strategic fields.

This Program is focused on applications for AI research and research in emerging and fusion areas of the AI field. More specifically, we want proposals for wide-ranging AI research that includes everything from basic to applied research, such as AI foundations, math, natural language processing, image recognition, speech recognition, algorithms, optimization, architecture, human interaction, robotics, security, machine learning, and HPC. We also want ambitious proposals that will incorporate cutting-edge AI technology in all kinds of academic fields, including science, engineering, and the social sciences, and develop research in an exceptional manner. We anticipate that young researchers who want to take on the challenge of the next-generation AI field, which is a very urgent national strategic field, will make use of their own high levels of expertise and have the positivity to go beyond this and take on the challenge of national strategic fields.

The Program also emphasizes the perspective of fostering human resources. By creating places where young researchers from different fields can interact with and inspire each other, it aims to foster research talent who will promote advanced research that will contribute to national strategic fields, and to create a human network of researchers that will lead to future collaboration.

2.2 Submission Period and Selection Schedule

Please refer to "Introduction: (1) Call for Research Applications and Selection Schedule" for the submission period and selection schedule.

2.3 Research Period

In principle, the research period will be five years from the start of the research (January 2025 or after).

*The actual research period will be determined based on the review and approval of the research plan of the research proposal. For details, please refer to "Chapter 3: Research Promotion After Selection."

2.4 Research Costs (Maximum Amount)

The budget amount per project is, in principle, up to 50 million yen (direct expenses; full year; research period: 5 years). Furthermore, based on the Collaborative Research Agreement, JST will add indirect expenses (up to 30% of direct expenses) to the research expenses (direct expenses) and pay them to the research institution as research expenses.

*The proposed research expenses will be assessed during the selection process. Furthermore, the actual research expenses will be determined after the research plan for the project has been scrutinized and approved. For more information, please refer to “Chapter 3: Research Promotion After Selection”.

2.5 Number of Proposals to be Selected

A maximum of 200 proposals will be selected. (However, this may be subject to change depending on the application situation.)

2.6 Application Requirements

Please be aware of the following matters described in this section below when applying.

In addition to the following, please be sure to read and understand the information provided in “Chapter 4: Key Points in Submitting Proposals”

2.6.1 Requirements for Applicants

If the following requirements a. through h. are not met by the time of selection, in principle, the research application will not be accepted nor selected.

Once selected, the following requirements must be maintained throughout the entire research period of the research project. If any of the requirements become non-compliant during the research period, in principle, the whole, or a part of, the research project will be terminated (early termination).

a. The applicant must be the PI himself or herself. No restriction on nationality.
b. The applicant must be capable of conducting research independently to execute his or her own research plan.
c. You should be able to use the cross-appointment system to carry out research while affiliated with a research institution in Japan.
    * Your total annual income with the cross-appointment must be more than your annual income before starting research.
    * If you are using the application to the Program to engage in a new cross-appointment (if your cross-appointment is not in place by the application deadline), please use the cross-appointment institution as your place of research. If your cross-appointment is in place by the application deadline, you can choose your place of research.
    * *You can apply even if the cross-appointment institution has not been decided at the time of proposal.
    * You can only carry out research through this Program while you are using the cross-appointment system and are affiliated with a research institution in Japan, but the location of your affiliated

institution (in Japan or overseas) does not matter when you apply. If you are not currently affiliated with a research institution in Japan, you can apply on the condition that you will sign an employment contract based on a cross-appointment agreement with a Japanese research institution and start research at this institution.

* Researchers who are currently affiliated with companies are also eligible if they sign an employment contract based on a cross-appointment agreement with a Japanese research institution and are able to accomplish satisfactory research in accordance with the purpose of the project in the research institution in question.
* If time is needed to coordinate a cross-appointment agreement between institutions, the start of the research may be postponed for up to a year until a system has been developed and research can commence in the cross-appointment institution. The selected researcher will retain their eligibility during this period. Selected researchers who make use of the postponement system can start their research as PIs when the cross-appointment conditions are in place, and it becomes possible to conclude a Collaborative Research Agreement. (For more details, see "3.6 System for Postponement of the Start of Research, and Interruption and Extension of Research")
* Foreign researchers should be aware of the followings:
  - A requirement of the Program is the ability to handle paperwork in Japanese (or to have an environment in which you can handle the paperwork with support).
  - You should complete the procedures to obtain a visa, update your period of stay and change your status, etc. If you do not meet the requirements for researcher status, your research proposal will not be selected and measures will be taken to suspend your research project, etc.
  - If a researcher is subject to regulations based on the Foreign Exchange and Foreign Trade Act due to their identification, etc., their research proposal will not be selected and measures will be taken to suspend their research project, etc.

d. The applicant must be a researcher who is capable of conducting his or her own research in a responsible manner throughout the entire research period.
   * For details, please refer to "3.7 Responsibilities of the Selected Researchers."

e. The applicant must have earned a doctoral degree as of April 1, 2024.

f. The applicant must meet one of the following experience requirements.
   (a) As of April 1, 2024, it has been less than 10 years since you obtained your doctorate (you obtained your doctorate on or after April 2, 2014).
   (b) If there was a period within 10 years of receiving your doctorate when you were not able to focus on research due to childbirth and childrearing: As of April 1, 2024, it has been less than 15 years since you obtained your doctorate.

(c) If there was a period within 10 years of receiving your doctorate when you were not able to focus on research due to being involved in nursing care, etc.: As of April 1, 2024, it has been less than 12 years since you obtained your doctorate.

* If you write the date and university from which you received your doctorate on your research application, or you obtained your doctorate before April 1, 2014, please write the reason for this. If (b) is applicable to you, please submit a copy of your Maternal and Child Health Handbook via e-Rad. If (c) is applicable to you, please submit a copy of your certificate for nursing care requirement authorization and documents that include the frequency and institution at which you provided care. JST will check these if necessary.

g. The applicant must have completed a program on research ethics education at the affiliated research institution in advance, or an educational program offered by JST by the submission deadline.

* For details, please refer to "4.1 Enrolling in and Completing the Educational Program on Research Integrity"

h. The applicant must be able to pledge the following four points:

- Understand and comply with the "Guidelines for Responding to Misconduct in Research" (Decreed by the Minister of Education, Culture, Sports, Science and Technology on August 26, 2014).
- Understand and comply with the "Guidelines for the Management and Audit of Public Research Funds In Research Institutions (practice standards)" (Revised on February 1, 2021);
- If the research application is selected and the research starts, the PI shall not engage in fraudulent activities (fabrication, falsification, and plagiarism) or misuse of research funds; and
- No misconduct in research activities has been committed in the past research outcomes described in this research application.

2.6.2 Research Organization Requirements

a. A PI will conduct the research on his or her own (alone) or together with postdoctoral fellows, research assistants, students, and others who are under the management and supervision of the PI. If necessary, new researchers, postdoctoral fellows, research assistants, etc. can be hired within the scope of research expenses. Additional support for doctoral students assisting in emergent research as RAs, etc., may be available under certain conditions for the payment of an appropriate level of compensation for their assistance services. Collaboration and joint research with other researchers as necessary to carry out the research is possible, but research funds cannot be allocated.

b. PIs must use the cross-appointment system and be a member of a research institution in Japan (JST will only sign a Research Contract with a research institution in Japan). Research or the use of research funds overseas should be based on the regulations of your affiliated research institution in Japan.

2.6.3 Requirements for Research Institutions to conduct the research

When conducting research, the research institutions must be fully aware that the source of budget for collaborative research is public funds, comply with all relevant laws and regulations, and strive to conduct the research efficiently. If the duties stated in section 3.8, "Responsibilities of Research Institutions", are not fulfilled, you will not be allowed to conduct your research at a research institution. Note that we will cancel your research project or take some other measures if it becomes obvious that the duties are not fulfilled after your application is selected. We encourage all parties concerned to treat the voluntary applications made by individual researchers with as much respect as possible when they make applications for this Program.

2.7 Submission

For information on how to apply, please refer to “Introduction: Overview of the Call for Research Application (2) Submission of Research Proposal”.

2.8 Selection Method

For the schedule, please refer to “Introduction: Outline of the Call for Research Proposals (1) Call for Research Applications and Selection Schedule.”

2.8.1 Flow of Selection

The PO, with the cooperation of the ADs and external experts, will conduct the selection process through document review and interviews. A first stage of selection may be conducted when screening the documents, depending on the number of applications, etc. The first stage of selection will be conducted mainly from the perspective of whether the proposals meet the objectives of the Program, and only those research proposals that meet this objective will be screened through the documents. Whether or not a first stage of selection will be conducted will not be made public.

In addition, surveys other than those mentioned above may be conducted as part of the selection process, if necessary.

The names of the ADs will be announced on the research proposal call webpage once they have been decided.
https://www.jst.go.jp/program/boost/yr/call/index.html (Japanese only)

2.8.2 Conducting Interview Screening and Notification of Selection Results

a. The applicants who have been selected for interviews as a result of the document screening will be notified by e-mail along with the information about the interview process, the schedule, and additional materials to be submitted. The applicant may be asked to submit applications, plans, and other document for other research funds at the time of interview screening. If the applicant is affiliated with a commercial organization, etc., it may be requested to submit a financial statement. As soon as the schedule of interview screening is fixed, it will be announced on the Call for Research Applications website.
https://www.jst.go.jp/program/boost/yr/call/index.html

b. At the interview screening, the applicant himself or herself is asked to explain the research plan. In principle, the interviews are conducted in Japanese, however if the applicant has difficulty in Japanese conversation, interviews in English are also possible.

c. Unsuccessful applicants will be notified of the selection results in writing by e-mail after the selection results are confirmed. In addition, the review comments for rejection will be separately sent e-mail from the e-Rad for unsuccessful applicants.

d. As a result of the selection process, the selected applicant will be notified in writing by e-mail along with the information on the procedure for starting the research.

* Those applicants who are likely to be selected as a result of the interview screening will be contacted by JST (by phone or e-mail) to confirm whether or not the Collaborative Research Agreement can be completed in November 2024 or later.

* Please set your e-mail address registered with e-Rad to be able to receive e-mail messages even after the selection period has ended.

2.8.3 Conflict of Interest Management

We take the management of conflicts of interest based on the provisions of JST from the viewpoint of a fair and transparent evaluation and the distribution of research funds. If you have any concerns regarding the reviewers involved in the selection process, please indicate them in the "Special Notes (Form 7)" of the research proposal.

(1) Persons Involved in the Selection Process

To ensure fair and transparent evaluations, the following persons and parties who have conflicts of interest with an ‘applicant’.

a. Persons, who are relatives of research project applicants:

b. A person who belongs to the same department, major, etc. at a university or other research institution as the applicant; or a person who is considered to be involved in the management of the university or other research institution to which the applicant belongs; a person who is an officer or other person involved in the

management of the university or other research institution; or a person who represents such an institution externally.

* The same department, major, etc. here refers to one above the smallest research unit, i.e. a laboratory or research team.

c. Persons, who belong to the same company as the research proposer or a company that is the parent company of the company to which the person being evaluated belongs.

d. Persons, who are conducting a close collaboration in a research work with research project applicants. (Examples are persons, who are conducting a joint research project or have co-authored a paper with research project applicants, a researcher pursuing the same research objectives as research project applicants, or a co-researcher of the proposal of research project applicants, and others, being recognized those practically affiliated with a research group with which research project applicants are affiliated.)

e. Persons in a close teacher-student relationship, or in a direct employer-employee relationship.

f. Persons in academic competition with the research subject of the research proposer or a person who belongs to a company that is in competition in the market.

g. Persons in other relationships judged by JST to representing conflicts of interest with research project applicants.

(2) Conflict of Interest Management for Research Applicants

When a research applicant specifies an “organization in relation to the research applicant” as a participating organization while making an application and if JST allocates some research funding to the "organization in relation to the research applicant”, this may lead to some conflict of interest concerning the research applicant. Therefore, to avoid any doubt or the like of any third party, we take the management of such conflicts of interest with respect to the conflicts of interest between such research applicant and such "organization in relation to the research applicant" in an appropriate consideration to the necessity, rationality, adequacy, etc. of the applicable relation.

An "organization in relation to the research applicant" here refers to any participating organization that comes under any following condition. Note that not only the research applicant but also the spouse and the relatives in the first degree of the research applicant (referred to as "researcher etc." from here) are regarded as the same in items "a" and "b" below.

a. An organization founded on the achievement of research by the researcher, etc. (including the cases in which the researcher etc. do not have any direct relation in the management of the organization but are appointed as a technical advisor or the like and in which the researcher etc. only have some stocks of the organization).

b. An organization of which the researcher, etc., are appointed as directors (including CTOs and excluding technical advisors).

c. An organization of which the research applicant has some stocks.

d. An organization from which the research applicant has revenues as a license fee.

Our screening committee makes deliberation from the vantage points of the necessity, rationality, adequacy, etc. of the applicable organization with respect to the application, including the "organization in relation to the research applicant" as a participating organization.

For this purpose, declare that the "organization in relation to the research applicant" is included as a participating organization in the column for special remarks (Form 7) in your application form if you specify an "organization in relation to the research applicant" is included as a participating organization.

To implement the management of the conflict of interest with the research applicant, additional documents may be asked.

(3) Conflict of Interest with JST

It is regarded as conflicts of interest on the side of JST (conflicts of interest as an organization) to distribute, in this Program, a research fund to a company JST has invested in (hereinafter "invested company"). Therefore, to avoid any doubt of any third party, JST clarifies it to avoid the conflict of interests between JST and the invested companies.

The selection committee will deliberate on the necessity, reasonableness, and appropriateness of adopting the funded company as a participating institution for the proposal in which JST's funded company will participate.

Therefore, if you wish to include a company funded by JST as a participating organization, please declare that the company is included in the participating organization in the "special remarks (Form 7)" of the research proposal.

This management is taken to guarantee the fairness and transparency of the process on the side of JST. It is not disadvantageous to have accepted funds from JST in the process of the adoption in this Program. You are asked to be cooperative in JST's management of conflicts of interest.

* As for JST invested company, please refer to the following website. Companies which have finished the investment form JST are not regarded as institute with conflict of interest and researchers who belongs to these companies are not requested to declare.
  https://www.jst.go.jp/entre/en/result.html
* Standard date for the declaration starts from the date which call for research applications have started. Companies which are selected but not yet disclosure as JST invested company, are not requested to declare in accordance with the non-disclosure commitment. Please refer to the following website for disclosure of investment by JST.
  https://www.jst.go.jp/entre/news.html (Japanese only)

2.9 Selection Perspective

(1) Selection Criteria (Pre-evaluation Criteria)

Selection criteria are as follows (It is a prerequisite to meet the “2.6 Application Requirements”):

a. It is consistent with the objectives of the Program;
b. The research is application eligible for this call for applications (see “2.1 Eligible Research Applications”).
c. The research application is based on the applicant’s own ideas;
d. The applicant has the willingness to execute the research plan, and it feels feasible;
e. The applicant has the necessary research capabilities and systems;
f. The applicants are expected that through putting research ideas into practice and through discussions and mutual inspiration with other researchers, and are to be leaders in the emerging AI field in Japan.

(2) “Unreasonable Duplication” and “Excessive Concentration” of Research Budgets

Whether the application falls under "unreasonable duplication" or "excessive concentration" of research budgets is also a factor in the selection. For details, please refer to “4.2 Measures Against Unreasonable Duplication and Excessive Concentration.”

Chapter 3 Research Promotion After Selection

3.1 Creation of Research Plan

a. Once selected, a research plan is to be created for the entire research period. In addition, an annual research budget plan is to be created for each fiscal year. The research plan includes research budget and research team organization plans. The proposed research budget will be assessed through the selection process. The actual research budget will be determined after the review and approval by PO at the time of formulating the research plan for the research project.

b. Research plans become official once they are examined and approved by PO. PO will offer advice and coordination assistance on the research plan and provide instructions when necessary.

c. PO, in approving research project plans may merge or link research projects, or take other coordinative actions.

* Research organizations and budgets set forth in research plans may be revised during the research project period in response to overall Program budget conditions or factors like results of research evaluations.

3.2 Collaborative Research Agreement

a. Once a research project is selected, JST, in principle, will enter into concluding a Collaborative Research Agreement with the research institutions with which the PIs are affiliated.

b. If it is not possible to conclude Collaborative Research Agreement with these research institutions, or not possible to put in place the management and audit systems required in connection with the use of public funds, or if the related research institutions are conspicuously financially unstable, it may be impossible to pursue research at the research institutions in question. For more details, please refer to “3.8 Responsibilities of Research Institutions”.

c. In principle, patents and other intellectual property rights resulting from research shall, in accordance with Collaborative Research Agreement contract terms, reside with research institutions under the condition that the research institutions abide by the items provided in Article 17 (Japanese version of the Bayh-Dole Act) of the Industrial Technology Enhancement Act.

d. If a PI is transferred to another institution, the research can be continued on the condition that the salary level in line with the purpose of this Program. It is not permitted to change the PI as a result of the transfer. It is stipulated in the Collaborative Research Agreement that, in principle, items acquired with research budget (direct cost) must be transferred in some ways to the research institution to which the PI is transferred. For details, please check the Collaborative Research Agreement template that will be released soon.

3.3 Research Costs

JST pays the costs of a contract research, to the research institution that have concluded a Collaborative Research Agreement with JST. The costs consist of the research cost (the direct cost) and the indirect cost that is 30% of the direct cost in principle.

3.3.1 Research Budget (Direct Costs)

Research budget (Direct Costs) are those that are directly related to and required for pursuing the subject research. Research costs include:

a. Commodities: Costs for purchasing new facilities (*1), equipment, consumable supplies, etc.
b. Travel Expenses: Expenses for travel by the PI and Research Participants listed on the research plan etc.
c. Personnel expenses and honoraria: Cross-appointment personnel expenses for PI (*2), and personnel costs and honorarium for research participants
d. Others: Expenses for publishing research outcomes (paper submission fees, etc.), equipment leasing, transportation for equipment and etc. (*3)

*1: The purchase of new research equipment and apparatuses shall be proceeded according to the "Research Equipment and Apparatus Sharing Systems for Research Organization Units" (hereinafter referred to as "apparatus sharing systems"), which shall operate on the premises of "Introduction of New Research Equipment and Apparatuses Operating Integrally with Research Organization Management" (Advanced Research Fundamentals Working Group, Scholarship Commission, November 2015). Please refer to "4.12 Promotion on Effective Use of Research Facilities and Equipment".

*2: The required amount of cross-appointment personnel expenses may be paid as long as the cross-appointment institution is a university, etc. In light of the aims of the Program, the total annual income with cross-appointment must be more than the annual income before the cross-appointment. (It is assumed that cross-appointment personnel expenses will also be paid by the cross-appointment institution as well as from the above research costs (direct costs).) However, if you carry out work other than research for this Program at the cross-appointment institution, the maximum expenditure is the percentage of time allocated for this Program's research (when 100% = the total amount of working hours at the cross-appointment institution) multiplied by the cross-appointment personnel expenses. In light of the special nature of this Program, it is exempt from "Paying PI personnel expenses from direct costs from competitive research funding" (arranged by the relevant ministry on October 9, 2020) and the JST policy based on "Paying PI personnel expenses from direct costs from competitive research funding." Moreover, as it is possible to ensure the effort required for this Program's research by making adjustments to the

cross-appointment agreement, and it is possible to pay personnel expenses for the PIs themselves as cross-appointment personnel expenses from this Program's direct costs when ensuring effort, this Program is also exempt from the "Review to enable the payment of costs for non-research administrative work from direct costs from competitive research funding (introduction of buyout system)" (arranged by the relevant ministry on October 9, 2020).

In terms of research costs other than cross-appointment personnel expenses, as this Program falls under competitive research funding, you should ensure that an appropriate amount of money is allocated to enable the proposed research.

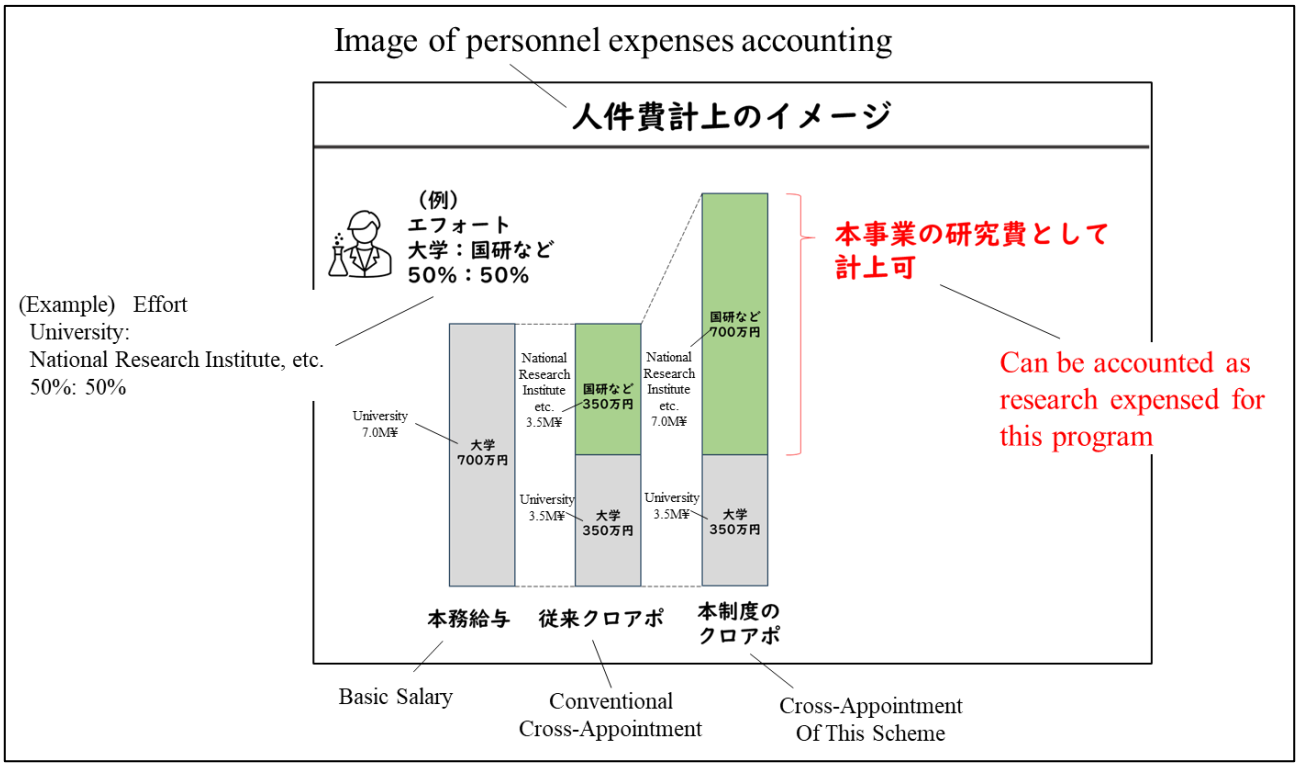


Image of salary improvement under this Program (Excerpt from the document of the Ministry of Education, Culture, Sports, Science and Technology (MEXT))

*3: Outsourcing is permitted if it is necessary to conduct the research. In the case of such outsourcing, however, it is assumed that it is under a service agreement that does not include research and development elements. Subcontracting that includes research and development elements is, in principle, not permitted.

NOTE: The following are examples of items not handled as research costs (direct cost).

- Costs for items not consistent with the research objectives.
- Costs that are considered to be more appropriately handled as overhead costs (indirect cost).

- Costs that JST judges that use is not appropriate in the settlement of commissioned research expenses (*).

  * JST has established rules and guidelines specific to this project for some items in the Contract Research Agreement, the Official Administration manual, and the Common Fund Handling Classification Table for Ministries and Agencies. For more information, please refer to the latest the Official Administration manual and other documents at the following URL.

    https://www.jst.go.jp/contract/index2.html (Japanese only)

3.3.2 Overhead (Indirect) Costs

Overhead (indirect) costs are costs required for the management, etc. of research institutions pursuing research; they are in principle capped at 30% of direct costs. According to “Common Guidance for the Execution of Indirect Expenses of the Competitive Fund” (agreed upon by the coordination committees of relevant ministries and agencies in April 20, 2001, and revised on May 31, 2023), a policy on use, etc. shall be created and shall be systematically and properly executed to ensure that use of indirect expense be transparent.

3.3.3 Multiple-year Contract and Carryover

From the perspective of more effective and efficient use of research funds for maximizing research outcomes and preventing fraud, JST has adopted multi-year contract for Collaborative Research Agreement to enable carry-over of collaborative research funds and procurement agreements spanning over the fiscal years.

3.4 Evaluation

PO carries out interim evaluations and ex-post evaluations of research projects with the cooperation of the AD and others, to gain an understanding of the progress of the research and any research outcomes. The interim evaluation takes place in around the third year after research has started, and the ex-post evaluation is carried out either as soon as possible after the research is finished or at an appropriate time before the research is finished.

3.5 Research Conferences

In this Program, research conferences that aim to check research progress, create a network of PIs, increase the understanding of diverse research fields, and realize fusion research are held by PO, JST, and PIs. PIs should participate in residential-type research conferences together with PO, ADs, and diverse external experts (around twice a year) and give presentations and carry out discussions on their research outcomes. When research conferences are held, PIs should be involved in the planning and management.

The aim is for PIs to not only participate in discussions and exchanges with PO, ADs, and diverse external experts, but also to create a vision and goal for themselves as PIs as well as research concepts for future development through joint growth and mutual inspiration, and to secure the creation of a network.

It is also recommended that PIs hold various meetings (study sessions, public events, etc.) based on their own independent plans as part of their research activities. JST will support the planning and management.

In addition, PO and ADs will give advice and guidance about initiatives to ensure an appropriate research environment for individual research content and the execution of research through site visits to different PIs, etc.

3.6 System for Postponement of the Start of Research, and Interruption and Extension of Research

(1) System to postpone the start of research

If you need time to coordinate a cross-appointment agreement between institutions, the start of the research may be postponed for up to a year until a system has been developed and research can commence in the cross-appointment institution. The selected researcher will retain their eligibility during this period. Selected researchers who make use of the postponement system can start their research as PIs when the conditions to start research are in place, e.g. the cross-appointment (a cross-appointment agreement is concluded, an appropriate pay increase is realized through this, other conditions presented at the time of selection), and it becomes possible to conclude a contract of (collaborative) research agreement.

However, when you start research, you must still meet the application requirements that you met when you were selected (see “2.6 Application Requirements”).

* You will be informed of the applicable date for the system to postpone the start of research after being told the review results.
* If the conditions for starting research (e.g. cross-appointment) do not fall into place during the postponement period for the start of research (a cross-appointment agreement being concluded, an appropriate pay increase being realized through this, and other conditions presented at the time of selection), and you are unable to start your research by the final day of the postponement period, you will no longer be eligible as a selected researcher.

(2) Research interruption and extension system

If, after research has started, the PI undergoes a life event (childbirth, childcare, care giving) and it is difficult to continue their research, they can temporarily suspend the research with permission from the PO and JST. It is possible to extend the research period in accordance with the suspension period. In this case, after the research restarts, JST will provide the same amount of research funds that went unused due to the research suspension. The suspension period will be decided through discussion by the PIs, PO, and JST.

For more details, please check the (JST) official administration manual for contract research (supplementary version) that will be published soon.

(3) Postponement of the start of research and the maximum extension for research

In principle, the postponement period for starting research based on "(1) System to postpone the start of research" and the extension period for research based on "(2) Research interruption and extension system" should be no more than two years when the systems are combined.

3.7 Responsibilities of the Selected Researchers

a. PIs are obliged to conduct their research, honestly and effectively, fully understanding that their research is funded by precious tax revenues collected from citizens.

b. These persons must agree with fulfilling the following duties presented to them at JST briefing and other and submit an agreement to JST, after their research projects are selected.

   1) Comply with application guidelines and other requirements.

   2) Understand that JST research budgets are funded by tax revenues from citizens and do not become involved in any research misconduct, including fabrication, falsification, and plagiarism, and/or the improper use of the research fund.

   3) Ensure that all the researchers and others participating in the research project are informed of the JST-designated Educational Program on Research Integrity (eAPRIN (ex-CITI Japan) e-learning program) and let them to enroll in and complete the Program. For details, refer to "4.29 Duty to Complete Education on Research Ethics and Compliance". Note that failure to complete the Educational Program on Research Integrity would result in the suspension of the research budget until the completion has been confirmed by JST.

c. Pursuing and Managing Research

   1) PIs are responsible for arranging research conducting locations and environments necessary for pursuing their research. If serious weaknesses in theses are found, the research project may be cancelled.

   2) PIs are responsible for submitting research reports and other required documents to JST (including PO) as well as for materials preparation required for the evaluation of their research project. They also are responsible for submitting a research report describing the progress of their research to PO on his/her request as well as for regularly submitting a semiannual report to him/her.

d. PIs will be responsible for the control and management of research budget, administrative procedures, management of research participants, travel, etc. Please give consideration to the research environment, working environment and conditions of the research participants, especially of the researchers hired with the research budget of this Program.

e. When hiring young postdoctoral fellows with research budget, please make a proactive effort to support them in ensuring diverse career paths both domestically and internationally. An activity plan to support diverse career

paths for young postdoctoral researchers hired with research budget (*) will be confirmed at the interview screening. For details, please refer to "4.17 Support for Diverse Career Paths for Young Researchers"

* Some of the activities under this activity plan may be included in the research effort.

f. The PIs will be asked to participate in various events such as "Research Conferences" and networking events with doctoral students supported by the "BOOST: Broadening Opportunities for Outstanding young researchers and doctoral students in STrategic area" and to cooperate in planning and running these events.

g. Handling of Research Results

1) Given that research results are obtained with national government funding, it is requested that research results be actively reported both domestically and internationally, with due consideration for the acquisition of intellectual property rights.

2) When reporting on research results through research papers or other media, please acknowledge that the research results were obtained by this Program.

3) Research team members may be requested to participate in domestic and international workshops and symposia sponsored by JST and to report on research results there.

4) It is requested that an active effort be made to secure intellectual property rights. In principle, intellectual property rights are to be applied, in accordance with Collaborative Research Agreement contract terms, by the research institutions with which PIs are affiliated.

h. PIs are requested to actively engage citizens in discussions of science and technology to promote citizens' understanding and support of science and technology.

* Please refer to the guideline details in "4.21 Dialogue and Collaboration with Public Stakeholders"

i. PIs shall abide by Collaborative Research Agreement entered by JST and research institutions, and shall abide by JST's various rules.

j. It should be noted that JST will provide research project names, names of PIs, research budget information, and other required information to the Cross-ministerial R&D Management System (e-Rad) and the Government Research and Development Database. Research Directors and others, therefore, are going to be requested to provide these types of information in this respect. ("4.30 Provision of information from e-Rad to the Cabinet Office")

k. PIs are requested to working together with JST, for conducting Research evaluations, JST accounting examinations, accounting audits by the national government, and other similar activities.

3.8 Responsibilities of Research Institutions

Research Institutions must fully recognize that the research funds are public funding and ensure compliance with related law, and make efforts to implement the research effectively. Research will not be allowed to be conducted at

research institutions that cannot fulfill the responsibilities listed below, so please ensure that you obtain prior approval from all research institutions where you plan to conduct research when applying.

a. Research institutions are obliged to conclude a Collaborative Research Agreement with contents proposed by JST, as a standard, also they are obliged to properly implement a research, in accordance with the Collaborative Research Agreement (*), administration manual, and research plan approved by JST. In the case that they cannot conclude a research contract with JST, and in the case that they are judged by JST that they cannot properly implement a research, an implementation of a research at the institutions shall not be admitted.

※ The latest sample of Collaborative Research Agreement which is published on website.

b. Research institutions with an autonomous institutional management and audit system for public research budgets are obligated to properly execute the contract research funds in accordance with the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)" (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised on Feb. 18, 2014). in addition to reporting the status of their management and audit system for public research budgets to the Ministry of Education, Culture, Sports, Science and Technology, research institutions are also obligated to be corporative in various investigations into their system implementation and other related matters (4.28 Consideration on "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)").

https://www.mext.go.jp/a_menu/kansa/houkoku/1343904.htm

c. In accordance with the "Guidelines for Responding to Misconduct in Research" (August 26, 2014, adopted by the Minister of Education, Culture, Sports, Science and Technology), research institutions are obliged to implement regulations and systems necessary for preventing research misconducts, and are responsible for operating the regulations and systems effective in actual situations. Also, research institutions are responsible for responding to various investigations relating to the construction of administration based on the guideline (4.28 Consideration on "Guidelines for Responding to Misconduct in Research").

https://www.mext.go.jp/b_menu/houdou/26/08/1351568.htm

d. Research institutions are responsible for ensuring that associated researchers fully recognize the contents of the above guideline described in a., b. and c. and making them trained with educational materials related to research ethics provided by JST.

e. Research institutions shall expend and manage research expenses properly in accordance with the regulations of the research organization while keeping reasonable flexibilities in the expenditure operation; as for expense items subjected to the administrative process manual, and etc., provided by JST, stating special regulation rules of expense in this Program. (Research institutions receiving Grants-in-Aid for Scientific

Research expenses can handle their expense in conformity with the handling rule of the Grant-in-Aid for Scientific Research expenses, as for items not described in the administrative process manual).

f. Research institutions need to conclude contracts with PIs who are going to participate in the Research and are to be an inventor of intellectual properties with regard to the Research, to ensure the properties be transferred from the PIs to the institutions. In particular, when a person who is not subject to the service invention regulations of a research institution such as a student who is not in an employment relationship with the research institution is a research participant, it is necessary to take appropriate action, such as concluding an contract with the student in advance to ensure that intellectual property rights pertaining to the invention (including conception) made by the student in the course of conducting the research belong to the research institution, except in cases where it is clear that the said student cannot become the inventor. Regarding the conditions of compensation for transfer of intellectual property rights, those concerned are asked to act in a way that is not unfavorable to the student who is the inventor.

   In addition, when the intellectual property is transferred to and exclusive licenses to use the property are granted to other persons or parties, etc., a prior approval of JST is needed in principle, and when the application, registration, implementation, and renunciation of the property rights are going to be conducted, a priori report to JST is needed. Regarding the intellectual property produced through conducing the contract research of JST by research institutions, the institutions are obliged to notify and make necessary applications to JST that are relevant to Article 17 of the Industrial Technology Enhancement ACT, even after the completion of the contract research.

g. Research institutions are responsible for responding to accounting investigations by JST and account audits by the government.

h. Research institutions are obliged to obey measures pertaining to the change of terms of payment as well as accept the decrease of payments decided by JST, based on JST investigations on their administrative management systems, financial conditions, etc.

   In addition, if the project evaluation at the end of the JST mid- and long-term target period calls for the dissolution or contraction of the JST, or changes in the state of budgetary measures in the country, the contract period, in the case of contract cancellation and contract research expenses reduction measures may be taken. In addition, based on the results of the mid-term evaluation of research subjects, it may take measures such as increase or decrease of commissioned research expenses, change of contract period, cancellation of research, etc., and when JST judges that the continuation of research is not appropriate. Even during the term of the contract, JST may take measures such as cancellation of the contract. Research institutes need to follow these measures.

i. When research institutions are national or municipal organizations, such institutions concluding research contracts are definitively obliged to implement necessary budgetary measures before entering research

contracts for which they are responsible. (In case it becomes apparent that the non-fulfillment of necessary measures has not been taken, after the concluding the contract, JST will take measures to release the research contact and rescind the research funds.)

j. As a part of the effort to prevent misconduct in research and development activities, JST has required PIs who take parts of newly selected research projects and who also are affiliated with a research institution to complete one of the following programs or course materials.

- “eAPRIN” provided by the Association for Research Integrity Promotion
- “eL CoRE” provided by the Japan Society for the Promotion of Science
- “For the Sound Development of Science: The Attitude of a Conscientious Scientist” by the Japan Society for the Promotion of Science
- ”Fair Research Activities Learned from Case Studies: A Casebook for Awareness and Learning” by the Japan Agency for Medical Research and Development
- “Collection of Near Misses in Research Integrity” by the Japan Agency for Medical Research and Development
- Other research ethics education programs and training that the affiliated research institution considers equivalent to the above

  (If the research institution considers it equivalent, the video material "Ethics Vacuum" provided by JST is also acceptable.)

If your affiliated institution does not have a research ethics education program, or if it is difficult for you to take a research ethics education program at your affiliated institution, you can take eAPRIN (an e-learning material operated by the Association for Research Integrity Promotion (APRIN)) through JST.
In the case that the relevant PIs of the institution fail to complete the educational program as stipulated despite repeated reminders by JST, JST will halt, partially or entirely, the payment of contract research fund. In line with this, the research institution is to halt all use of the research funds and not to restart the use until further notice from JST is given.

k. Research institutions are obliged to take necessary measures, such as concluding research contracts with other institutions participating in the Research, regarding the handling of intellectual property rights and non-disclosure agreements, not to creating problems in implementing the Research and utilizing the Research achievement.

l. Research institutes are requested to execute appropriate measures to fulfill their accountability, paying full attention to economics, efficiency, effectiveness, legitimacy, and accuracy, since the state funds shall be used as a source of funding for entrusted research expenses. In addition, research institutes need to make sure to

work on planned execution and be careful not to procure for the purpose of budget reduction at the end of the research period or at the end of the fiscal year.

m. Research institutions that will act as places of research for this Program must develop a system through cross-appointment to accept PIs with welcoming treatment based on the aims of this Program. From the perspective of improving treatment, institutions should establish an appropriate pay scale for the PIs it accepts. (If the cross-appointment institution is a university or similar organization, the PIs themselves can allocate their desired amount from direct costs through cross-appointment. Please set the amount of pay in consultation with the PI.) When coordinating with the PI's current affiliated institution, which will become the base for cross-appointment, please make sure the PI will be paid appropriately, including an increase from their existing annual income. If the status of improvements to researcher treatment is being investigated, please cooperate with the investigation.

3.9 Other Notes

3.9.1 Programs for Supporting Childbirth, Childcare, and Care Giving

As part of the efforts to promote gender equality, JST offers a support program for childbirth, childcaring, and care giving. This Program provides a "Gender Equality Promotion Fund" (The base amount of 300,000 yen multiplied by the number of months of support) for research projects, etc., with the aim of enabling the researchers who are employed full-time as researchers or the like under the research funds (excluding indirect costs) from JST programs to continue their research, or their careers from the time they return to their research if they are forced to temporarily suspend their research, in the event of a life event (childbirth, childcare, care giving).

For details, please refer to the website below.

https://www.jst.go.jp/diversity/about/research/child-care.html

3.9.2 The use of JREC-IN Portal

The database of research human resources (JREC-IN https://jrecin.jst.go.jp/seek/SeekTop?ln=1) is the largest website supporting research human resources in Japan. It is free to browse this service containing information on human resources, including researchers, their supporters, and engineers involved in research.

At present, the database holds more than 20,000 pieces of information on needed human resources from universities, public research organizations, and private business firms, in addition to more than 140,000 registered users. Use JREC-IN Portal to look for research human resources (postdoctoral, researchers, and so on) with high levels of knowledge to promote research projects.

Furthermore, JREC-IN Portal collaborates with researchmap. It may be reach by logging in with a researchmap ID and password. It functions for the preparation of resumes; achievement lists can use the information registered in researchmap to prepare these documents.

Chapter 4 Key Points in Submitting Proposals

4.1 Enrolling in and Completing the Educational Program on Research Integrity

The research project applicant must complete the Educational Program on Research Integrity as a prerequisite for application. Note that if completion of the Program cannot be confirmed, the application will be disqualified for failing to meet the requirements.

To enroll in the Educational Program on Research Integrity and to submit a declaration of completion, follow either procedure (1) or (2) below. For instructions on how to enter information into e-Rad, please refer to "Chapter 5: How to Apply via the Cross-ministerial R&D Management System (e-Rad)."

(1) For applicants who have completed an equivalent program at their institution

Applicants, who have already completed an e-learning program or educational seminar on various aspects of research integrity at your institution by the time of their application, are requested to make the declaration of it on the e-Rad application information input screen.

(2) For applicants who have not completed an equivalent program at their institution (including applicants at institutions who do not have such a program)

a. Applicants who have in the past completed eAPRIN (ex-CITI Japan) e-learning program in a JST program.

Applicants who have in the past completed eAPRIN (ex-CITI Japan) e-learning program in a JST program by the time of their application are requested to make the declaration of it on the e-Rad application information input screen.

b. For other applicants for whom a. above does not apply.

Applicants who find it difficult to enroll in the educational program for research integrity because their institution does not offer such a program or for other reasons may enroll in and take a digest version of eAPRIN (ex-CITI Japan) e-learning program offered through JST. Please attend from the URL below.

Course URL: https://edu2.aprin.or.jp/ard/

No cost is needed for completing the program, which will take one to two hours to complete. Once enrolled, applicants are expected to complete the program without delay and then to declare the completion of the program and to also select/type "Digest Completion." in the e-Rad application information input screen.

■ Contact for consultation on the Educational Program on Research Integrity

Japan Science and Technology Agency

Department of Audit and Legal Affairs, Research Integrity Division

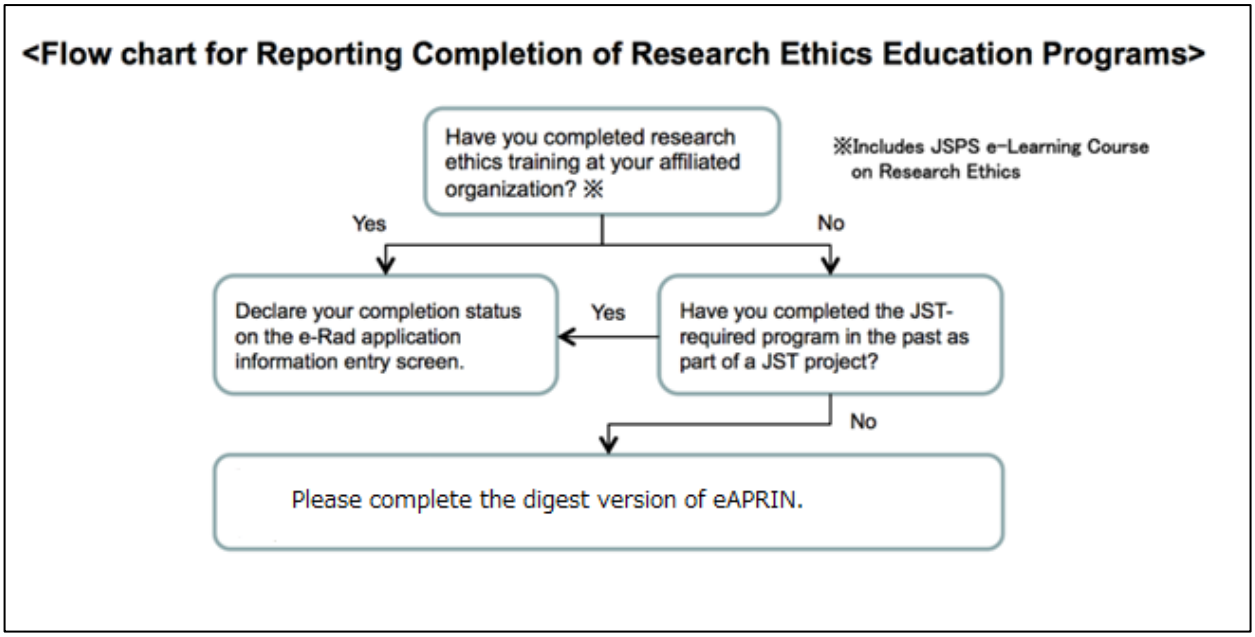
Email: rcr-kousyu@jst.go.jp

■ Contact for consultation on the call for application

Japan Science and Technology Agency

Department of Disruptive Research

Email: boost-yr-inquiry@jst.go.jp * Include the Program name, e-Rad project ID, research applicant name, and project name in the body of email.



JST requires that researchers participating in this Program complete one of the following programs or course materials.

- "eAPRIN" provided by the Association for the Promotion of Fair Research
- "eL CoRE" provided by the Japan Society for the Promotion of Science
- "For the Sound Development of Science: The Attitude of an Honest Scientist" by the Japan Society for the Promotion of Science
- "Fair Research Activities Learned from Case Studies: A Casebook for Awareness and Learning" by the Japan Agency for Medical Research and Development
- "Collection of Near Misses in Research Integrity" by the Japan Agency for Medical Research and Development
- Other research ethics education programs and training that the affiliated research institution deems equivalent to the above

  (If the research institution deems it equivalent, the video material "The Ethics Vacuum" provided by JST is also acceptable.)

If it is difficult for you to take a research ethics education program at your affiliated institution, for example because your affiliated institution does not offer one, you can take eAPRIN (e-learning materials operated by the Association for Research Integrity Promotion (APRIN)) through JST. We will do the same for next year, so if your research is selected, in principle, all research participants will be required to take the research ethics education

program or materials specified by JST (however, this does not apply if you have already taken the research ethics education program or materials specified by JST for your affiliated institution or a JST project, etc.).

4.2 Measures against Unreasonable Duplication and Excessive Concentration

○ Measures against “Unreasonable Duplication”

If a given Research Project by a given researcher (i.e. the name and content of the research is the same, and the research is receiving competitive research funding) is unnecessarily receiving multiple competitive research funding programs or other research funds (all current research funds for individual research subjects, such as subsidies, grants, joint research funds, contract research funds, etc., including those from overseas (*)), and any of the following applies, research projects may be rejected, canceled or reduced (hereinafter referred to as "rejection of research projects") depending on the degree in this Program. In the case that a duplicate application is made for research funds at the same time for research project that is essentially the same (including cases where they overlap to a considerable extent; the same as hereinafter), and they are selected more than once.

1) In the case that there are applications for multiple competitive research funds and other research funds at the same time for research projects that are substantially the same (including cases where they overlap to a considerable extent; the same applies hereinafter), and they are adopted more than once.
2) In the case that there are multiple applications for research projects that are substantially the same as the competitive research funds or other research funds that have already been selected and funded.
3) In the case that there is an overlap in intended application of research funding between multiple research projects.
4) Other cases equivalent to the above.

At the application stage for this Program, there are no limitations regarding the submission of proposals to other competitive research funds or other research funds. If a research project is selected by another competitive research fund or other research funds, please report this promptly to the administrative staff of this Program (Department of Disruptive Research, JST). If there is any omission in this report, the research project may be rejected in this Program.

* Excluding basic expenses or internal funds as allocated within your institution, commercial activities as defined in the Commercial Code, and financing through direct or indirect financing.

○ Measures against “Excessive Concentration”

Even if the content of the research proposed for this Program differs from the content of another research being carried out under another competitive research funding program or other research funds, if that the overall research funding allocated to the same researcher or research group (hereinafter referred to as “researchers”) in relevant fiscal year exceeds an amount that can be utilized effectively and efficiently and can be used within the research

period, and in this Program, research projects may be rejected in accordance with the degree of the following cases.

In the case that an excessive amount of research funding is being received in light of the capabilities of the researchers and the research methods being used, etc.

1) In the case that an excessive amount of research funding is being received in light of the capabilities of the researchers and the research methods being used, etc.
2) In the case that an excessive amount of research funding is being received, compared with the amount of effort (percentage of the researchers' overall working time that is required for carrying out the said research project* :100%) allocated to the research project.
3) In the case that highly expensive research equipment is purchased unnecessarily.
4) Other cases equivalent to the above.

Hence, if you submit proposals to other competitive research funds or other research funds after submitting your application to this Program, and the research project is selected by another competitive fund, or if any information provided on your application changes, please report this promptly to the administrative staff of this Program (Department of Disruptive Research, JST). In the event of any omission in this report, the research project may be rejected in this Program.

* The total work time of a researcher includes the time not only for research activities but also for teaching activities, management assignments, and other activities substantially equivalent to work.

○ How to eliminate Unreasonable Duplication and Excessive Concentration

To eliminate unreasonable duplication and excessive concentration of competitive research funds, ensure transparency in research activities, and ensure appropriate efforts, applicants shall provide the following information at the time of application.

(i) Providing information on the current application / acceptance status of other competitive research funds including other ministries and other research funds, and all current affiliated institutions / positions.

At the time of application, regarding the principal investigator / principal collaborator, the current application / acceptance status of other competitive research funds including other ministries and other research funds (system name, research subject, implementation period, budget amount, effort, etc.) (Hereinafter referred to as "information on research funds") and information on all current affiliated institutions / positions (including side jobs, participation in foreign recruitment programs, honorary professors without employment contracts, etc.) (hereinafter referred to as "information") Please enter "information about your institution / position") in the application documents and the research and

development management system common to all ministries (hereinafter referred to as "e-Rad"). If the application documents or e-Rad contain false statements, the research project may be rejected.

Of the information on research expenses, information on joint research with which confidentiality agreements have been signed will be handled as follows in consideration of individual circumstances so that activities such as industry-academia collaboration will not be shrunk.

- Only the information necessary to confirm whether the submitted research project does not result in unreasonable duplication or excessive concentration of research funds and can appropriately secure the effort related to the execution of the research project (in principle, information of the joint research such as only the name of the partner institution, the amount of research funds accepted, and information related to effort) will be requested.
- However, if it is difficult to submit due to unavoidable circumstances such as when it is difficult to submit based on the contents of the confidentiality agreement that has already been concluded, it is possible to submit the application without entering the name of the partner institution and the amount of research expenses accepted. Even in that case, JST may make inquiries to the institution to which we belong if necessary.
- In addition to the affiliated institution, information may be shared between distribution institutions and related ministries and agencies, but even in that case, it will be shared only by those who have a duty of confidentiality.

When concluding a non-disclosure agreement, etc. in the future, please consider assuming that you may submit only the necessary information when applying for competitive research funds. However, if both contracting parties agree on the scope of information to be kept confidential and its legitimate reason (such as when it is considered to be extremely important in corporate strategy and highly confidential), the confidential information will be submitted. Please note that it is possible to make a contract that does not assume.

（ii） Provision of other information necessary to ensure transparency in all research activities in which one is involved.

To ensure transparency in all research activities in which you are involved, including information on research expenses, information on affiliated institutions and job titles, and support for facilities and equipment other than donations and funds (*). JST requests a pledge that we are properly reporting the information necessary for the research to the institution to which we belong based on the relevant regulations. If it is found that an appropriate report has not been made in violation of the pledge, the research project may be rejected.

Regarding information on the acceptance status of facilities / equipment, etc. that are not used for the research project of the application but are used for the research that is separately engaged, can the research project be sufficiently carried out without unreasonable duplication or excessive concentration. From the viewpoint of confirming, in addition to the pledge, JST may ask the affiliated institution to submit the status of grasping and managing the information.

* Includes cases where articles such as research facilities, machines, and equipment are supplied and services are provided even in the manner of free of charge.

○ Information on Proposal Contents Provided to Eliminate Unreasonable Duplications and Excessive Concentration

In order to eliminate unreasonable duplication and excessive concentration, to the extent necessary the information of some proposals (or selected projects/programs) may in some cases be provided through the Cross-ministerial R&D Management System (e-Rad) to other departments in charge of competitive funds, including other government ministries. Furthermore, when it is required that checks be made for duplicate project applications under other funding programs, the information may be provided in a manner alike.

4.3 Ensuring research integrity against new risks associated with internationalization and openness of research activities

In order to promote the creation of science and technology and innovation in Japan, it is necessary to continue to strongly promote international joint research with various partners, with open science as the main principle. At the same time, in recent years, new risks associated with the internationalization and openness of research activities may impair the values that form the basis of the research environment, such as openness and transparency, and researchers unintentionally fall into conflicts of interest and responsibilities. Dangers have been pointed out, and under these circumstances, building an internationally reliable research environment as Japan will promote necessary international cooperation and exchanges while preserving the values that form the basis of the research environment. Is indispensable for.

Therefore, universities, research institutes, etc. have stated that "the policy for ensuring research integrity against new risks associated with the internationalization and openness of research activities (decided by the Integrated Innovation Strategy Promotion Council on April 27, 2021). Based on this, establish rules and management systems related to conflicts of interest and responsibilities, and autonomously ensure the soundness and fairness (research integrity) of research at researchers, universities, research institutes, etc. Is important.

From this point of view, we are confirming whether we can appropriately secure efforts while eliminating unreasonable duplication and excessive concentration of competitive research funds and ensuring transparency in research activities. We may make inquiries to the institution to which we belong, as necessary, regarding the status of maintenance of regulations and the status of grasping and managing information.

4.4 Measures against Inappropriate Usage of Research Funds

Inappropriate use and reception (referred to as “inappropriate usage” hereinafter) of research budgets related to implemented issues are strictly treated as described below.

○ Measures Taken in the Case that Inappropriate Usage of Research Expenses are Found

(i) Measures to Cancel Contracts

The Collaborative Research Agreement contract is cancelled or altered if issues of inappropriate usage are found, and a request is made for refunding all or part of the entrusted funds. Contracts for the following year and subsequent years may not be concluded.

(ii) Measures to Restrict Application and Participation Eligibility（※1）

Restriction measures set out in the table below, depending on the levels of inappropriate usage, are taken against the application and participation eligibility of researchers (including researchers who conspired, referred to as (“researchers who conspired to inappropriate usage”)) who exercised inappropriate usage of research expenses of this project or those whose involvement in inappropriate usage is not proven but who violated due care of a prudent manager. Or, they are otherwise reprimanded.

Furthermore, the outlines of pertinent inappropriate usage (names of researchers who exercised inappropriate usage, project names, affiliations, research issues, amounts of budget, fiscal year of research, contents of inappropriate usage, contents of measures taken) are provided to persons of other ministries and their independent corporations in charge of competitive funds, who may restrict application and participation of the researchers in other systems for competitive funds of the prefectures.

*1 “Application and participation" refers to proposing, applying for, or submitting a new proposal, participating in new research as a co-researcher, or participating in an ongoing research project (ongoing proposal) as a Principal Investigator or co-researcher.

*2 A "researcher who violated the duty of care" refers to a researcher who, although not found to have been involved in improper use, violated the duty to conduct business with the care of a prudent manager.

Classification of person who committed or is involved in misconduct in use of research budget	Extent of maliciousness in misconduct		Period of ineligibility for applying to competitive research fund, deemed to be reasonable*3,4
A researcher who committed a misconduct or a researcher who was in conspiracy with a person who committed a misconduct *1	1. Use of a research budget to make a private profit		10 years
	2. Other than 1.	①Impact of the misconduct on the society is substantial and	5 years

		maliciousness of the misconduct is judged to be high	
		② Neither ① or ③	2-4 years
		③The impact of the misconduct on the society is small and the maliciousness of the misconduct is judged to be low.	1 year
A researched who used a fabrication and other dishonest means to receive a competitive research fund or etc. and a researcher who was in conspiracy with the person who committed this misconduct			5 years
A researcher who did not commit or was not involved in a misconduct, but used a research budget, inappropriately, failing to fulfill his/her duty of due care of prudent manager *2			1 to 2 years (in maximum) in accordance with the degree of failure of fulfilling his/her duty of due care of prudent manager

*3: A strict warning is issued under any of the following conditions without restricting application or eligibility for participation.

- In case of item 1, the influence over the society is minor, the malignancy of the act is minor, and the amount of unjustifiable use is small.
- In case of item 2, the influence over the society, as well as the malignancy of the act, is minor.

*4: The Period of ineligibility for applying will be calculated from the fiscal year following the fiscal year in which the misuse of research funds is recognized and the research funds are returned. Also ineligible in the fiscal year in which inappropriate usage of research funds are identified.

(iii) About Public Announcement of a Case of Inappropriate Usage

Among those who are involved in an inappropriate usage of the Program's research funds or those who failed to fulfil their duty of due care of prudent manager, regarding those researchers whose eligibility of application to or participation in this Program is restricted, information of the outline of their misconduct (name of the research institution, name of the funding program, year of misconduct, details of misconduct, the amount of misused funds, and number of researchers involved in the misconduct) will be disclosed in principle by JST. The outline of the misconduct case (project name, affiliation, research year, details of misconduct, and details of measures taken) will be also disclosed in principle by MEXT.

Furthermore, according to the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)," once misconduct is determined as the outcome of an investigation of an institute, it will be the responsibility of the research institution to announce the results of the investigation; hence, we request that each institution deal with the matter appropriately, following the "Guidelines".

Please refer to the following web site for an overview of the current MEXT publication on fraud cases.

https://www.mext.go.jp/a_menu/kansa/houkoku/1364929.htm

4.5 Measures taken for Researchers whose Application and Participation Eligibilities are Restricted in Another Competitive Fund System

Researchers on whom restriction is imposed for the reason of inappropriate usage of research expenses in another competitive fund system (*) under the central government or independent administrative agencies are not eligible to apply to or participate in this Program while their qualifications are restricted for application in the competitive fund system.

“Other competitive fund systems” include those systems that newly start a call for proposals in public 2024 fiscal year and those that finished before the 2023 fiscal year.

* Refer to following website
https://www8.cao.go.jp/cstp/compefund/

4.6 Majors taken to the Violation of Related Guidelines

In the event that research is conducted in violation of relevant laws, regulations, guidelines, etc., the researcher will be subject to disciplinary action and penalties in accordance with related laws and regulations, and the allocation of research funds may be suspended or the decision to allocate research funds may be revoked.

4.7 Carryover of Research Expenses

Making a carryover of research expenses until the end of next fiscal year for a maximum, for multi-year contracts that continue until the next year, may be permitted according to the delay of the progress in the project occurs and is difficult to conclude within the fiscal year due to unavoidable conditions difficult to determine in advance the research or study method of the experimental research, such as weather-related conditions, obtaining rare materials and others etc.

4.8 Cross-ministerial Expenses Handing Partitioned Table

The expense items of research costs specific to this Program are determined on the basis of “Cross-ministerial Expenses Handing Partitioned Table”, which will be released soon.

In addition, based on the "Common Guidelines for the Development of a Competitive Research Funding System from the Perspective of Gender Equality and Human Resource Development" (February 8, 2023, Liaison Conference of Relevant Ministries and Agencies on Competitive Research Funding), this project allows for the expenditure of direct expenses for the promotion of human resource development in science and engineering fields for the next generation.

4.9 Exchange of Direct Costs between Expense Items

Direct costs of different expense items can be exchanged under certain condition. Exchange are allowed without approval from JST when the amount of direct costs to be exchanged does not exceed 50% of the total direct costs.

4.10 Securing Research Period until the end of Fiscal Year

In order to enable researchers to continue their research work until the end of a fiscal year, statements below should be followed in every JST competitive funds.

(1) JST makes inspections on the completion of the project and the achievements of the research.

(2) Submit the accounting report by May 31.

(3) Submit the report on the research achievements by May 31.

(4) When the end of the research falls on a date other than March 31, the deadline for submission of the Financial and Research reports shall be within 61days after the end date and a date designated by JST.

Each research institute should make efforts to organize necessary systems at the institute based on the fact that the purpose of those practices is to secure the research period that continues at the end of a fiscal year.

4.11 Overhead Costs (Indirect Costs)

Institutions who received overhead costs are required to manage the costs appropriately and store the receipts as evidence for the appropriate use of overhead costs for five years counted from the next fiscal year from which the project ended.

Institutions which received overhead costs are required to report the actual use of overhead costs via e-Rad before June 30 of the next fiscal year. (If a research institute has acquired two or more competitive research funds, report all indirect costs accompanied by such competitive research funds.)

How to use e-Rad system is described on user manual of e-Rad is provided on the website (https://www.e-rad.go.jp/manual/for_organ.html).

FAQs are also provided on the website (https://qa.e-rad.go.jp/).

In addition, due to the revision of the "Common Guidelines for the Execution of Indirect Costs of Competitive Research Funds" (agreed upon by the Liaison Committee of Ministries and Agencies Concerning Competitive Research Funds on April 20, 2001), it is now possible to use these funds for reserves for the replacement of depreciable assets held by independent administrative institutions, based on accounting standards, but only for projects funded by funds or operating expense grants.

4.12 Promotion on Effective Use of Research Facilities and Equipment

According to “Reform on Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)” (Examination Meeting on the Reform of Competitive Funds, June 24, 2015), it is considered

appropriate that facilities/equipment which are comparatively large in scale and have high general applicability should in principle be shared, under the assumption that the original research objectives are sufficiently accomplished. In addition, the "6th Science and Technology Innovation Basic Plan" (Cabinet decision on March 26, 2021) and the "Integrated Innovation Strategy 2022" (Cabinet decision on June 3, 2022) request the promotion on the maintenance and sharing of research equipment and facilities, to establish a system for introducing, updating and utilizing research equipment (core facility), and to formulate and publish a sharing policy.

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) provided the "Guidelines for Promotion of Sharing of Research Facilities" in March 2022.

Based on the above, for research facilities/equipment which are purchased by this Program, and particularly for large scale, general purpose items, positive efforts for sharing should be made, including sharing within the scope that does hinder the progress of the applicable Research Project, use of research facilities and equipment purchased with other research funds, and purchase and sharing by combining multiple research funds, within the scope of the management conditions of other research funds and in accordance with the sharing system in the affiliated institution or organization. It is important to examine the sharing of research facilities due to strengthen research performance. Please note that it is necessary to strike a balance between management as shared equipment/facilities and accomplishment of the research purpose of the applicable Research Project.

Moreover, participants are asked to promote the sharing of research facilities and equipment beyond the framework of individual research organizations and institutes by positively cooperating with the "Inter-University Network for Common Utilization of Research Equipment," which was implemented for the purpose of the mutual use of facilities in the National Institutes of Natural Sciences, and the sharing system constructed thanks to the "Equipment Support Center Maintenance Business New Shared System Introduction Support Program" and the "New Shared System Introduction Core Facility Construction Support Program" in each university.

○ "Reform on the Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)" (Examination Meeting on the Reform of Competitive Funds, June 24, 2015), in Japanese.
https://www.mext.go.jp/b_menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm

○ "6th Science and Technology / Innovation Basic Plan" (March 26, 2021, Cabinet decision), in Japanese.
https://www8.cao.go.jp/cstp/kihonkeikaku/6honbun.pdf

○ “Integrated Innovation Strategy 2023” (June 9, 2023, Cabinet decision), in Japanese.
https://www8.cao.go.jp/cstp/tougosenryaku/togo2022_honbun.pdf

○ Unification of usage rule of competitive research funds (May 24, 2023), in Japanese.
https://www8.cao.go.jp/cstp/compefund/toitsu_rule_r50524.pdf

○ "The Purchase of Shared Facilities Using Multiple Research Fund Systems (Use of Combined Total)" (September 10, 2020, Agreement between the institutions allocating funds and the relevant supervising government bodies)
https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf

○ "Guidelines for Promotion of Sharing of Research Facilities" (March 2022), in Japanese.
https://www.mext.go.jp/content/20220329-mxt_kibanken01-000021605_2.pdf

○ Inter-University Network for Common Utilization of Research Equipment, in Japanese.
https://chem-eqnet.ims.ac.jp/

○New shared system introduction support program
https://www.jst.go.jp/shincho/program/sinkyoyo.html

○ Core Facility Construction Support Program, in Japanese
https://www.jst.go.jp/shincho/program/corefacility.html

4.13 Improvement of Treatment of Doctoral Student Participants

In the "Science and Technology / Innovation Basic Plan" (decided by the Cabinet on March 26, 2021), financial support for graduate students, especially doctoral students (second semester), in order to attract excellent students and working people from inside and outside of Japan. The aim is to triple the number of doctoral students who receive living expenses equivalent to the conventional amount (equivalent to about 30% of students enrolled in the doctoral program receiving living expenses equivalent). Set as a numerical target, "RA, etc. in each business and university, etc., in order to promote salary payment at an appropriate level as a research assistant (RA) to doctoral students from competitive research expenses and joint research expenses. We will formulate rules for the expenditure of RA expenses related to employment and rewards, and will implement them sequentially from FY2021. " There is a need to expand employment and improve treatment of doctoral students as research assistant (RA) in universities and research institutions.

Furthermore, the "Guideline for the Employment and Nurturing of the Postdoctoral etc." Human Resources Committee, Council of Science and Technology, December 3, 2020) stated concerning the students in doctoral courses that "they have the aspects of both students and researchers, and providing a good environments for conducting research activities and securing the working conditions for them are important duty of the universities and colleges, which are to nurture researchers," that "specifying the compensation appropriate to the nature and contents of work, paying compensation according to the time spent for work under an appropriate management of the working, and providing the compensation according to the contribution appropriately evaluated are important in particular," and that "reviewing the rules, regulations, and the like in each universities and colleges is necessary so that some necessary cost may be counted up as the direct cost to recruit an RA at the time of application for a competitive research funding, and that paying the compensation at an appropriate level to such RA may be possible."

Based on the above, in this Program, please actively employ doctoral (second semester) students who are necessary for the execution of the research as RAs to the extent consistent with the objectives of this Program and the research plan of the researcher, and pay them according to the hours worked under appropriate work management by setting a unit price commensurate with the nature and content of the work while setting the salary level to be

equivalent to the cost of living. In addition, when applying for this Program, please apply with a financial plan that also takes into account pay by doctoral students.

（Points to remember）

- With regard to the salary level equivalent to living expenses (around 1.8–2.4 million yen per year), the " 6th Science and Technology /Innovation Basic Plan" assumes that 1.8 million yen per year is an amount equivalent to living expenses; it also references payments to excellent doctoral students—doctoral course students (DC) who are paid research subsidies so they can give their undivided attention to their research without feeling financial unease—and gives 1.8–2.4 million yen per year as an indicative range for the amount needed to live.
- The "Guideline for the Employment and Nurturing of the Postdoctoral etc." states concerning the treatment in the case in which a student in a doctoral course is hired for executing a research project that “the payment of 2,000 yen to 2,500 yen per hour (*) be standard in consideration to the average amount of the salaries etc. of the specially appointed assistant professors etc. hired for some competitive research funding, etc.”
    * The standard pay for a specially-appointed assistant professor employed with competitive research funds is considered to be around 2,000 yen to 2,500 yen per hour, taking average amounts of pay into account. (Calculated based on the median monthly salary (between 400,000 and 450,000 Yen) of specially-appointed assistant professors according to the Survey on Instructor Employment at Research Universities (Preliminary Report) published August 2020 divided by the number of working hours per day (between 7 hours 45 minutes and 8 hours) for actual days worked (between 19 and 20 days), excepting weekends and holidays, and multiplying by 0.8 in light of their status as doctoral students.)
- The specific amount and period of payment will be determined by the research institution. There is no restriction on the amount of payment above or below the level mentioned above.
- When hiring students as RAs, etc., please consider not making them work excessive hours and the balance between the work time and doctoral (second semester) students' own research and study time.

4.14 Securing Independent and Stable Research Environment for Young Researchers

The "Guideline for Employment and Upbringing of Postdoctoral Researcher" (December 3, 2020, Council for Science and Technology, Committee on Human Resources) point out that "there are many postdoctoral fellows whose tenure is less than three years, however, too short employment period can be a hindrance a major obstruction to career development, and from this view point, it is necessary to secure a term that allows them to settle down and concentrate on their research activities for a certain period of time.", and "after working as a postdoctoral fellow at

one or two places, considering that it is desirable to proceed to the next step in about 3 to 7 years until the mid-30s, it is hoped that each post will have a term of 3 to 5 years."

In addition, regarding national universities and inter-university research institute corporations, the Guidelines for Human Resource Payroll Management Reform in National Universities: Towards the Construction of an Appealing Human Resource Payroll Management that will Contribute to Enhancing Education and Research Abilities (February 25, 2019, Ministry of Education, Culture, Sports, Science and Technology) state that "in order to realize both perspectives of training and stable employment for young teaching staff, it is desirable to promote an institutional system that incorporates the perspective of training researchers while maintaining mobility; for example, ensuring a fixed period of employment of around 5–10 years by making use of expenses that can be used with a high degree of freedom, such as indirect costs or donations, even if there is a fixed period of employment."

Based on the above, if you are employing young researchers such as specially-appointed teaching staff or postdoctoral researchers in these programs, please confirm who is responsible for human resources and accounting in your department, and endeavor to guarantee the research period as the length of their term of employment; please try to ensure as much as possible that the term of employment is fixed by making use of indirect costs, basic costs, donations, etc. from external funds.

4.15 Promoting gender equality and human resources initiatives

In the "Basic Plan for Science, Technology and Innovation (approved by the Cabinet on March 26, 2011)," the "Basic Plan for Gender Equality (approved by the Cabinet on December 25, 2020)," and the "Policy Package on Education and Human Resource Development for the Realization of Society 5.0 (decided by the Council for Science, Technology and Innovation on June 2, 2022) aims to create a research environment where both men and women can easily continue their research activities even after life events such as childbirth, childcare, and nursing care, and to promote the appointment of excellent female researchers as project leaders. Furthermore, through efforts to convey the attractiveness of science and engineering to female junior and senior high school students, including their parents and teachers, the project aims to increase the percentage of women entering master's and doctoral programs, mainly in science and engineering, to break through the low rate of women entering doctoral programs in the natural sciences, and to increase the number of potential bearers of knowledge in Japan. If gender differences are not taken into account in the research and development process, they may have inappropriate effects during the social implementation stage. Therefore, it is necessary to conduct research and technological development that takes gender differences, such as differences in physique and body structure and function, into consideration. In light of the above, this project will also take into consideration efforts to promote the activities of female researchers and expand the base of human resources who will be responsible for science and technology in the future.

4.16 Voluntary Research Activities of Young Researchers Employed for Executing a Project

Based on “Implementation Policy on Voluntary Research Activities of Young Researchers Employed for Competitive Research Fund Projects” (The Coordination Committees of Relevant Ministries and Agencies on Competitive Funds, December 18, 2020), when the principal investigator determines that it does not hinder the promotion of the Program, participation of such young researchers contributes to the promotion of the Program, and approval from affiliated research institute is obtained, the personnel costs for such young researchers can be paid from the research cost, and a part of their efforts can be spent for their activities, including their voluntary research activities and their research and management capacity improvement. For details, refer to the following website:

○“Implementation Policy on Voluntary Research Activities of Young Researchers Employed for Competitive Research Fund Projects” (December 18, 2020)
https://www8.cao.go.jp/cstp/compefund/jisshishishin.pdf

4.17 Support for Diverse Career Paths for Young Researchers

The “6th Science and Technology Innovation Basic Plan” (Cabinet decision of March 26, 2021) also sets targets regarding the creation of "an environment in which excellent young people can develop their potential in various fields, such as academia, industry, and government". Furthermore, the “Guideline for the Employment and Training of Postdoctoral (December 3, 2020, the Committee on Human Resources, Council for Science and Technology Policy) states that "it is essential that doctorate human resources with high level specialization and advanced research skills should help drive innovation by contributing in a wide range of positions, including at venture companies and global corporations, and accordingly, initiatives are needed for the diversification of career paths after the completion of the postdoctoral period.”

Based on this, when a project is selected in this call for research applications and young researchers such as specially appointed faculty members and postdoctoral personnel are to be employed with public research funds (competitive research funds or other project research funds, or public invitation-type education research funds for universities), the institution concerned should make active efforts to support those researchers in securing diverse career paths.

Institutions should also consider using indirect funds in these efforts.

4.18 Securing management personnel such as URA

In the "6th Science and Technology Innovation Basic Plan" (Cabinet decision on March 26, 2021), it is pointed out the importance that quality assurance and treatment improvement as professionals so that management personnel such as URA becomes attractive jobs. In addition, the "Comprehensive Package for Strengthening Research Capabilities and Supporting Young Researchers" (January 23, 2020, Science Technology, and

Innovation Conference) also showed the need to establish career paths for management personnel, URAs, engineers, etc.

Based on these, when management personnel such as URA employed by research institutes or newly hired are engaged in the management of research programs of this project, the research institute is not limited to this project, but other management personnel. Please try to secure a fixed term as much as possible by utilizing indirect expenses of external funds, basic expenses, donations, etc.

At the same time, as support for securing a career path for such management personnel, we would like to ask for active efforts such as having them participate in URA training, etc. Also, please consider using indirect expenses for the project.

4.19 Security Export Control (Measures against Leakage of Technology internationally)

Many advanced technologies are studied at research institutions. Particularly at universities, there is a heightened risk of leakage of advanced technologies and research-related materials/equipment or misuse in development/manufacture of weapons of mass destruction owing to the increased number of international students and foreign researchers due to internationalization. For this reason, an organizational response by the research institution is required when a research institution conducts research activities, including the relevant contract research, so that research results with potential military applications are not passed to groups or individuals considering activities of concern, such as terrorist groups and developers of weapons of mass destruction.

In Japan, export controls (*1) are imposed based on the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949; hereinafter, “Foreign Exchange Act”) for the purpose of maintaining international peace and security. Accordingly, when attempting to export (provide) goods or technologies controlled under the Foreign Exchange Act, in principle, a license from the Minister of Economy, Trade and Industry (METI) is necessary. All those participating in this Program must comply with the Foreign Exchange Act and all other laws, ordinances, guidelines, notifications, etc. of the national government. In addition to legal action and penalties, distribution of research funds may be stopped and the decision to allocate research funds may be cancelled if research is conducted in violation of the relevant laws, ordinances, guidelines, etc.

*1 Currently, Japan's security export control system consists of two main systems that require the permission from the Minister of Economy, Trade and Industry, based on international agreements, etc. (1) ”list regulation” when trying to export (provide) cargo (technology) with specifications and functions above a certain level, such as carbon fiber and numerically controlled machine tools, etc. (2) ”catch-all regulation” when certain requirements (use requirements / consumer requirements or inform requirements) are met.

Not only the export of cargo but also the provision of technology is subject to the regulation of the Foreign Exchange Law. When providing list regulation technology to non-residents (including residents who fall under a specific type (*2)), or when providing it in a foreign country, prior to the provision. Permission required. To provide technology, we provide technical information such as design drawings, specifications, manuals, samples, and prototypes on storage media such as paper, mail, CD, DVD, and USB memory, as well as technical guidance and skills. It also includes the provision of work knowledge through training and technical support at seminars. Acceptance of foreign students from abroad and activities such as joint research may include many exchanges of technologies that may be subject to the regulations of the Foreign Exchange Law. Please note that the technology acquired through this project may also be subject to regulation when it is intended to be exported (provided).

*2 Refers to the type of resident who is strongly influenced by non-residents, and it is permitted based on the provisions of Article 25, Paragraph 1 of the Foreign Exchange and Foreign Trade Law and Article 17, Paragraph 2 of the Foreign Exchange Ordinance. Transactions or acts that provide technology that requires ”1. (3) Refers to the specific types specified in (1) to (3).

In addition, based on the Foreign Exchange Law, it is necessary to establish a security trade management system when exporting list-regulated cargo or providing list-regulated technology to foreign countries (*3). Therefore, by the time the contract is concluded, it will be confirmed whether the project plans to provide cargo and technology that are subject to the export restrictions of the Foreign Exchange Law, and if there is an intention to provide, it will be confirmed via e-Rad whether or not there is a management system. ~~It may be~~. If you are willing to provide and do not have a management system, we request that you establish a system by the earlier of provide or the end of this project. The confirmation status may be reported to the Ministry of Economy, Trade, and Industry at the request of the Ministry of Economy, Trade and Industry. In addition, if it is found that the technology acquired through this project violates the regulations related to the Foreign Exchange Law, the contract may be canceled in whole or in part.

*3 Exporters, etc. are obliged to comply with the "Exporter Compliance Standards" stipulated in Article 55-10, Paragraph 1 of the Foreign Exchange Law. In addition, the security trade management system here is based on the management system in the "Exporter Compliance Standards", and by appropriately exporting list-regulated cargo or providing list-regulated technology to foreign countries. The internal control system of an organization to prevent illegal exports.

Details of security trade management are available on the websites of the Ministry of Economy, Trade and Industry. See below for details.

- Ministry of Economy, Trade and Industry (METI) ： Security export control (general)
  https://www.meti.go.jp/policy/anpo/englishpage.html
- Ministry of Economy, Trade and Industry: Security Trade Control Handbook

https://www.meti.go.jp/policy/anpo/seminer/shiryo/handbook.pdf (Japanese only)

- Ministry of Economy, Trade and Industry (METI)：Guidance on sensitive technology management related to security trade (for universities and research institutes)
  https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf
- Center for Information on Security Trade Control
  http://www.cistec.or.jp/english/index.html
- Information about Transactions or Acts that Provide Technologies that Require Permission Pursuant to the Provisions of the Foreign Exchange and Foreign Trade Act Article 25 Paragraph 1 or the Foreign Exchange Order Article 17 Paragraph 2
  https://www.meti.go.jp/policy/anpo/law_document/tutatu/t10kaisei/ekimu__tutatu.pdf (Japanese only)

4.20 Strict Adherence to United Nations Security Council Resolution No. 2321

In response to the nuclear test and repeated launching of ballistic missiles by North Korea in September 2016, The United Nations Security Council (hereinafter referred to as “Security Council”), adopted Security Council Resolution No. 2321 on October 30, 2016, that substantially increased and strengthened sanctions against North Korea. Accordingly, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) issued the Request for Strict Adherence to United Nations Security Council Resolution No. 2321 (2016 MEXT document No. 98) on February 17, 2017.

“Scientific and technical cooperation” in the section 11 in the main text of the Resolution is not limited to technologies regulated under the Foreign Exchange and Foreign Trade Act, but includes all cooperation with the exception of medical exchange. Accordingly, it is important to remember that the research institution must adhere to this Resolution in all research activities, including the relevant commissioned research.

See the following link for more information on Security Council Resolution No. 2321.

- ○ Ministry of Foreign Affairs of Japan: United Nations Security Council Resolution No. 2321, Japanese translation (Ministry of Foreign Affairs Notice No. 463 (issued on December 9, 2016))
  https://www.mofa.go.jp/mofaj/files/000211409.pdf

4.21 Dialogue and Collaboration with Public Stakeholders

In "Promotion of" Science and Technology Dialogue with the People "(Basic Initiative Policy)" (decided by the Minister of State for Science and Technology Policy and a member of the Diet on June 19, 2010), the excellent results of science and technology are constantly being achieved. To create and further develop Japan's science and technology, it is essential to return the results of science and technology to the people, gain the understanding and support of the people, and promote science and technology together. It has been. If the research results are selected for this open call and receive an annual allocation of 30 million yen or more per

year, public lectures on research results, symposiums, continuous distribution of research results on the Internet, and various stakeholders We ask that you actively engage in "scientific and technical dialogue with the people" such as round table conferences that involve the public.

○ Promotion of "Science / Technology Dialogue with the People" (Basic Initiative Policy)
https://www8.cao.go.jp/cstp/stsonota/taiwa/taiwa_honbun.pdf

In the “Science, Technology and Innovation Basic Plan (decided by the Cabinet on March 26, 2020)”, there is a demand for co-creation of knowledge and enhancement of science and technology communication through the participation of diverse entities such as public participation. The following examples provided by JST are “interactive dialogue and cooperation among diverse subject”.

○ Science Agora
https://www.jst.go.jp/sis/scienceagora/

○ The National Museum of Emerging Science and Innovation (Miraikan)
https://www.miraikan.jst.go.jp/

4.22 Data Management Plan

JST announced the basic policy regarding the handling of research results for the promotion of open science in April 2017 and revised it in April 2022. This policy stipulates the basic concept of making research papers, open access and storing, managing, and disclosing research data in the research activities of this project.
Generally, researchers participating in this project are requested to make their research papers through institutional repositories and publications premised on open access in 12 months after publishment. In addition, based on the data policy of the research institution, researchers are required to create a Data Management Plan* that describes the policy and plan regarding the storage / management, disclosure / non-disclosure of research data generated through the research activities, submit it to JST together with the protocol, and undertake the research activities after implementing the storage, management, and release of research data based on this protocol. The research activities will be conducted in accordance with this protocol. The Plan may be modified during the conducting research. Furthermore, research data to be managed (which is defined in the data management plan) must have JST-specified metadata added to it. Managed data to which metadata has been added must be appropriately included in the institutional repository designated by each research institution or in the research data infrastructure system operated by the National Institution of Informatics.

See below for more information.

○ JST’s basic policy regarding the handling of research results for the open science promotion
https://www.jst.go.jp/all/about/houshin.html#houshin04 (Japanese only)

○ JST’s basic policy operation guidelines regarding the handling of research results for the open science promotion

https://www.jst.go.jp/pr/intro/openscience/guideline_openscience_r4.pdf (Japanese only)

* Items to be included in the Data Management Plan are described in this guideline

○ Management and Utilization of Publicly Funded Research Data (Cabinet Office)

https://www8.cao.go.jp/cstp/kenkyudx.html

○ Basic Approach to Management and Utilization of Publicly Funded Research Data (Integrated Innovation Strategy Promotion Council)

https://www8.cao.go.jp/cstp/tyousakai/kokusaiopen/sanko1.pdf

○Common items of metadata in the Basic Concept for the Management and Utilization of Research Data Funded by Public Funds (March 31, 2023)

https://www8.cao.go.jp/cstp/common_metadata_elements.pdf

Please note that JST analyzes statistical data such as the number of data modules, the type of data, the type of disclosure, and the location of storage for the purpose of understanding the contents of the description, supporting researchers, and reflecting (revising) the basic policies. The statistical data analyzed will be made public, however no individual personal data or other information which allows identification of the names will be disclosed.

* As for life science data, please also refer to "4.23 Data Disclosure from the NBDC".

4.23 Data disclosure from NBDC

The National Bioscience Database Center (NBDC) of JST has proceeded the Integration of Life Science Database Project (https://biosciencedbc.jp/) to promote the integrated use of databases in the life sciences field created by various research institutions and others.

Additionally, in “Progress and Future Direction of the Integration of Life Science Database Project" (January 17, 2013), NBDC has also worked for the object projects that receive provision of data and databases are to be expanded.

Based on these points, program participants are asked to cooperate in disclosure of the following types of data and databases related to the life science field obtained from this Program.

No.	Type of Data	Place of Disclosure	URL
1.	Overview of public databases that have been built	Integbio Database Catalog	https://integbio.jp/dbcatalog/?lang=en
2.	Data recorded in public databases that have been built	Life Science Database Archive	https://dbarchive.biosciencedbc.jp/index-e.html
3.	Of items in 2, data related to human beings	NDBC Human Database	https://humandbs.biosciencedbc.jp/en/

4.24 Inclusion of the Systematic Number in Acknowledgment and Other Sections

When presenting the outcomes of the research obtained through this Program, please indicate the receipt of the grant through this Program.

If you mention in the Acknowledgment of your paper that it was funded by this project, please include "JST BOOST Program, Grant Number 10-digit systematic number". The same applies when submitting a paper. The systematic numbers in this Program are in the form of JPMJ + BY + four-digit alphanumeric.

Shown below are examples of the systematic numbers used in the acknowledgment in papers.

【in English】

This work was supported by JST BOOST Program Japan Grant Number JPMJBYxxxx.

【in Japanese】

本研究は、JST、BOOST、JPMJBYxxxx の支援を受けたものです。

* If you have two projects or more in relation to a paper, list the names of the projects and the systematic numbers.

4.25 Research Support Services Partnership Accreditation System (A-PRAS)

MEXT established the "Accreditation System for Partnership for Research Support Services (A-PRAS)" in 2019 with the aim of improving the research environment for researchers, accelerating the promotion of science and technology and creation of innovation in Japan, as well as providing support for the development of various initiatives related to research support services. Under this system, research support services provided by private business operators that meet certain requirements are accredited as a “Research support service/partnership” by the Minister of Education, Culture, Sports, Science and Technology. Nine services have been certified as of March, 2023. We strongly recommend you to utilize its wide variety of services such as search for joint researchers, release of 51 research results for publicity or promotion for commercialization, fund or equipment procurement. Details of each certified service can be found on the MEXT website below.

https://www.mext.go.jp/a_menu/kagaku/kihon/1422215_00001.htm

4.26 Reformation of Competitive Research Funds

Currently, the systems of competitive research funding are being discussed by the government of Japan under the scope of "6th Science, Technology and Innovation Basic Plan", "Integrated Innovation Strategy 2021" and "Comprehensive Package to Strengthen Research Capacity and Support Young Researchers " to enable the efficient and effective use of research funds. Further notice will be provided if any principle or the like common in competitive research fund programs with respect to the improvement and operation of the systems is presented within the period of this call-for program and if such a principle is applied to this call-for program and its operation.

4.27 Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)

(1) Implementation of Management and Audit Systems Based on the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)"

In implementing the program, research institutions must stringently observe the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)" (decided by the Minister of Education, Culture, Sports, Science and Technology; revised on February 11, 2021) *. There is a need for research institutions, having implemented a system for managing and auditing public research funds, to take responsibility for making every effort to properly disburse the contract research funds in line with the aforementioned guidelines. If the Ministry of Education, Culture, Sports, Science and Technology (MEXT) decides that the system of a research institution for managing and auditing is insufficient, based on an investigation according to the said guidelines, measures such as reduction of overhead costs of competitive funding could be taken on the said institution. "Competitive funding" includes all financing distributed by the MEXT and the independent administrative agency under the jurisdiction of the MEXT.

* Please refer to the following URL for the details of the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)."
https://www.mext.go.jp/a_menu/kansa/houkoku/1343904_21.htm

(2) Submission of the "Self-evaluation Checklist for Implementation of Proper Systems" based on the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)"

In concluding a contract for this project, the research organization must prepare for a management and auditing system for research expenses based on the said guidelines and submit a "Self-evaluation Checklist for Implementation of Proper Systems" ("checklist," hereinafter), which is a report on the situation (research undertaking is not approved unless the checklist is submitted).

Accordingly, starting on April 1, 2024, , you must review the content of the following website and submit it. Please note that contracts for research institutions that have submitted the FY2023version of the checklist will be approved irrespective of the above, but you must also submit the FY2024version of the checklist by December 1, 2024.

This response/submission procedure must be continued during the period when competitive research funds are allocated by JST and the funds are being managed.

On the other hand, institutions that are not receiving competitive funds from the MEXT or administrative agencies under the jurisdiction of the MEXT do not have to submit a checklist.

See the website of the MEXT below for details of the method for checklist submission.

https://www.mext.go.jp/a_menu/kansa/houkoku/1324571.htm

Since the said guidelines encourage the "promotion of issuing and sharing information," please proactively publish and disseminate information regarding their misconduct prevention initiatives via their websites.

4.28 Consideration on "Guidelines for Responding to Misconduct in Research"

(1) Administrative System based on the "Guidelines for Responding to Misconduct in Research"

In applying to this funding program and conducting research activities, research institutions are required to adhere to the "Guidelines for Responding to Misconduct in Research" (decided by the Minister of Education, Culture, Sports, Science and Technology (MEXT) on August 26, 2014, hereinafter referred to as the "guidelines").

* Refer to the following webpage for the guideline (in Japanese)

  https://www.mext.go.jp/a_menu/jinzai/fusei/index.htm

In the case that the Ministry of Education, Culture, Sports, Science and Technology finds defects in the approach of organizations as a result of a survey of the situation, based on the guidelines, the Ministry may take measures including reduction of indirect expenses of the whole competitive fund for the pertinent organization.

* For more information on " Guidelines for Responding to Misconduct in Research" see the following web page

  https://www.mext.go.jp/b_menu/houdou/26/08/1351568.htm

(2) Submission of the "Self-evaluation Checklist" Based on the "Guidelines for Responding to Misconduct in Research"

When concluding a contract for this Program, research organizations must submit "a checklist related to the approach, based on 'Guidelines for responding to misconduct in research" (hereinafter, "checklist of inappropriate research conduct"). (Research undertaking is not approved unless a checklist of inappropriate research conduct is submitted).

Accordingly, after April 1, 2024, you should review the content of the following website, download the FY2024 version of the Research Misconduct Checklist from the Cross-ministerial Research and Development Management System (e-Rad), fill it out completely, and submit it (upload it) via e-RAD to the Research Integrity Promotion Office, Research Environment Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) by the designated date before the conclusion of the research contract.

Institutions that are not receiving competitive funds from MEXT or administrative agencies under its jurisdiction through a budget allocation or budgetary measures do not have to submit the Research Misconduct Checklist.

See the website of the Ministry of Education, Culture, Sport, Science and Technology for details of the method for submitting a checklist of inappropriate research conduct.

https://www.mext.go.jp/a_menu/jinzai/fusei/1420301_00005.htm

*Note1: A perfect environment for using e-Rad is necessary for submission of a checklist for inappropriate research conduct. See the URL below for details of the procedure related to the use of e-Rad (Note that subscription process for e-Rad requires approximately two weeks) :

https://www.e-rad.go.jp/organ/index.html

*Note2: Institutions that conduct research activities that receive budgetary allocations or measures from MEXT or from independent administrative agencies under its jurisdiction must submit a research misconduct checklist by September 30 each year (or the immediately preceding business day if September 30 falls on a Saturday, Sunday, or holiday).

(3) Measures Taken for Misconduct in Research Activities Based on the "Guidelines for Responding to Misconduct in Research"

Misconduct in research activities in this Program is treated strictly as described below.

(i) Measures to Cancel the Contract

In the case of specific misconduct (fabrication, falsification, and plagiarism) is identified of research of the Program, the Collaborative Research Agreement is cancelled or altered and a refund of all or part of the entrusted expenses is requested. Furthermore, there may be cases in which no agreement is concluded in the following years.

(ii) Measures to Restrict Application and Participation Eligibility

Measures given in the table below, depending on the level of inappropriateness and responsibility of specific misconduct, to restrict application to and participation in this project are imposed upon researchers involved in certain misconduct in research papers or reports of this project and those whose involvement has not been established but who are found responsible to an extent for the violation of the duty of due care as a distinct manager of pertinent papers and reports. Furthermore, in the case that such restriction measures are taken on qualification for application and participation, information is provided to pertinent sections of competitive fund systems (referred to as "competitive fund system related to the Ministry of Education, Culture, Sport, Science and Technology" hereinafter) distributed by the Ministry of Education, Culture, Sport, Science and Technology and independent administrative agencies of the ministry and to pertinent sections of competitive fund systems (referred to as "competitive fund systems related to other ministries" hereinafter) distributed by other ministries and their independent administrative agencies, which may similarly restrict qualification for application and participation in

competitive fund systems related to the Ministry of Education, Culture, Sport, Science and Technology and to other ministries.

* The terms 'application and participation' encompass the entire process of proposing and applying for new research projects, submitting entries, joining research projects either as co-researchers or in similar roles, and serving as PIs or co-researchers in existing (ongoing or continuous) research projects.

<table>
<tr><th colspan="3">Classification of person ineligible to apply to competitive research funds, being involved in specific research misconduct</th><th>Degree of maliciousness in specific research misconduct</th><th>Ineligible period of application.</th></tr>
<tr><td rowspan="5">Person who was involved in a research misconduct</td><td colspan="2">1． Especially malicious person, who, from the beginning of research, had an intention to commit a specific research misconduct</td><td></td><td>10 years</td></tr>
<tr><td rowspan="3">2. The author of a research paper, which is a product of a research where a specific research misconduct was committed</td><td rowspan="2">The authors of the paper, who are responsible for the whole content of it. Namely, they are the supervisor and the representative author of the paper or others who are identified to be equivalently responsible for the paper.</td><td>The misconduct has a substantial impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to be high.</td><td>5-7 years</td></tr>
<tr><td>The misconduct has a small impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to be low</td><td>3-5 years</td></tr>
<tr><td>The authors of the paper other than those described above.</td><td></td><td>2-3 years</td></tr>
<tr><td colspan="2">3. Persons who conducted a specific research misconduct other than those of 1 and 2.</td><td></td><td>2-3 years</td></tr>
<tr><td colspan="3" rowspan="2">Person who has not been involved in a specific research misconduct but is a responsible author of a paper relevant to a research where a specific research misconduct was committed, being the supervisor or representative author of the paper, or a person, who is identified to be equivalently responsible for the paper.</td><td>The misconduct has a substantial impact on the development of relevant research fields and on the society, or the maliciousness of the deed is judged to be high.</td><td>2-3 years</td></tr>
<tr><td>The misconduct has a small impact on the development of relevant research fields and on the society, or the</td><td>1-2 years</td></tr>
</table>

	maliciousness of the deed is judged to be low	

※The Period of ineligibility for applying will be calculated from the fiscal year following the fiscal year in which the misuse of research funds is recognized and the research funds are returned. Also ineligible in the fiscal year in which inappropriate usage of research funds are identified.

(iii) Measures Taken to Researchers whose Qualification is Restricted for Application to and Participation in the Competitive Fund System and Base Expenses

Qualification is restricted for application to and participation in this project for researchers whose qualification is restricted for application to and participation to competitive fund related to MEXT; management grants to national university corporations, inter-university research institute corporations and independent administrative agencies under MEXT; base expenses including private school subsidies; or competitive fund systems related to other ministries during the period the restriction is in effect.

"Other competitive fund systems" and "competitive research fund systems related to other ministries" include those systems that newly start a call for proposals in 2024 fiscal year and those that finished before the 2023 fiscal year.

(iv) Public Announcement of Misconduct

In principle, JST makes a public announcement with regard to the outline of specific misconduct in research activities of this project (name of researcher, project name, affiliation, research year, contents of misconduct, and measures taken). The Ministry of Education, Culture, Sports, Science and Technology also makes a public announcement concerning the contents of the pertinent misconduct (name of misconduct, kind of misconduct, research field of misconduct, name of expense account of misconduct, outline of misconduct, measures taken by research organization, measures taken by fund distributor, and so on).

In addition, the above-mentioned guidelines stipulate that the research organization shall promptly disclose the results of the investigation when a fraud has been identified.

https://www.mext.go.jp/a_menu/jinzai/fusei/1360483.htm

4.29 Duty to Complete Education on Research Ethics and Compliance

Researchers who participate in the project of this research program shall receive training on research ethics education for the prevention of misconduct in research activities as per the "Guidelines for Responding to Misconduct in Research" and on compliance education as per the "Guidelines for the Management and Audit of Public Research Funds in Research Institutions."

During the process of concluding a Collaborative Research Agreement after the selection of a proposed research project, it is necessary for all researchers participating in the research project, including the PI, to receive training on research ethics education and compliance education and submit a document to confirm their understanding of the contents of the training.

4.30 Handling of Information on Projects and Other Items on the e-Rad

Information on the e-Rad about each application (program name, project title, affiliated institution, PI's name, budget, research period, and project overview) will be treated as "Information planned to be made public" in accordance with the "Act on Access to Information Held by Independent Administrative Agencies" (Act No. 140, 2001) Article 5, Item 1 (a).

The results will be made public in the JST Project Database (hereinafter referred to as "PDB") (https://projectdb.jst.go.jp/) and the Research Project Integrated Search (GRANTS, https://grants.jst.go.jp/). In addition, among the research results reports submitted by researchers, those that are available for public release may be made public in the PDB.

4.31 Provision of information from e-Rad to the Cabinet Office

The " 6th Science, Technology and Innovation Basic Plan" (approved by the Cabinet on March 26, 2021) stipulates that EBPM, which is policy making based on objective evidence, will be thoroughly implemented in the science, technology and innovation administration, and the information registered in the Cross-ministerial R&D Management System (e-Rad) will be used for appropriate evaluation of government-funded R&D, planning of effective and efficient comprehensive strategies, resource allocation policies, etc.

For this reason, you are requested to input information on research outcomes, accounting performance records, and indirect cost execution records for competitive grants, for each fiscal year for the selected project in the e-Rad.

The information necessary for macro analysis, including information on research outcomes and accounting performance records, will be provided to the Cabinet Office.

4.32 Registration of Researcher Information on researchmap

Researchmap (https://researchmap.jp/) is one of the largest researcher information databases in Japan, and it is also possible to make registered achievement information public. In addition, researchmap is also linked to e-Rad and many university faculty databases, so that registered information can be used in other systems, thus eliminating the need to register the same achievements repeatedly in various application forms and databases, thereby improving efficiency.

The information registered on researchmap is also effectively used for research and statistical purposes in academic and science and technology policy planning by the government, etc. We ask for your cooperation in actively registering this project on researchmap.

In this project, JST plans to use the researchmap operated by JST as a master database for performance information in various situations such as performance reporting in the future. In addition, the community function of researchmap will be used in project management, such as distribution of various files and event announcements. Therefore, registration on researchmap is mandatory for the selected Principal Investigators, and we recommend early registration if you have not yet done so.

4.33 Patent Applications by JST

In case a research institution does not acquire rights to an invention, JST may acquire those rights in some cases. Therefore, if a research institution does not foresee acquiring rights to an invention, the PI should notify JST promptly, providing information concerning the said invention, etc. in any appropriate format. (The above “information concerning the said invention” means information necessary for JST to determine whether an application for intellectual property rights is possible or not, for example, a copy of the notification of invention used in the research institution.)

JST will conduct a study based on the received notice, and if JST judges, based on the results, that an application for the said invention, etc. is possible, a separate “Patent Rights Transfer Agreement” will be concluded between the research institution and JST.

* About the Patent Application Non-Disclosure System

In the patent system, when a patent right is granted, the invention for which a patent application has been filed is uniformly made public, in order to promote further technological improvements and eliminate overlapping research and development. On the other hand, before the establishment of the Patent Application Non-Disclosure System, Japan's patent system was such that once a patent application was filed, the government would make the contents of the application public after one and a half years, even if the invention was one that should not be spread for security reasons. In systems in other countries, it is common to have a system in place that keeps patent applications related to such inventions private. For this reason, Japan also established a patent application non-disclosure system in the "Act on Ensuring National Security by Taking Economic Measures in an Integrated Manner (Act No. 43 of 2022) (hereinafter referred to as the "Economic Security Promotion Act"), which reserves procedures such as the publication of applications in certain cases and takes measures to prevent proliferation.

Under the Economic Security Promotion Act, if the specification of a patent application describes an invention that is likely to cause a situation that would endanger the safety of the nation and its people through external actions if made public, patent procedures such as publication of the application, patent decision, and rejection

decision are suspended through a procedure called "preservation designation." During that time, disclosure of the contents of the invention, including publication, and the implementation of inventions that may lead to similar results are generally prohibited, and withdrawal by withdrawal of the patent application is also prohibited. Please comply with the Economic Security Promotion Act and other national laws, guidelines, and notices.

Details of the patent application non-disclosure system are available on the Cabinet Office website. For more information, please see the following.

- Cabinet Office: System for non-disclosure of patent applications
  https://www.cao.go.jp/keizai_anzen_hosho/patent.html

Chapter 5: Submission via the Cross-ministerial R&D Management System (e-Rad)

5.1 Cross-ministerial R&D Management System (e-Rad)

The Cross-ministerial R&D Management System (e-Rad) is a cross-ministerial system that provides a series of on-line processes (acceptance of applications → selection → adoption → management of adopted subject → reporting of research results) to manage the publicly funded research projects under the jurisdiction of ministries and agencies.

* "e-Rad" is the abbreviation of the Cross-ministerial R&D Management System, which is created by adding the capital letter of "e" of "Electronic" to the capital letters of "Research and Development" for science and technology.

5.2 Application method using e-Rad

Applications must be submitted through the e-Rad (e-Research and Development Management System).
When applying, please refer to the e-Rad portal site (hereinafter referred to as "portal site")
（https://www.e-rad.go.jp/en/）.

* With regards to various application processes when using e-Rad, in principle applications using paper documents are not accepted, so be sure to carry out each process using the e-Rad portal site.

In addition to (1) and (2) on the next page, please pay particular attention to the following points when applying.

(1) Pre-registration for using e-Rad (https://www.e-rad.go.jp/organ/index.html)

Pre-registration of the research institution and affiliated researchers is required by the time of application.

(a) Application for Registration of Research Organization

Please appoint one administrative representative for e-Rad at your research organization, and complete the procedures from "Application for Registration of Research Organization" (https://www.e-rad.go.jp/organ/entry.html).

* Please allow at least two weeks for registration.

* Once registered, you do not need to register again when applying for programs/projects administered by other ministries.

* If you have already registered for a program or project administered by another ministry or agency, you do not need to register again.

(b) Registration of departmental information, administrative assistant information, position information, and researcher information

The administrative representative will log in to e-Rad with the ID and password obtained in (a), register departmental information, administrative assistant (if any), position information, and researcher information, and issue IDs and passwords for the administrative assistant and researcher.

For the registration procedure, please refer to "10. Procedures for Research Institutions," "11. Procedures for Research Institution Administrative Members," and "12. Procedures for Researchers" in the Manual for Research Institution Administrative Representatives on the portal site (https://www.e-rad.go.jp/manual/for_organ.html).

(2) Application through e-Rad Proposal Submission by Researchers

Please refer to the Researcher's Manual on the portal site (https://www.e-rad.go.jp/en/manual/for_researcher.html). Applications that have not been "Processed" or "Accepted" by the submission deadline will be considered invalid. Please check the status of your application on the "Proposal List" page. If a researcher's application is submitted by the submission deadline date and time but does not reach one of these statuses, please contact the Program staff (boost-yr-inquiry@jst.go.jp). Although the proposal must be "accepted" in order for the allocating agency to manage the submitted proposal, acceptance is not required in terms of completion of the application process by the researcher. If the status of the submitted proposal is "Applying" and the application type (status) is "Allocation Agency Processing Application" by the deadline, the application has been successfully submitted.

<Cautions>

(a) To apply, you must enter your application information online and attach the application form. The application form can be uploaded as a single electronic file with a maximum file size of 3MB. If you use image data in the file, please pay attention to the file size.

(b) Incomplete application forms will not be considered. Please read the application guidelines and research proposal instructions carefully.

5.3 Others

(1) Where to direct questions on how to use the e-Rad system

Questions about the Program itself are answered by the person in charge of the Program, as usual. Questions about e-Rad operation methods are answered by the e-Rad Help Desk. Before asking questions, be sure to read both the website outlining the Call for Proposals and the e-Rad Portal site carefully. JST will not answer any questions regarding the status of the screening or acceptance.

Questions on matters such as programs, application documents for submission, and submission procedures	**JST Department of Disruptive Research (person in charge of calls for BOOST proposals)**	**Be certain to send questions by e-mail, except when in a hurry.** **For matters related to proposal submission:** **E-mail： boost-yr-inquiry@jst.go.jp** **Tel： 03-5214-7276** **Office hours: 10:00 -12:00, 13:00 - 17:00 (Japan Time)** **＊ Except on Saturdays, Sundays, holidays, the year-end and new year period.** **[Communication by e-mail may be requested even when a question is asked by telephone.]**
Questions regarding usage of the e-Rad system ※Please be sure to also contact the JST contact above regarding any operation just before the application deadline.	e-Rad helpdesk	Tel: 0570-057-060(navi dial) Office hours: 9:00-18:00 ●Except on Saturdays, Sundays, holidays, and the year-end and new year period.

- Website for this Program: (https://www.jst.go.jp/program/boost/yr/call/index.html)
  * The above web page also contains supplementary e-Rad input materials for this Program, so please refer to them.
- e-Rad portal website (https://www.e-rad.go.jp/en/)

(2) Availability of e-Rad

Basically, e-Rad operates 24 hours a day, 365 days a year, but may stop the service for system maintenance. This will be announced in advance on the portal site.

5.4 Points to be Noted Specific to This Program on the e-Rad Registration System

- If a cross-appointment has already been made by the time of the application deadline, you can select the location of the research. Please apply as an affiliate of the institution where the research will be conducted.
- Please be sure to specify your research field (main) and research field (secondary) as they will be required for the review process (for all applicants). Your research field (main) and research field (secondary) can be the same.

- If you register a field code belonging to "Humanities and Social Sciences" or "Other" for your research field (main), you must register a field code that does not belong to "Humanities and Social Sciences" nor "Other" for your research field (secondary). If you do not register a field code, your proposal will not be accepted. In addition, if you register a field code belonging to the "Humanities and Social Sciences" or "Other" fields for both your research field (main) and research field (secondary), your proposal will not be accepted.
- The research field (secondary) is an optional field in the e-Rad system, so please do not forget to enter it.